MCC-NIES
Microalgae, Endangered Macroalgae and Protists

Microbial Culture Collection (MCC) at National Institute for Environmental Studies (NIES)

Core facility for algal resources of National BioResource Project (NBRP)


http://mcc.nies.go.jp/
CONTENTS

Cover
Plate 1–6  Various NIES strains (alphabetical order of genera)

I. Introduction

II. List of strains
1. How to use the list of strains
2. List of strains (alphabetical order, pp. 15-258)
   3. List of type specimens
   4. List of synonyms
   5. List of former (previously used) names
   6. List of lost strains
   7. Restrictions about strains photos

III. Information on strains
   Phylogenetic position of the cyanobacterial strains

IV. Media preparation, subculture and cryopreservation
1. How to prepare stock solutions and media
2. Media list
3. Subculture methods
4. Methods of cryopreservation

V. Deposition
1. Conditions for deposition
2. Agreement for deposition
3. How to deposit a strain

VI. Ordering and distribution
1. Agreement for distribution
2. Ordering strains
3. Price and payment
4. Special notes regarding distribution
5. Distribution to NIES researchers, guest researchers and collaborators

VII. Index
1. Numerical index
2. Systematic index

VIII. Reference

IX. Committee and staff
1. Committee members
2. Collection staff

X. Application forms
   Strain Deposit Request and Agreement Form
   Strain Ordering and Agreement Form
   Strain Ordering and Agreement Form (For NIES staff)
   Strain Ordering and Agreement Form (For guest researchers and collaborators)
   Feedback of ordered strain(s)

Back cover
II. LIST OF STRAINS

1. How to use the list of strains

The strains are listed in alphabetical order of their scientific name. Same species of strains are arranged according to their strain numbers. The strain number assigned to a given strain remains the same, regardless of any change in nomenclature or re-identification. We request that users hyphenated the strain number with the acronym “NIES”, e.g. “NIES-44”. A detailed example of a strain description is as follows:

**MICROCYSTIS** [1]: Cyanophyceae [2]

*Micr. aeruginosa* (Kützing) Lemmermann [3]


44 [5] **History** [6]: IAM Other collection strain no. [7]: IAM M-176 **Locality** [8]: Lake Kasumigaura/Ibaraki /Japan(1974-08-**) **Isolator** [9]: Watanabe, Makoto M. **Identified by** [10]: Watanabe, Makoto M. **Formerly identified as** [11]: *Micr. aeruginosa* (Kützing) Lemmermann f. *aeruginosa* States [12]: Unialgal; Clonal; Axenic **Culture conditions** [13]: CB; 25°C; 20-30 μmol/m²/s; 20 D **Habitat** [14]: Freshwater (lake water) **Characteristics** [15]: Cyanobacterial water bloom (aokozu) **Gene data** [16]: 16S rRNA (AB015361); 16S-23S ITS region (AB015361) **Other strain no.** [17]: TAC 44 **References** [18]: 1,2 **Remarks** [19]: Cryopreserved

1) Genus name.
2) Class name: If the class name is uncertain, we use “incertae sedis” with the phylum name, e.g. Metamonada incertae sedis.
3) Scientific name with authority: We put the genus or species name in single quotation marks (such as ‘Chlorella’ saccharophila or ‘Chlorella ellipsoidea’), if the polyphyly of genera or species is clear from DNA sequencing. In the cyanobacterial genus Anabaena, scientific names followed by * indicate those identified without observation on akinete position and morphology.
4) Synonym(s).
5) Strain number: Please add a hyphen and the acronym NIES before the number, e.g. “NIES-44”.
6) History: How and by whom the strain was deposited in the MCC-NIES through other culture collections, researchers or an isolator. Deposit year is shown in parentheses if available.
7) Other collection strain no.: Strain designation in other culture collections or institutions. Acronyms placed before strain numbers refer to the following culture collections and institutions:

**ATCC** : American Type Culture Collection, U.S.A.
**CAUP** : Culture Collection of Algae of Charles University of Prague, Czech
**CCAP** : Culture Collection of Algae and Protozoa, U.K.
**CCMP** : The Provasoli-Guillard National Center for Culture of Marine Phytoplankton, U.S.A.
**CRC** : *Chlamydomonas* Resource Centre, U.S.A.
**IAM** : Institute of Molecular and Cellular Biosciences, University of Tokyo, Japan
(almost all algal strains were moved to the MCC-NIES until the end of March 2007, when the IAM Collection was closed.)
**IFO** : Institute for Fermentation, Osaka, Japan
**IPPAS** : Culture Collection of Microalgae, Institute of Plant Physiology, Russian Academy of Sciences, Russia
**JCM** : Japan Collection of Microorganisms, RIKEN, Japan
**KAGAWA** : Akashiwo Research Institute of Kagawa Prefecture, Japan
**NIVA** : Norwegian Institute for Water Research, Norway
**PCC** : Pasteur Culture Collection of Cyanobacteria, Institut Pasteur, France
**RCC** : Roscoff Culture Collection, France
**SAG** : Culture Collection of Algae at the University of Göttingen, Germany
**TAC** : Tukuba Botanical Garden, National Science Museum, Japan
(almost all algal strains were deposited to the MCC-NIES.)
**TISTR** : Thailand Institute of Scientific and Technological Research, Thailand
**TKB** : Graduate School of Life and Environmental Science, University of Tsukuba, Japan
**UTEX** : The Culture Collection of Algae at the University of Texas at Austin, U.S.A. (Formerly BIU,
8) Locality: The place where the strain was collected, in order of place/prefecture/country, if full data are available, with collection date in parentheses if available.

9) Isolator’s name in order of family name, then first name.

10) Identified by: The person who gave the scientific name shown herein in order of family name, then first name. If the strain was re-identified, the re-identifying person(s) is also shown. If re-identification was conducted at the MCC-NIES by DNA sequencing, this is shown as “Re-identified at NIES by DNA sequencing”. If scientific names were found to be proper by DNA sequencing, this is shown as “Confirmed at NIES by DNA sequencing”.

11) Formerly identified as: The scientific name that was formerly used and mostly found to be misidentified after re-identification by DNA sequencing and/or detailed morphological studies. In the case of the cyanobacterium Microcystis aeruginosa, formerly used morpho-species names are indicated, if available.

12) States: The state of culture strains, indicating whether or not they are unialgal, clonal, and axenic. Axenic state is indicated with the last check as follow: [2013 Jan]. For coccolithophorids, check of cell covering is indicated as follow: Coccolith bearing cells (+); now as naked cells Coccolith (−); and under recovery for coccoliths bearing stage (+/−).

13) Culture conditions: In order of medium [with (agar) or (semi-solid)] if medium is a agar slant or a soft agar medium; unless otherwise noted the phase of medium is liquid, culture temperature, illumination as photon flux density, interval for subculture maintenance (Days or Months), with pre-culture conditions for active growth (culture temperature and photon flux density) in parentheses, if necessary. The light–dark photo-regime is 12 h light and 12 h dark.

14) Habitat: The habitats specified by the depositors, with the source of isolation in parentheses. We often use “Freshwater” “Brackish” “Marine” “Salt water” “Hot spring” or “Terrestrial” to indicate the habitat of the strain.

15) Characteristics: Environmental, physiological, taxonomic, and miscellaneous characteristics of the strains. We use “Authentic strain” for strains used as a basis for the description of new species of eukaryotic algae and protozoa, and “Type strain” for cyanobacterial type strains. For the cyanobacterium Microcystis aeruginosa, we also show the sequence type (ST) to clarify the genetic diversity within a same single species. For endangered species, we show the categories revised by the Ministry of Environment in 2007 (http://www.env.go.jp/press/press.php?serial=8648); i.e. CR+EN (critically endangered and endangered), VU (vulnerable), and NT (near threatened).

16) Gene data: Gene names, with accession numbers in parentheses. Note that serial numbers are summarized as follow: series from AU294770 to AU295959 is noted as AU294770-5959.

17) Other strain no.: Strain designation given by isolators.

18) References: Publications in which the strain was used. The number corresponds to publications listed below in section VIII.

19) Remarks: Notes relevant to ordering, such as “Cryopreserved”, “Toxic”, “Unstable”, “Very slow growth”, “Fragile species to transportation stresses”, or “Fragile species to temperature changes”. Cryopreserved: we deliver “Cryopreserved” strains after thawing and recovery of cells to normal culture growth, so that a longer time is required when ordering “Cryopreserved” strains, though their viability is ensured. Toxic: for “Toxic” strains, caution in handling is required. Unstable: “Unstable” strains are sometimes not available if their growth is poor at that time, and are usually difficult to maintain permanently at the MCC-NIES. Very slow growth: if you order such strain you need to wait till the cell population will be sufficient. Fragile species to transportation stresses: we may need several trials to deliver successfully fragile strains, or we may not be able to deliver them, note that you are welcome to visit the culture collection and pick up the strain on your own. Fragile species to temperature changes: some strains are more sensitive to temperature changes than others, restriction during severe seasons might occur.
2. List of strains

**ACARYOCHLORIS** : Cyanophyceae

*Acaryochloris marina* Miyashita et Chihara

2412 History: < Miyashita, Hideaki Locality: Hokkaido University Marine Station/Hokkaido/Japan (2004-06-20) Isolator: Miyashita, Hideaki Identified by: Miyashita, Hideaki (2004-08-***) States: Unialgal Culture conditions: IMK; 20°C; 70-90μmol/m²/s; 1 M Habitat: Marine (Seaweed) Characteristics: Halophilic; Contains chlorophyll d Other strain no.: Muroran strain

**ACHNANTHES** : Bacillariophyceae

*Achnanthes kuwaitensis* Hendey

1349 History: < Mayama, Shigeki Locality: Morito Beach/Kanagawa/Japan (2003-04-19) Isolator: Shono, Naoko Identified by: Mayama, Shigeki States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 15-27μmol/m²/s; 2 M Habitat: Marine (A polyethylene bag on a beach)

*Achnanthes subconstricta* (Meister) Toyoda

330 History: < Sawaguchi, Tomohiro Locality: Imaihama/Shizuoka/Japan (1985-05-22) Isolator: Sawaguchi, Tomohiro Identified by: Nagumo, Tamotsu Formerly identified as: Achnanthes longipes Agardh States: Unialgal; Clonal; Axenic[2012 Nov] Culture conditions: f/2; 10°C; 15-20μmol/m²/s; 2 M Habitat: Marine (Seawater) Other strain no.: IMHB-5 References: 137, 328

**ACHNANTHIDIUM** : Bacillariophyceae

*Achnanthidium minutissimum* (Kützing) Czarnecki

Syn. Achnanthes minutissima Kützing

71 History: < Yuri, Akira Locality: Kosaka River/Akita/Japan (1983-04-19) Isolator: Yuri, Akira Identified by: Mizuno, Makoto States: Unialgal; Clonal; Non-axenic Culture conditions: CSi; 20°C; 40-50μmol/m²/s; 1 M Habitat: Freshwater (River water) Other strain no.: A15-6 References: 137, 565, 625, 838, 1017, 1018


411 History: < Kasai, Fumie Locality: Miyata River/Ibaraki/Japan (1987-02-25) Isolator: Kasai, Fumie Identified by: Takamura, Noriko States: Unialgal; Non-clonal; Non-axenic Culture conditions: CSi; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (River water) Other strain no.: 1st-3-17 References: 1017, 1018

412 History: < Kasai, Fumie Locality: Miyata River/Ibaraki/Japan (1987-02-25) Isolator: Kasai,
Fumie Identified by: Takamura, Noriko States: Unialgal; Non-clonal; Non-axenic Culture conditions: CSi; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (River water) Other strain no.: 1st-1-1 References: 1017, 1018

413 History: < Kasai, Fumie Locality: Miyata River/Ibaraki/Japan (1987-02-25) Isolator: Kasai, Fumie Identified by: Takamura, Noriko States: Unialgal; Non-clonal; Non-axenic Culture conditions: CSi; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (River water) Other strain no.: 1st-2-8 References: 1017, 1018

414 History: < Kasai, Fumie Locality: Ooe River (Ozegahara)/Fukushima/Japan (1987-10-16) Isolator: Kasai, Fumie Identified by: Takamura, Noriko States: Unialgal; Non-clonal; Non-axenic Culture conditions: CSi; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (River water) Other strain no.: 0-25 Reference: 1018

1350 History: < Mayama, Shigeki Locality: Tama River/Tokyo/Japan (2002-11-26) Isolator: Shono, Naoko Identified by: Mayama, Shigeki States: Unialgal; Clonal; Non-axenic Culture conditions: CSi/5; 20°C; 15-27μmol/m²/s; 2 M Habitat: Freshwater (River stone) Characteristics: Benthic; Epilithic

Achnanthidium minutissimum (Kützing) Czarnecki var. saprophilum Kobayasi et Mayama
Sync. Achnanthes minutissimum Kützing var. saprophila Kobayasi et Mayama

372 History: < Sawaguchi, Tomohiro Locality: Lake Kasumigaura/Ibaraki/Japan (1985-12-19) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro States: Unialgal; Clonal; Axenic[2012 Mar] Culture conditions: CSi/5; 20°C; 40-50μmol/m²/s; 1 M Habitat: Freshwater (Plant) Other strain no.: KAAC-6

ACINETOSPORA : Phaeophyceae

Acinetospora crinita (Carmichael) Sauvageau

548 History: < Kuroiwa, Tsuneyoshi Locality: Tuscan/Italy (1991-**.**) Isolator: Hagiwara, Tomiji Identified by: Sartoni, G. Formerly identified as: Tribonema marinum J.Feldmann States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 4-10μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Marine Gene data: 18S rRNA (AF038005); CO1 (AF037996); tufA (AF038004) References: 75, 137, 245, 886

ACTINASTRUM : Trebouxiophyceae

Actinastrum hantschii Lagerheim

415 History: < Kasai, Fumie Locality: Lake Kasumigaura/Ibaraki/Japan (1983-07-22) Isolator: Kasai, Fumie Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (20°C; 70-80μmol/m²/s) Habitats: Marine (River water) Other strain no.: F7-4 References: 188, 567, 1159 Remarks: Cryopreserved

ACTINOPHrys : Nucleohelea

Actinophrys sol Ehrenberg


ADENOIdes : Dinophyceae

Adenoides eludens (Herdman) Balech

AKASHIWO : Dinophyceae

Akashiwo sanguinea (Hirasaka) Hansen et Moestrup
Syn. Gymnodinium sanguineum Hirasaka

**History:** < KAGAWA < Yoshimatsu, Sadaaki **Locality:** Harima-nada/Japan (1980-06-17) **Isolator:** Yoshimatsu, Sadaaki **Identified by:** Yoshimatsu, Sadaaki **States:** Unialgal; Clonal; Axenic[2012 Mar] **Culture conditions:** ESM; 20℃; 40-50μmol/m²/s; 1 M **Habitat:** Marine (Seawater) **Characteristics:** Red tide **Other strain no.:** TKB-263 **Remarks:** Fragile species to transportation stresses

**History:** < KAGAWA < Yoshimatsu, Sadaaki **Locality:** Yamakawa Bay/Kagoshima/Japan (1988-03-28) **Isolator:** Yoshimatsu, Sadaaki **Identified by:** Yoshimatsu, Sadaaki **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** ESM; 20℃; 40-50μmol/m²/s; 1 M **Habitat:** Marine (Seawater) **Characteristics:** Red tide **Other strain no.:** Acy-6 **Remarks:** Fragile species to transportation stresses

Alexandrium hiranoi Kita et Fukuyo

**History:** < Kita, Takumi **Locality:** Kawasaki/Kanagawa/Japan (1984-08-****) **Isolator:** Kita, Takumi **Identified by:** Kita, Takumi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** ESM; 20℃; 40-50μmol/m²/s; 2 M **Habitat:** Marine (Seawater) **Characteristics:** Toxic **References:** 394, 404, 405, 580 **Remarks:** Toxic; Fragile species to transportation stresses

Alexanderium insuetum Balech

**History:** < KAGAWA < Yoshimatsu, Sadaaki **Locality:** Shodo Isl., Uchiumi Bay/Kagawa/Japan (1985-06-06) **Isolator:** Yoshimatsu, Sadaaki **Identified by:** Yoshimatsu, Sadaaki **States:** Unialgal; Clonal; Axenic[2012 Mar] **Culture conditions:** ESM; 20℃; 40-50μmol/m²/s; 1 M **Habitat:** Marine (Seawater) **Characteristics:** Red tide **Remarks:** Fragile species to transportation stresses

Alexanderium sp.

**History:** < Noël, Mary-Hélène **Locality:** Seto Inland Sea/Japan (2005-08-01) **Isolator:** Noël, Mary-Hélène **Identified by:** Noël, Mary-Hélène **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MNK; 20℃; 10-15μmol/m²/s; 20 D **Habitat:** Marine (Seawater) **Other strain no.:** MHW6 **Remarks:** Fragile species to transportation stresses

**History:** < Noël, Mary-Hélène **Locality:** Seto Inland Sea/Japan (2005-08-01) **Isolator:** Noël, Mary-Hélène **Identified by:** Noël, Mary-Hélène **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MNK; 20℃; 10-15μmol/m²/s; 20 D **Habitat:** Marine (Seawater) **Other strain no.:** MHW7 **Remarks:** Fragile species to transportation stresses

**History:** < Noël, Mary-Hélène **Locality:** Seto Inland Sea/Japan (2005-05-12) **Isolator:** Noël,
Mary-Hélène Identified by: Noël, Mary-Hélène (2005-12.**) States: Unialgal; Clonal; Non-axenic Culture conditions: MNK; 15°C; 35-50μmol/m²/s; 20 D Habitat: Marine (Sediment) Other strain no.: MHW2 Remarks: Fragile species to transportation stresses


2328 History: < Sawaguchi, Tomohiro Locality: Noumea/New Caledonia (1987-03-06) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: NCD-4 Remarks: Fragile species to transportation stresses

ALLAPSA : Sarcomonadea

Allapsa ocella Howe, Bass, Vickerman, Chao et Cavalier-Smith

2414 History: < Howe, Alexis T. Locality: U.K. (2007-**,***) Isolator: Howe, Alexis T. Identified by: Howe, Alexis T. (2007-**,***) Culture conditions: AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M Habitat: Terrestrial (Plant (Moss)) Characteristics: Heterotrophic; Authentic strain; Resting spore forming Other strain no.: 5A moss Reference: 225

Allapsa scotia Howe, Bass, Vickerman, Chao et Cavalier-Smith

2415 History: < Howe, Alexis T. Locality: U.K. (1999-**,***) Isolator: Vickerman, Keith Identified by: Vickerman, Keith (1999-**,***) Culture conditions: AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M Habitat: Terrestrial (Soil) Characteristics: Heterotrophic; Authentic strain; Resting spore forming Other strain no.: KV Hf Reference: 225

AMPHIDINIUM : Dinophyceae

Amphidinium carterae Hulburt

331 History: < Sawaguchi, Tomohiro Locality: Iriomote Isl/Okinawa/Japan (1986-01-23) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: ESM; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Gene data: psbA (AB025586) Other strain no.: IIDA References: 143, 1035 Remarks: Unstable; Fragile species to transportation stresses

Amphidinium klebsii Coll

613 History: < Murata, Michio Locality: Aburatsubo Bay/Kanagawa/Japan (1993-04-21) Isolator: Murata, Michio Identified by: Fukuyo, Yasuo States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Gene data: GapDH (AB106698); GapDH (AB106699) Other strain no.: AK-1 References: 222, 223, 224, 575, 576, 1032 Remarks: Fragile species to transportation stresses

Amphidinium operculatum Claparede et Lachmann


Amphidinium sp.

2663 History: < Tsuda, Masashi Locality: Taketomi Isl/Okinawa/Japan (2009-06-04) Isolator: Kumagai, Keiko Identified by: Kumagai, Keiko (2010-05-26) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; ESM; 20°C; 10-15μmol/m²/s; 1 M Habitat: Marine (Sediment) Characteristics: Resting spore forming Other strain no.: KCA09051 Remarks: Fragile species to transportation stresses

Non-axenic **Culture conditions**: f/2; ESM; 20°C; 10-15μmol/m²/s; 1 M **Habitat**: Marine (Sand) **Characteristics**: Resting spore forming **Other strain no.**: KCA09053 **Remarks**: Fragile species to transportation stresses

**Amphidinium testudo** Kofoid et Swezy

**1268 History**: < Moriya, Mayumi **Locality**: Saipan/U.S.A. (2002-04-**) **Isolator**: Higa, Atsushi **Identified by**: Higa, Atsushi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: ESM; 20°C; 40-50μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Other strain no.**: M-44 **Remarks**: Fragile species to transportation stresses

**ANABAENA**: Cyanophyceae

**Anabaena affinis** Lemmermann

**40 History**: < IAM (1983) **Other collection strain no.**: IAM M-168 **Locality**: Lake Kasumigaura/Ibaraki/Japan (1974-08-**) **Isolator**: Watanabe, Makoto M.; Ichimura, Terunobu **Identified by**: Watanabe, Makoto M. **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CT; 25°C; 70-90μmol/m²/s; 1 M **Habitat**: Freshwater (Lake water) **Characteristics**: Cyanobacterial water bloom (ako) **References**: 235, 477, 567, 671, 1159, 1231 **Remarks**: Unstable

**1639 History**: < TAC **Locality**: Lake Shirarutoro/Hokkaido/Japan (1990-08-**) **Isolator**: Niiyama, Yuko **Identified by**: Niiyama, Yuko **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CB; 20°C; 22-32μmol/m²/s; 1 M **Habitat**: Freshwater (Lake water) **Other strain no.**: TAC 439 **References**: 675, 1103

**1640 History**: < TAC **Locality**: Lake Shirarutoro/Hokkaido/Japan (1990-08-**) **Isolator**: Niiyama, Yuko **Identified by**: Niiyama, Yuko **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CB; 20°C; 22-32μmol/m²/s; 1 M **Habitat**: Freshwater (Lake water) **Other strain no.**: TAC 440 **Reference**: 675

**1641 History**: < TAC **Locality**: Lake Kasumigaura/Ibaraki/Japan (1991-06-**) **Isolator**: Niiyama, Yuko **Identified by**: Niiyama, Yuko **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CB; 20°C; 22-32μmol/m²/s; 1 M **Habitat**: Freshwater (Lake water) **Other strain no.**: TAC 442 **Reference**: 675

**1642 History**: < TAC **Locality**: Lake Tsukui/Kanagawa/Japan **Isolator**: Watanabe, Masayuki **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CB; 20°C; 22-32μmol/m²/s; 1 M **Habitat**: Freshwater (Lake water) **Other strain no.**: TAC 454 **Reference**: 1103

**Anabaena akankoensis** M.Watanabe

**1875 History**: < TAC **Locality**: Lake Akan/Hokkaido/Japan (2002-09-10) **Isolator**: Niiyama, Yuko **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CB; MG; 20°C; 13-18μmol/m²/s; 1 M **Habitat**: Freshwater (Lake water) **Other strain no.**: TAC 505 **Reference**: 1103

**1876 History**: < TAC **Locality**: Lake Akan/Hokkaido/Japan (2002-09-10) **Isolator**: Niiyama, Yuko **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CB; MG; 20°C; 13-18μmol/m²/s; 1 M **Habitat**: Freshwater (Lake water) **Other strain no.**: TAC 506

**1906 History**: < TAC **Locality**: Lake Akan/Hokkaido/Japan (2002-09-10) **Isolator**: Niiyama, Yuko **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CB; MG; 20°C; 13-18μmol/m²/s; 1 M **Habitat**: Freshwater (Lake water) **Other strain no.**: TAC 571

**1907 History**: < TAC **Locality**: Lake Akan/Hokkaido/Japan (2002-09-10) **Isolator**: Niiyama, Yuko **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CB; MG; 20°C; 13-18μmol/m²/s; 1 M **Habitat**: Freshwater (Lake water) **Other strain no.**: TAC 572

**Anabaena aphanizomenoides** Forti
Anabaena circinalis Rabenhorst ex Bornet et Flahault

1643 History: < TAC Locality: Tsukuba-shi, Chuo-koen/Ibaraki/Japan (1999-10-05) Isolator: Niiyama, Yuko Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 456 Reference: 1103

1644 History: < TAC Locality: Tsukuba-shi, Chuo-koen/Ibaraki/Japan (1999-10-12) Isolator: Niiyama, Yuko Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 457

References
1645 History: < TAC Locality: Lake Inbanuma/Chiba/Japan (2001-09-25) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 496 Reference: 1103

1646 History: < TAC Locality: Lake Shiroyama/Kanagawa/Japan (2001-10-31) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 497 Reference: 1103

1647 History: < TAC Locality: Lake Shiroyama/Kanagawa/Japan (2001-10-31) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 498 Reference: 1103

1649 History: < TAC Locality: Lake Shiroyama/Kanagawa/Japan (2001-10-31) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 499

1650 History: < TAC Locality: Lake Shiroyama/Kanagawa/Japan (2001-10-31) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 501 Reference: 1103

1877 History: < TAC Locality: Lake Shiroyama/Kanagawa/Japan (2001-10-31) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 502

1878 History: < TAC Locality: Lake Shiroyama/Kanagawa/Japan (2001-10-31) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 503 Reference: 1103

1879 History: < TAC Locality: Lake Inbanuma/Chiba/Japan (2002-09-23) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 508

1908 History: < TAC Locality: Hachirogata/Akita/Japan (2002-09-19) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 552
History: < TAC Locality: Hachirogata/Akita/Japan (2002-09-19) Isolator: Niiyama, Yuko
Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 553 Reference: 1103


Anabaena circinalis* Rabenhorst ex Bornet et Flahault

History: < TAC Locality: Lake Inbanuma/Chiba/Japan (2002-09-23) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: *Akinete not observed Other strain no.: TAC 507 Reference: 1103

Anabaena compacta (Nygaard) Hickel

History: < Li, Renhui < CCAP Other collection strain no.: CCAP 1403/24 Locality: Rostherne Mere/Cheshire/U.K. Isolator: Jaworski, G. H. M. Identified by: Li, Renhui Formerly identified as: Anabaena spiroides Klebahn States: Unialgal; Clonal; Axenic[2012 Nov] Culture conditions: MG; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko)

History: < Li, Renhui < CCAP Other collection strain no.: CCAP 1403/29 Locality: Esthwaiete Water/England, Camibia/U.K. Isolator: Butterwick Identified by: Li, Renhui Formerly identified as: Anabaena spiroides Klebahn States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Reference: 203

Anabaena crassa (Lemmermann) Komárková-Legnerová et Cronberg

History: < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-08-***) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Anabaena spiroides Klebahn f. spiroides States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 25°C; 70-90μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 31 (K-TAN-31) References: 360, 567, 1159 Remarks: Unstable


History: < TAC Locality: Lake Akan/Hokkaido/Japan (1990-08-***) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 436 References: 476, 675, 1103, 1141

History: < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1991-07-***) Isolator: Niiyama, Yuko Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 443 References: 476, 675, 1103

History: < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1991-07-***) Isolator: Niiyama, Yuko Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water)
TAC 444

1655 History: < TAC Locality: Lake Inbanuma/Chiba/Japan (1996-08-10) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 468 Reference: 675

1656 History: < TAC Locality: Nigo-ike Pond/Hyogo/Japan (2001-07-25) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 473 Reference: 1182

1657 History: < TAC Locality: Nigo-ike Pond/Hyogo/Japan (2001-07-25) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 474 Reference: 1103

1658 History: < TAC Locality: Lake Biwa, Akanoi/Shiga/Japan (2001-10-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 485 Reference: 1103

1659 History: < TAC Locality: Lake Biwa, Akanoi/Shiga/Japan (2001-10-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 486 Reference: 1182

1660 History: < TAC Locality: Lake Biwa, Hamaotsu/Shiga/Japan (2001-10-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 487

1661 History: < TAC Locality: Lake Biwa, Hikone/Shiga/Japan (2001-10-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 488

1662 History: < TAC Locality: Lake Yogo/Shiga/Japan (2001-10-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 490 Reference: 1182

1663 History: < TAC Locality: Niigata/Japan (2001-10-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 492 Reference: 1182

1664 History: < TAC Locality: Niigata/Japan (2001-10-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 493

1665 History: < TAC Locality: Niigata/Japan (2001-10-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 494 Reference: 1103

1666 History: < TAC Locality: Niigata/Japan (2001-10-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m³/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 495

1881 History: < TAC Locality: Lake Yogo/Shiga/Japan (2002-10-14) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m³/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 512

1882 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB;
20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Pond water) Other strain no.: TAC 518

1883 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Pond water) Other strain no.: TAC 519

1884 History: < TAC Locality: Lake Suwa/Nagano/Japan (2002-10-13) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 520 Reference: 1103

1885 History: < TAC Locality: Mannou/Kagawa/Japan (2002-10-02) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Pond water) Other strain no.: TAC 522

1886 History: < TAC Locality: Lake Suwa/Nagano/Japan (2002-10-13) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 524

1887 History: < TAC Locality: Lake Suwa/Nagano/Japan (2002-10-13) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 525 Reference: 1103

1888 History: < TAC Locality: Lake Suwa/Nagano/Japan (2002-10-13) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 526

1889 History: < TAC Locality: Lake Suwa/Nagano/Japan (2002-10-13) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 527

1890 History: < TAC Locality: Lake Suwa/Nagano/Japan (2002-10-13) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 528

1891 History: < TAC Locality: Lake Biwa, Hamaotsu/Shiga/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 529 Reference: 1103

1892 History: < TAC Locality: Lake Biwa, Hamaotsu/Shiga/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 532

1910 History: < TAC Locality: Minakami-ike Pond/Nara/Japan (2003-05-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Pond water) Other strain no.: TAC 562

1911 History: < TAC Locality: Minakami-ike Pond/Nara/Japan (2003-05-22) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Pond water) Other strain no.: TAC 563

1912 History: < TAC Locality: Plöner See/Schleswich-Holstein/Germany Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 567

1913 History: < TAC Locality: Plöner See/Schleswich-Holstein/Germany Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 573

1914 History: < TAC Locality: Plöner See/Schleswich-Holstein/Germany Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habit: Freshwater (Lake water) Other strain no.: TAC 574
<table>
<thead>
<tr>
<th>Year</th>
<th>History</th>
<th>Locality</th>
<th>Isolator</th>
<th>Identified by</th>
<th>States</th>
<th>Culture conditions</th>
<th>Habitat</th>
<th>Other strain no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901</td>
<td>History: Lake Biwa, Hamaotsu/Shiga/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; MG; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water)</td>
<td>Lake Biwa, Hamaotsu/Shiga/Japan (2002-10-04)</td>
<td>Isolator: Niiyama, Yuko</td>
<td>Identified by: Niiyama, Yuko</td>
<td>States: Unialgal; Clonal; Non-axenic Culture conditions: CB; MG; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water)</td>
<td>Other strain no.: TAC 542</td>
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<td>1899</td>
<td>History: Lake Toro/Hokkaido/Japan (2002-06-25) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water)</td>
<td>Lake Toro/Hokkaido/Japan (2002-06-25)</td>
<td>Isolator: Niiyama, Yuko</td>
<td>Identified by: Niiyama, Yuko</td>
<td>States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water)</td>
<td>Other strain no.: TAC 537</td>
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<td>1898</td>
<td>History: Lake Suwa/Nagano/Japan (2002-10-13) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water)</td>
<td>Lake Suwa/Nagano/Japan (2002-10-13)</td>
<td>Isolator: Niiyama, Yuko</td>
<td>Identified by: Niiyama, Yuko</td>
<td>States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water)</td>
<td>Other strain no.: TAC 521</td>
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<td>1897</td>
<td>History: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water)</td>
<td>Fujiidera/Osaka/Japan (2002-10-04)</td>
<td>Isolator: Niiyama, Yuko</td>
<td>Identified by: Niiyama, Yuko</td>
<td>States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water)</td>
<td>Other strain no.: TAC 516</td>
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<td>1895</td>
<td>History: Koi Inbanuma/Chiba/Japan (2002-09-23) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: *Akinete not observed Other strain no.: TAC 514 Reference: 1103</td>
<td>Inbanuma/Chiba/Japan (2002-09-23)</td>
<td>Isolator: Niiyama, Yuko</td>
<td>Identified by: Niiyama, Yuko</td>
<td>States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water)</td>
<td>Characteristics: *Akinete not observed Other strain no.: TAC 513</td>
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<td>1894</td>
<td>History: Lake Yogo/Shiga/Japan (2002-10-14) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: *Akinete not observed Other strain no.: TAC 514 Reference: 1103</td>
<td>Lake Yogo/Shiga/Japan (2002-10-14)</td>
<td>Isolator: Niiyama, Yuko</td>
<td>Identified by: Niiyama, Yuko</td>
<td>States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water)</td>
<td>Characteristics: *Akinete not observed Other strain no.: TAC 513</td>
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<tr>
<td>1893</td>
<td>Anabaena crassa* (Lemmermann) Komářková-Legnerová et Cronberg</td>
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<td></td>
<td></td>
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</tbody>
</table>

**CONTENTS**
1902 **History:** < TAC Locality: Lake Biwa, Hamaotsu/Shiga/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: *Akinete not observed Other strain no.: TAC 531

**Anabaena cylindrica** Lemmermann

19 **History:** < IAM (1983) Other collection strain no.: IAM M-1 (=M-253) States: Unialgal; Non-clonal; Axenic[2013 Jan] Culture conditions: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Characteristics: Nitrogen fixation Gene data: 16S rRNA (AF247592); gyrB (AB074770); rpoC1 (AB074793); rpoD1 (AB074820) References: 19, 20, 43, 101, 102, 105, 106, < TAC 13, 108, 109, 110, 111, 112, 113, 130, 141, 185, 204, 205, 235, 291, 422, 423, 467, 535, 567, 589, 669, 771, 772, 773, 774, 775, 776, 777, 778, 780, 782, 783, 784, 785, 786, 787, 788, 844, 845, 846, 869, 937, 1002, 1004, 1089, 1125, 1132, 1159, 1189, 1225, 1226, 1227, 1228, 1229, 1231

**Anabaena danica** (Nygaard) Komárová et Eloranta

1667 **History:** < TAC Locality: Lake Okutama/ Tokyo/ Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 453 References: 476, 1103

**Anabaena flos-aquae** Brébisson ex Bornet et Flahault

Syn. Anabaena flos-aquae Brébisson ex Bornet et Flahault f. flos-aquae

73 **History:** < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-08-***) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: MA; 25°C; 70-90μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aok) Gene data: 16S rRNA (AF248258) Other strain no.: TAC 32 (K-TAN-32) References: 151, 221, 360, 567, 671, 796, 840, 841, 842, 973, 1159, 1272 Remarks: Unstable

75 **History:** < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-12-***) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 25°C; 70-90μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aok) Other strain no.: TAC 43 (K-TAN-43) References: 567, 621, 1159 Remarks: Unstable

1668 **History:** < TAC Locality: Lake Suwa/Nagano/ Japan (1984-09-13) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aok) Other strain no.: TAC 99 References: 749, 1103

1669 **History:** < TAC Locality: Lake Suwa/Nagano/ Japan (1984-09-13) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aok); Toxic Other strain no.: TAC 100 Remarks: Toxic

1670 **History:** < TAC Locality: Hirosaki Castle/Aomori/ Japan (1990-06-***) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Moat water) Other strain no.: TAC 430 Reference: 675

1671 **History:** < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1991-06-***) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 445 Reference: 675

1672 **History:** < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1991-06-***) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions:
CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 446

References: 476, 675, 1103

1903 History: < TAC Locality: Hirosaki Castle/Aomori/Japan (1990-06-***) Isolator: Niiyama, Yuko
Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Moat water) Other strain no.: TAC 429

Anabaena heterospora* Nygaard


Reference: 1103

Anabaena kisseleviana Elenkin

74 History: < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-08-***) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki Formerly identified as: Anabaena flos-aquae Brébisson ex Bornet et Flahault States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 25°C; 70-90μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 33 (K-TAN-33) References: 50, 323, 567, 585, 586, 840, 841, 842, 1159 Remarks: Unstable

807 History: < Li, Renhui < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-08-***) Isolator: Watanabe, Masayuki
Identified by: Li, Renhui States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 34 Reference: 1103

Anabaena lemmermannii Richter

808 History: < Li, Renhui < TAC Locality: Lake Akan/Hokkaido/Japan (1990-08-***) Isolator: Niiyama, Yuko
Identified by: Li, Renhui; Niiyama, Yuko (Reidentify) Formerly identified as: Anabaena mendotae Trelease States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 437 (A28) References: 151, 675, 1103

833 History: < Li, Renhui < NIVA Other collection strain no.: NIVA CYA 82 Locality: Buskerud, Lake Steinsfjorden/Norway Identified by: Li, Renhui Formerly identified as: Anabaena circinalis Rabenhorst ex Bornet et Flahault States: Unialgal; Clonal; Non-axenic Culture conditions: CT; MG; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Remarks: Unstable

1673 History: < TAC Locality: Lake Akan/Hokkaido/Japan (1990-08-***) Isolator: Niiyama, Yuko
Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 438 References: 476, 675, 1103

Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 475 Reference: 1103

Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 476

1676 History: < TAC Locality: Lake Teganuma/Chiba/Japan (2001-09-26) Isolator: Niiyama, Yuko
Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 483

Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 583 Reference: 1103
Anabaena minispora M.Watanabe

1921 History: < TAC Locality: Rebun Isl., Lake Kushu/Hokkaido/Japan (2006-07-21) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 584 Reference: 1103

Anabaena mucosa* Komárkova-Legnerová et Eloranta

809 History: < Li, Renhui < TAC Locality: Lake Toro/Hokkaido/Japan (1990-08-***) Isolator: Niiyama, Yuko Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 426 (A10) Reference: 675 Remarks: Unstable

1677 History: < TAC Locality: Lake Toro/Hokkaido/Japan (1990-08-***) Isolator: Niiyama, Yuko Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 425 References: 476, 675, 1103, 1182

Anabaena mucosa* Komárkova-Legnerová et Eloranta

1925 History: < TAC Locality: Lake Toro/Hokkaido/Japan (2002-10-01) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: *Akinete not observed Other strain no.: TAC 534

1926 History: < TAC Locality: Lake Toro/Hokkaido/Japan (2002-10-01) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: *Akinete not observed Other strain no.: TAC 535

1927 History: < TAC Locality: Lake Toro/Hokkaido/Japan (2002-10-01) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: *Akinete not observed Other strain no.: TAC 536

1928 History: < TAC Locality: Lake Toro/Hokkaido/Japan (2002-10-01) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: *Akinete not observed Other strain no.: TAC 537

Anabaena oumiana M.Watanabe

1678 History: < TAC Locality: Lake Inbanuma/Chiba/Japan (1996-08-10) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 464 Reference: 1103

1679 History: < TAC Locality: Lake Inbanuma/Chiba/Japan (1996-08-10) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.:
CONTENTS

TAC 466 Reference: 1182

1904 History: < TAC Locality: Funada-ike Pond/Chiba/Japan (2002-08-28) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 509 Reference: 1103

1931 History: < TAC Locality: near Koyama-ike Pond/Tottori/Japan Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 568 Reference: 1103

1932 History: < TAC Locality: near Koyama-ike Pond/Tottori/Japan Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 569

1933 History: < TAC Locality: near Koyama-ike Pond/Tottori/Japan Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 570

Anabaena planctonica Brunnthaler

80 History: < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-12-** ) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Anabaena solitaria Klebahn f. solitaria States: Unialgal; Clonal; Axenic Culture conditions: MG; 20°C; 70-90μmol/m²/s; 20 D Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 42 (K-TAN-42) References: 221, 477, 567, 671, 1159 Remarks: Unstable

81 History: < Li, Renhui < TAC Locality: Lake Ohnuma/Hokkaido/Japan (1990-08-** ) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Axenic Culture conditions: MG; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 421 (A3) References: 203, 477, 675

82 History: < Li, Renhui < TAC Locality: Lake Tofutsu/Hokkaido/Japan (1990-08-** ) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Axenic Culture conditions: MG; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 422 (A4) Reference: 675

83 History: < Li, Renhui < TAC Locality: Lake Tofutsu/Hokkaido/Japan (1990-08-** ) Isolator: Niiyama, Yuko Identified by: Li, Renhui States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 424 (A7) Reference: 675

84 History: < Li, Renhui < TAC Locality: Lake Tofutsu/Hokkaido/Japan (1990-08-** ) Isolator: Niiyama, Yuko Identified by: Li, Renhui States: Unialgal; Clonal; Axenic Culture conditions: CT; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 434 (A25) Reference: 675

85 History: < Li, Renhui < CCAP Other collection strain no.: CCAP 1403/19 Locality: Esthwaite Water/England, Cambria/U.K. Isolator: Jaworski, G. H. M. Identified by: Li, Renhui Formerly identified as: Anabaena solitaria Klebahn States: Unialgal; Clonal; Axenic Culture conditions: CT; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko)

86 History: < Li, Renhui < CCAP Other collection strain no.: CCAP 1403/27 Locality: Bletham Tarn/England, Cambria/U.K. Isolator: Jaworski, G. H. M. Identified by: Li, Renhui Formerly identified as: Anabaena solitaria Klebahn States: Unialgal; Clonal; Axenic Culture conditions: CT; 20°C; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics:
Cyanobacterial water bloom (aoko)

817 History: < Li, Renhui Locality: Lake Inbanuma/Chiba/Japan (1995-05-**)) Isolator: Li, Renhui Identified by: Li, Renhui States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20°C; 12-22μmol/m²/s; 2 M Habitats: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Offensive taste and odor Other strain no.: Inba 2

834 History: < Li, Renhui < NIVA Other collection strain no.: NIVA CYA 66 Locality: Aust-Agder, Lake Langsævatn/Norway (1979-**-**)) Identified by: Li, Renhui Formerly identified as: Anabaena solitaria Klebhan f. planktonica (Brunnthal) Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20°C; 12-22μmol/m²/s; 2 M Habitats: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko)

1680 History: < TAC Locality: Lake Toro/Hokkaido/Japan (1990-08-**)) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitats: Freshwater (Lake water) Other strain no.: TAC 423 Reference: 675

1681 History: < TAC Locality: Lake Inbanuma/Chiba/Japan (1996-08-10) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitats: Freshwater (Lake water) Other strain no.: TAC 465

1682 History: < TAC Locality: Nigo-ike Pond/Hyogo/Japan (2001-07-25) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitats: Freshwater (Pond water) Other strain no.: TAC 471

1683 History: < TAC Locality: Nigo-ike Pond/Hyogo/Japan (2001-07-25) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitats: Freshwater (Pond water) Other strain no.: TAC 472 Reference: 1103

1723 History: < Li, Renhui Locality: Lake Yamanaka/Yamanashi/Japan (1998-07-**)) Isolator: Li, Renhui Identified by: Li, Renhui (1998-07-**)) States: Unialgal Culture conditions: CB; CT; 20°C; 12-22μmol/m²/s; 2 M Habitats: Freshwater (Lake water) Characteristics: Offensive odor; Resting spore forming Other strain no.: yama-2

1934 History: < TAC Locality: Lake Shinotsu/Hokkaido/Japan (2003-07-29) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitats: Freshwater (Lake water) Other strain no.: TAC 561 Reference: 1103

Anabaena pseudocompacta M.Watanabe

79 History: < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-07-**)) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Anabaena spirocida Klebhan f. spirocida States: Unialgal; Clonal; Axenic Culture conditions: CB; 25°C; 70-90μmol/m²/s; 1 M Habitats: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 28 (K-TAN-28) References: 221, 477, 567 Remarks: Unstable

1684 History: < TAC Locality: Nigo-ike Pond/Hyogo/Japan (2001-07-25) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitats: Freshwater (Pond water) Other strain no.: TAC 477 Reference: 1182

1935 History: < TAC Locality: Hachirogata/Akita/Japan (2002-07-30) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitats: Freshwater (Ditch water) Other strain no.: TAC 539

1936 History: < TAC Locality: Hachirogata/Akita/Japan (2002-07-30) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitats: Freshwater (Ditch water) Other strain no.: TAC 541
**Anabaena pseudocompacta** M.Watanabe

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**Anabaena reniformis** Lemmermann emend. Aptekarji

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References: 1103, 1182

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| Other strain no. | TAC 462 | TAC 461 | TAC 458 | TAC 459 | TAC 460 | TAC 461 | TAC 462 | TAC 478 | TAC 479 | TAC 480 | TAC 481 | TAC 484 |
1941 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20℃; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 542 Reference: 1103

1942 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20℃; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 543 Reference: 1103

1943 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20℃; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 544 Reference: 1103

1944 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20℃; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 545 Reference: 1103

1945 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20℃; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 546 Reference: 1103

1946 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20℃; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 547 Reference: 1103

1947 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20℃; 4-6μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 548 Reference: 1103

1948 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20℃; 4-6μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 549 Reference: 1103

1949 History: < TAC Locality: Fujiidera/Osaka/Japan (2002-10-04) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20℃; 4-6μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 550 Reference: 1103

Anabaena smithii (Komárek) M.Watanabe

818 History: < Li, Renhui < TAC Locality: Lake Barato/Hokkaido/Japan (1989-08-**) Isolator: Watanabe, Masayuki Identified by: Li, Renhui States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20℃; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 116 Reference: 203, 675

819 History: < Li, Renhui < TAC Locality: Lake Barato/Hokkaido/Japan (1990-08-**) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20℃; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 428 (A14) References: 675, 1103

820 History: < Li, Renhui < TAC Locality: Hirosaki/Aomori/Japan (1990-06-**) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20℃; 12-22μmol/m²/s; 2 M Habitat: (Freshwater) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 431 (A18) References: 675, 1103

821 History: < Li, Renhui < TAC Locality: Hirosaki/Aomori/Japan (1990-06-**) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20℃; 12-22μmol/m²/s; 2 M Habitat: (Freshwater) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 432 (A19) References: 477, 675

822 History: < Li, Renhui < TAC Locality: Lake Akan/Hokkaido/Japan (1991-07-**) Isolator: Niiyama, Yuko Identified by: Li, Renhui States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20℃; 12-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 450 (A51) References: 675, 1103
Anabaena sp.

1651 History: < TAC Locality: Lake Shiroyama/Kanagawa/Japan (2001-10-31) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 500 Reference: 1103

1953 History: < TAC Locality: Lake Mikata/Fukui/Japan (2003-05-15) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 4-6μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 564

Anabaena spiroides Klebahn


1905 History: < TAC Locality: Soe-ike Pond/Hyogo/Japan (2001-11-03) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 20-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TAC 504

Anabaena ucrainica (Schkorbatow) M.Watanabe

263 History: < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-07-***) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Anabaena spiroides Klebahn f. spiroides States: Unialgal; Clonal; Axenic Culture conditions: CT; 25°C; 70-90μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 27 (K-TAN-27) References: 567, 1159 Remarks: Unstable
825 History: < Li, Renhui < TAC Locality: Lake Sagami/Kanagawa/Japan (1991-08-***) Isolator: Niiyama, Yuko Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20°C; 12-22µmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 448 (A48) References: 477, 675

826 History: < Li, Renhui < TAC Locality: Lake Sagami/Kanagawa/Japan (1991-08-***) Isolator: Niiyama, Yuko Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20°C; 12-22µmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 449 (A50) References: 203, 477, 675, 1103

1696 History: < TAC Locality: Lake Tsukui/Kanagawa/Japan Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 22-32µmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TAC 455 References: 1103, 1182

Anabaena variabilis Kützing ex Bornet et Flahault 23 History: < IAM (1983) Other collection strain no.: IAM M-2 States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: MDM (agar); 20°C; 4-10µmol/m²/s; 4 M (25°C; 70-80µmol/m²/s) References: 20, 73, 94, 95, 96, 110, 111, 112, 204, 235, 567, 600, 601, 602, 865, 1002, 1090, 1125

2093 History: < IAM (2007) < Meyers, Jack Other collection strain no.: IAM M-3 States: Unialgal; Clonal; Axenic[2012 Feb] Culture conditions: MDM (agar); 20°C; 13-18µmol/m²/s; 3 M Habitat: Freshwater Characteristics: Mostly fragmented Gene data: 16S rRNA (AB016520); gyrB (AB074772); rpoC1 (AB074795); rpoD1 (AB074822) References: 2, 3, 4, 5, 205, 286, 287, 361, 372, 455, 456, 523, 535, 555, 559, 561, 590, 591, 813, 895, 896, 897, 898, 899, 900, 901, 937, 1004, 1097, 1100, 1117, 1197


2095 History: < IAM (2007) < Fujiwara, Shoko (1990) Other collection strain no.: IAM M-204; ATCC 29413 States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: MDM (agar); 20°C; 13-18µmol/m²/s; 3 M Habitat: Freshwater Gene data: 16S rRNA (AB074502); gyrB (AB074766); rpoC1 (AB074789); rpoD1 (AB074816) References: 486, 937, 965, 1016

Anabaena viguieri Denis et Fremy 827 History: < Li, Renhui < TAC Locality: Shikata-futago-ike Pond/Hyogo/Japan (1990-09-***) Isolator: Niiyama, Yuko Identified by: Li, Renhui States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 12-22µmol/m²/s; 2 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 433 (A23) Reference: 675


ANABAENOPSIS : Cyanophyceae

CONTENTS
**Anabaenopsis** sp.

**History:** < TAC  
**Locality:** Lake Barato/Hokkaido/Japan (1990-08-***)  
**Isolator:** Niiyama, Yuko  
**Identified by:** Niiyama, Yuko  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** CB; 20℃; 22-32μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water)  
**Other strain no.:** TAC 427

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**Anacystis marina** (Hansgirg) Drouet et Dailey

**History:** < IAM (2007) < Safferman, R. S.  
**Other collection strain no.:** IAM M-122  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** C (agar); 20℃; 13-18μmol/m²/s; 3 M **Habitat:** Freshwater  
**Other strain no.:** SEC 142

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**ANKISTRODESMUS** : Chlorophyceae

**Ankistrodesmus angustus** Bernard

**History:** < IAM (2007) < BIU (UTEK; 1967)  
**Other collection strain no.:** IAM C-302; SAG 202-3; UTEX 188  
**Isolator:** Rodhe, W.  
**Formerly identified as:** Ankistrodesmus falcatus (Corda) Ralfs  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** Pro (agar); 20℃; 8-15μmol/m²/s; 3 M **Habitat:** Freshwater  
**References:** 38, 513

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**Ankistrodesmus braunii** (Nägeli) Brunnthaler

**History:** < IAM (2007) < BIU (UTEK; 1967)  
**Other collection strain no.:** IAM C-303; UTEX 241; (BIU 241); CCAP 202/4A; SAG 202-4  
**Locality:** Czechoslovakia  
**Isolator:** Czurda, V.  
**Formerly identified as:** Ankistrodesmus falcatus (Corda) Ralfs var. mirabilis W. et G.S. West  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** C (agar); 20℃; 8-15μmol/m²/s; 3 M **Habitat:** Freshwater  
**Other strain no.:** Vischer 9

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**Ankistrodesmus falcatus** (Corda) Ralfs var. acicularis (A. Braun) G.S. West

**History:** < IAM (2007) < BIU (UTEK; 1961)  
**Other collection strain no.:** IAM C-88; UTEX 101; CCAP 202/11D(?)  
**Locality:** Indiana/U.S.A.  
**Isolator:** Starr, R. C.  
**States:** Unialgal; Clonal; Axenic[2013 Jan]  
**Culture conditions:** C (agar); 20℃; 8-15μmol/m²/s; 3 M **Habitat:** Freshwater  
**Reference:** 513
Ankistrodesmus falcatus (Cord.) Ralfs var. stipatus (Chodat) Lemmermann

2196 History: < IAM (2007) < BIU (UTEX) Other collection strain no.: IAM C-304; CCAP 202/5A; UTEX 242; SAG 202-5; Prague 262 Locality: Czechoslovakia Isolator: Czurda, V. States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Habitat: Freshwater

Ankistrodesmus nannoselene Skuja

2197 History: < IAM (2007) < BIU (UTEX; 1967) Other collection strain no.: IAM C-305; CCAP 202/6A; SAG 202-6; UTEX 243 Locality: Siggforsajon/Sweden Isolator: Rodhe, W. States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Other strain no.: Rodhe 1632

APHANIZOMENON : Cyanophyceae

Aphanizomenon flos-aquae (L.) Ralfs ex Bornet et Flahault

1258 History: < Sano, Tomoharu Locality: Lake Suigetsu/Fukui/Japan (2000-12-05) Isolator: Sano, Tomoharu Identified by: Otsuka, Shigeto States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20 °C; 70-90 μmol/m²/s; 1 M Habitat: Brackish water (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: SUI-CT-1

1726 History: < Li, Renhui Locality: U.K. (1997-08.**) Identified by: Li, Renhui (1997-08.**) States: Unialgal Culture conditions: MG; 20 °C; 12-22 μmol/m²/s; 2 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Nitrogen fixation; Motile; Resting spore forming Other strain no.: Aphan E

1727 History: < Li, Renhui Locality: Germany (1997-07.**) Isolator: Li, Renhui Identified by: Li, Renhui (1997-07.**) States: Unialgal Culture conditions: MG; 20 °C; 12-22 μmol/m²/s; 2 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: Aphan Gmü


APHANOCAPSA : Cyanophyceae

Aphanocapsa montana Cramer

416 History: < Watanabe, Makoto M. Locality: Toyamasawa/Tochigi/Japan (1987-04-30) Isolator: Kasai, Fumie Identified by: Watanabe, Makoto M. States: Unialgal; Non-clonal; Non-axenic Culture conditions: CSi; CSi + Cu; 20 °C; 4-10 μmol/m²/s; 4 M (20 °C; 15-27 μmol/m²/s) Habitat: Freshwater (River water) Other strain no.: NK-24 References: 139, 567, 1018 Remarks: Cryopreserved

APIOCYSTIS : Chlorophyceae

Apiocystis brauniana Nägeli

1020 History: < Moriya, Mayumi Locality: Shishizuka-ohike Pond/Ibaraki/Japan (2002-02-**) Isolator: Moriya, Mayumi Identified by: Moriya, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 15 °C; 15-22 μmol/m²/s; 2 M Habitat: Freshwater (Pond water)
Characteristics: Epiphytic Other strain no.: #115

**ARTHROSPIRA** : Cyanophyceae

*Arthrospira platensis* (Nordstedt) Geitler
Syn. Arthrospira platensis Geomont

39 History: < IAM (1983) Other collection strain no.: IAM M-135 (=M-222) Locality: Lake Chad/Chad Formerly identified as: Spirulina platensis (Geomont) Geitler States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: SOT; 20°C; 4-10μmol/m²/s; 4 M (25°C; 60-70μmol/m²/s)
Habitat: Salt water Characteristics: Hydrogen evolution; Contains good quality of proteins Gene data: 16S rRNA (AB074508); 16S rRNA (DQ393279); CpcB & CpcA (DQ393287); crtB (AB001284); cyaA (D49530); cyaG (D49531); DNA for adenylylate cyclase (D49692); groEL (AB039632); gyrB (AB074765); MS (AB548759); mth (AB282753); recA (U33924); rpoC1 (AB074788); rpoD1 (AB074815); Total genome sequence (AP011615)
References: 20, 92, 141, 235, 467, 480, 481, 482, 483, 527, 567, 769, 770, 937, 1003, 1062, 1079, 1133, 1147, 1151, 1159


46 History: < IAM (1983) Other collection strain no.: IAM M-185 Locality: Lake Texcoco/Mexico Formerly identified as: Spirulina platensis (Geomont) Geitler States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: SOT; 20°C; 4-10μmol/m²/s; 4 M (25°C; 60-70μmol/m²/s)
Habitat: Salt water Characteristics: Cyanobacterial water bloom (aoko); Hydrogen evolution Gene data: CpcB & CpcA (DQ393288) References: 17, 20, 26, 27, 139, 235, 383, 467, 567, 1003, 1147, 1151, 1159

597 History: < Hagiwara, Tomiji Locality: Lake Teganuma/Chiba/Japan (1990-07-24) Isolator: Hagiwara, Tomiji Identified by: Hagiwara, Tomiji Formerly identified as: Spirulina platensis (Geomont) Geitler States: Unialgal; Non-clonal; Non-axenic Culture conditions: MA; 22°C; 60-70μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: T-43 References: 139, 567

**ASTERIONELLOPSIS** : Bacillariophyceae

*Asterionellopsis glacialis* (Castracane) Round
Syn. Asterionella glacialis Castracane

265 History: < Sawaguchi, Tomohiro Locality: Matoya Bay/Mie/Japan (1984-09-01) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 10°C; 15-20μmol/m²/s; 2 M Habitat: Marine (Seawater) Other strain no.: MB-B-1

417 History: < Riquelme, Carlos E. Locality: Maizuru Bay/Kyoto/Japan (1985-10-12) Isolator: Riquelme, Carlos E. Identified by: Riquelme, Carlos E. States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 15°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Not growing under axenic condition

**ASTEROCHLORIS** : Trebouxiophyceae

*Asterochloris ct. glomerata* (Warén) Friedl

1298 History: < Ohmura, Yoshihito Locality: Chikurin-ji Temple/Hiroshima/Japan (2002-03-24) Isolator: Ohmura, Yoshihito Identified by: Ohmura, Yoshihito States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Cladia aggregata on humus) Characteristics: Symbiotic; Isolated from
Cladia aggregata (lichen) on humus Other strain no.: AYO4871 Remarks: Cryopreserved

1299 History: < Ohmura, Yoshihito Locality: Chikurin-ji Temple/Hiroshima/Japan (2002-03-24) Isolator: Ohmura, Yoshihito Identified by: Ohmura, Yoshihito States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20℃; 8-15μmol/m2/s; 6 M (25℃; 70-80μmol/m2/s) Habitat: Terrestrial (The lichen Cladonia macilenta on a bark roof) Characteristics: Symbiotic; Isolated from Cladonia macilenta (lichen) on wood Other strain no.: AYO4872 Remarks: Cryopreserved

1300 History: < Ohmura, Yoshihito Locality: Chikurin-ji Temple/Hiroshima/Japan (2002-03-24) Isolator: Ohmura, Yoshihito Identified by: Ohmura, Yoshihito States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20℃; 8-15μmol/m2/s; 6 M (25℃; 70-80μmol/m2/s) Habitat: Terrestrial (The lichen Cladonia aggregata on a stone wall) Characteristics: Symbiotic; Isolated from Cladia aggregata (lichen) on rock Other strain no.: AYO4874 Remarks: Cryopreserved

1301 History: < Ohmura, Yoshihito Locality: Chikurin-ji Temple/Hiroshima/Japan (2002-03-24) Isolator: Ohmura, Yoshihito Identified by: Takeshita, Shunji States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20℃; 8-15μmol/m2/s; 6 M (25℃; 70-80μmol/m2/s) Habitat: Terrestrial (The lichen Cladonia aggregata on soil) Characteristics: Symbiotic; Isolated from Cladia aggregata (lichen) on soil Other strain no.: AYO4875 Remarks: Cryopreserved

ASTEROCOCCUS : Chlorophyceae

ASTEROCOCCUS superbus (Cienkowski) Scherffel

1331 History: < Nakazawa, Atsushi Locality: Tamiyaji-ohike Pond/Mie/Japan (2000-09-***) Isolator: Nakazawa, Atsushi Identified by: Nakazawa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20℃; 22-27μmol/m2/s; 1 M Habitat: Freshwater (Pond water) Gene data: rbcL (AB175937); rbcL (AB175938); rbcL (AB175939) Other strain no.: Asteroco-4 References: 662, 665

2198 History: < IAM (2007) < BIU (UTEX) Other collection strain no.: IAM C-299; CCAP 3/3A; UTEX 88 Locality: Amiens/France Isolator: George, E. A. States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20℃; 8-15μmol/m2/s; 3 M Habitat: Freshwater

ASTREPHOMENE : Chlorophyceae

ASTREPHOMENE gubernaculifera Pocock

418 History: < Nozaki, Hisayoshi Locality: Kanagawa/Japan (1981-04-***) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Axenic Culture conditions: VTAC; 20℃; 15-22μmol/m2/s; 20 D Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Mating type(−); Crosses with NIES-419 Gene data: atpB (AB014022); atpB (AB014023); psaA (AB044234); psaA (AB044234); psbA (AB044458); psbC (AB0444513); psbC (AB0444514); rbcL (D63428); rbcL-462 intron (AB076095) Other strain no.: 1520-4 (−) References: 567, 662, 690, 715, 733, 738, 740, 743

419 History: < Nozaki, Hisayoshi Locality: Kaisei, Yoshidajima/Kanagawa/Japan (1981-04-***) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Axenic Culture conditions: VTAC; 20℃; 15-22μmol/m2/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Mating type(+); Crosses with NIES-418 Other strain no.: 1520-1 (+) References: 567, 690


Aulosira fertilissima Ghose (in IAM)

**History:** < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1394

**Locality:** Monroe County/Indiana/U.S.A. (1962-10-***)

**Isolator:** Brooks, A. E.

**Identified by:** Brooks, A. E.

**States:** Unialgal; Clonal; Non-axenic

**Culture conditions:** VTAC; 20°C; 22-27μmol/m²/s; 20 D

**Habitat:** (Soil)

**Characteristics:** Mixotrophic; Heterothallic

**Gene data:** psbC (AB044181); psaA (AB044459); psbC (AB044515); psbC (AB044516); psbC (AB044517); rbcL (AB0444169); rbcL (AB0444170)

**References:** 39, 733

Aulacoseira granulata (Ehrenberg) Simonsen

**History:** < Hiwatarı, Takehiko

**Locality:** Lake Kasumigaura/Ibaraki/Japan (1983-05-09)

**Isolator:** Hiwatarı, Takehiko

**Identified by:** Mizuno, Makoto; Kawachi, Masanobu (Reidentify)

**Formerly identified as:** Melosira granulata (Ehrenberg) Ralfs var. angustissima O.Müller f. spiralis O.Müller

**States:** Unialgal; Clonal; Axenic

**Culture conditions:** VTAC; 20°C; 22-27μmol/m²/s; 1 M

**Habitat:** Freshwater (Paddy soil)

**Characteristics:** Authentic strain; Heterothallic; Isogamy; Mating type(+); Crosses with NIES-565

**Gene data:** atpB (AB014024); psaA (AB044236); psaaA (AB044237); psaaA (AB044238); psaaB (AB044460); psaaB (AB044458); psaaB (AB044519); rbcL (D63429)

**Other strain no.:** 1620-3-2

**References:** 567, 662, 690, 715, 733, 738, 740

Aulacoseira laxa Kirchner ex Bornet et Flauhault

**History:** < IAM (1983) Other collection strain no.: IAM M-128

**Locality:** Pusa/India

**Isolator:** Venkataraman, G. S.

**Formerly identified as:** Aulacoseira fertilissima

**States:** Unialgal; Non-clonal; Axenic

**Culture conditions:** MDM (agar); 20°C; 4-10μmol/m²/s; 4 M

**Habitat:** Freshwater (Paddy soil)

**Characteristics:** Nitrogen fixation

**References:** 221, 235, 356, 1159

**Remarks:** Cryptopreserved

Aurearenophyceae

Aurearenophyceae

**History:** < TKB

**Locality:** Isonoura Beach/Wakayama/Japan (2003-05-***)

**Isolator:** Kai, Atsushi

**Identified by:** Kai, Atsushi (2003-**-***)

**States:** Unialgal; Clonal; Non-axenic

**Culture conditions:** f/2; 25°C; 180-200μmol/m²/s; 1 M

**Habitat:** Marine (Sand)

**Characteristics:** Authentic strain

**Other strain no.:** TKB-337

**Reference:** 331

**History:** < TKB

**Locality:** Noma Beach/Aichi/Japan (2004-**-***)

**Isolator:** Kai, Atsushi

**Identified by:** Kai, Atsushi (2004-**-***)

**States:** Unialgal; Clonal; Non-axenic

**Culture conditions:**
**AUXENOCHLORELLA**: Trebouxiophyceae

*Auxenochlorella protothecoides* (Krüger) Kalina et Puncochárová

Syn. Chlorella protothecoides Krüger

**History**: < IAM (2007) < BIU (UTEX; 1965) **Other collection strain no.**: IAM C-201; UTEX 838; CCAP 211/22 **Isolator**: Lewin, Ralph A. **Identified by**: Re-identified at NIES by DNA sequencing **Formerly identified as**: Chlorella sp. **States**: Unialgal; Clonal **Culture conditions**: Pro (agar); 20°C; 8-15μmol/m²/s; 3 M **Gene data**: 18S rRNA (AB488571) **Reference**: 385 **Remarks**: Cryopreserved

**BASICHLAMYS**: Chlorophyceae

*Basichlamys sacculifera* (Scherffel) Skuja

Syn. Gonium sacculiferum Scherffel

**History**: < Nozaki, Hisayoshi **Locality**: Fujisawa/Kanagawa/Japan (1983-08-01) **Isolator**: Nozaki, Hisayoshi **Identified by**: Nozaki, Hisayoshi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: AF-6; 20°C; 22-27μmol/m²/s; 1 M **Habitat**: Freshwater (Pond sediment) **Gene data**: atpB (AB014015); psaA (AB044416); psaB (AB044467); psaB (AB044468); psbC (AB044526); rbcL (D63430) **Other strain no.**: 3907-1 **References**: 567, 695, 715, 718, 733, 738, 740

**BATHYCOCCUS**: Prasinophyceae

*Bathycoccus prasinos* Eikrem et Throndsen

**History**: < RCC (2010) **Other collection strain no.**: RCC 419 **Locality**: English Channel/Britanny Coast/Canada **Isolator**: Le Gall, F.; Le Gall, F. (Re-isolation) **Identified by**: Confirmed at RCC by DNA sequencing **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: K; 15°C; 4-8μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Other strain no.**: RD010614-71-3

**BATRACHOSPERMUM**: Florideophyceae

*Batrachospermum atrum* (Hudson) Harvey

**History**: < TKB (2005-07-**) **Locality**: Hashikui Beach/Wakayama/Japan **Isolator**: Kai, Atsushi (2005-**-**) **Identified by**: Kai, Atsushi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: f/2; 25°C; 180-200μmol/m²/s; 1 M **Habitat**: Marine (Sand) **Other strain no.**: TKB-338 **Reference**: 331
**CONTENTS**

1456 **History:** < Higa, Atsushi **Locality:** Fukui/Japan (2003-05-25) **Isolator:** Higa, Atsushi **Identified by:** Kumano, Shigeru (2003-**.**-**) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12\(\mu\)mol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; CR+EN **Other strain no.:** BF1 **Reference:** 142

**Batrachospermum helminthosum** Bory

1457 **History:** < Higa, Atsushi **Locality:** Fukui/Japan (2003-05-25) **Isolator:** Higa, Atsushi **Identified by:** Kumano, Shigeru (2003-**.**-**) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12\(\mu\)mol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; NT **Other strain no.:** BF3 **Reference:** 142

**Batrachospermum** sp.

1459 **History:** < Kawachi, Masanobu **Locality:** Kuma River/Kumamoto/Japan (2001-11-26) **Isolator:** Iwaki, Hiroyuki **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 15°C; 3-12\(\mu\)mol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic **Other strain no.:** KUM-2

1460 **History:** < Higa, Atsushi **Locality:** Okubo-ga/Okinawa/Japan (2002-03-16) **Isolator:** Higa, Atsushi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12\(\mu\)mol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic **Other strain no.:** BO2

**Batrachospermum turfosum** Bory

Syn. Batrachospermum vagum (Roth) Agardh

2136 **History:** < IAM (2007) **Other collection strain no.:** IAM R-4 **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; Bold 3N; 20°C; 3-12\(\mu\)mol/m²/s; 3 M **Characteristics:** VU

**Batrachospermum virgato-decaisneanum** Sirodot

1458 **History:** < Higa, Atsushi **Locality:** Fukui/Japan (2003-05-25) **Isolator:** Higa, Atsushi **Identified by:** Kumano, Shigeru (2003-**.**-**) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12\(\mu\)mol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; CR+EN **Other strain no.:** BF2

**BICOSOCA** : Bicoecea

**Bicosoeca** sp.

1438 **History:** < TKB **Locality:** Akashi/Hyogo/Japan (2004-12-10) **Isolator:** Yubuki, Naoji **Identified by:** Yubuki, Naoji **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** SUY 1/10 + Wheat; 20°C; 0\(\mu\)mol/m²/s; 20 D **Habitat:** Marine (Seawater) **Characteristics:** Heterotrophic; Benthic **Other strain no.:** TKB-211 (NY0158)

**BICETOLOWIELLA** : Chlorarachniophyceae

**Bigelowiella natans** Moestrup

2677 **History:** < RCC (2010) **Other collection strain no.:** RCC 337 **Locality:** Mediterranean Sea (1999-09-30) **Isolator:** Partensky, F.; Le Gall, F. (Re-isolation) **Identified by:** Confirmed at RCC by DNA sequencing **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** ESM; 20°C; 22-32\(\mu\)mol/m²/s; 1 M **Habitat:** Marine (Seawater) **Other strain no.:** PROSOPE_153-1

**BLIDINGIA** : Ulvophyceae

**Blidingia minima** (Nägeli) Kylin

1837 **History:** < TKB **Locality:** Yumenoshima/Tokyo/Japan (2005-01-**) **Isolator:** Nakayama, Takeshi **Identified by:** Nakayama, Takeshi (2006-**.**-**) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** IMK; 20°C; 20-30\(\mu\)mol/m²/s; 2 M **Habitat:** (Seawater) **Other strain no.:** TKB-271

**BODO** : Kinetoplastea

**Bodo saltans** Ehrenberg
CONTENTS

1439  **History:** < TKB  **Locality:** Tsukuba/Ibaraki/Japan (2002-10-13)  **Isolator:** Yubuki, Naoji  **Identified by:** Yubuki, Naoji  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** URO + Wheat; 15°C; 0μmol/m²/s; 1 M  **Habitat:** Freshwater (Water)  **Characteristics:** Heterotrophic  **Other strain no.:** TKB-013 (NY0117)

**BOLDOMONAS** : Bolidophyceae

**Bolidomonas mediterranea** Guillou et Chrétiennot-Dinet

**History:** < RCC (2010)  **Other collection strain no.:** RCC 238; CCMP 1867  **Locality:** Mediterranean Sea (1996-06-19)  **Isolator:** Vaulot, Daniel  **Identified by:** Guillou, L.  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** K; 20°C; 22-32μmol/m²/s; 14 D  **Habitat:** Marine (Seawater)  **Characteristics:** Authentic strain  **Other strain no.:** MIN 129-20m Aa

**Bolidomonas pacifica** Guillou et Chrétiennot-Dinet

**History:** < RCC (2010)  **Other collection strain no.:** RCC 205; CCMP 1866  **Locality:** Equatorial Pacific (1994-11-11)  **Isolator:** Vaulot, Daniel  **Identified by:** Guillou, L.  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** IMK; 20°C; 22-32μmol/m²/s; 1 M  **Habitat:** Marine (Seawater)  **Characteristics:** Authentic strain  **Other strain no.:** OLI 31 SE3

**Bolidomonas** sp.

**History:** < RCC (2010)  **Other collection strain no.:** RCC 852  **Locality:** South East Pacific (2004-11-02)  **Isolator:** Vaulot, Daniel; Le Gall, F. (Re-isolation)  **Identified by:** Confirmed at RCC by DNA sequencing  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** AF-6; 20°C; 15-22μmol/m²/s; 4 M  **Habitat:** Freshwater (Pond water)  **Gene data:** 18S rRNA (AB780364); 18S rRNA (JQ941954); rbcL (JQ941955)  **Remarks:** Cryopreserved; very slow growth

**BOTRYDIOPSIS** : Xanthophyceae

**Botrydiopsis arrhiza** Borzi

**History:** < CCAP  **Other collection strain no.:** CCAP 222/1B  **Locality:** England/U.K.  **Isolator:** George  **States:** Unialgal  **Culture conditions:** AF-6; 20°C; 32-40μmol/m²/s; 2 M  **Habitat:** Freshwater (Lake water)  **Reference:** 137

**BOTRYDIUM** : Xanthophyceae

**Botrydium granulatum** (L.) Greville

**History:** < CCAP  **Other collection strain no.:** CCAP 805/3A  **Isolator:** Vischer, W.  **States:** Unialgal; Clonal; Axenic[2013 Jan]  **Culture conditions:** AF-6; 20°C; 32-40μmol/m²/s; 2 M  **Habitat:** Freshwater (Lake water)  **Reference:** 137

**BOTRYOCOCCUS** : Trebouxiophyceae

**Botryococcus braunii** Kützing

**History:** < Mori, Fumi  **Locality:** Imuta-ike Pond/Kagoshima/Japan (1997-06-***)  **Isolator:** Mori, Fumi  **Identified by:** Mori, Fumi  **States:** Unialgal; Clonal; Axenic[2013 Jan]  **Culture conditions:** AF-6; 20°C; 15-22μmol/m²/s; 4 M  **Habitat:** Freshwater (Pond water)  **Gene data:** 18S rRNA (AB780364); 18S rRNA (JQ941954); rbcL (JQ941955)  **Remarks:** Cryopreserved; very slow growth

**BRACHIOMONAS** : Chlorophyceae

**Brachiomonas submarina** Bohlin

**History:** < Sawaguchi, Tomohiro  **Locality:** Hachinohe Harbor/Aomori/Japan (1986-08-13)

41
**CONTENTS**

Isolator: Sawaguchi, Tomohiro  **Identified by:** Sawaguchi, Tomohiro  **States:** Unialgal; Clonal; Axenic  **Culture conditions:** ESM; 15°C; 20-30μmol/m²/s; 1 M  **Habitat:** Brackish water (Water)  **Other strain no.:** 86-SuHH-2  **Reference:** S67

**BRACTEACOCCUS** : Chlorophyceae

**Bracteacoccus giganteus** Bischoff et Bold

**History:** < IAM (2007)  **Other collection strain no.:** IAM C-388  **States:** Unialgal; Clonal; Axenic[2013 Jan]  **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M

**Bracteacoccus** sp.

**History:** < IAM (2007)  **Other collection strain no.:** IAM C-172  **Locality:** Marble Point/Antarctica  **Isolator:** Holm-Hansen, O.  **States:** Unialgal; Clonal; Axenic[2013 Jan]  **Culture conditions:** C; 20°C; 8-15μmol/m²/s; 1 M  **Other strain no.:** Holm-Hansen M-37

**BUMILLERIOPSIS** : Xanthophyceae

**Bumilleriopsis petersonis** Vischer et Pascher

**History:** < Inouye, Isao  **Locality:** Nabeta Bay/Shizuoka/Japan (2007-04-***)  **Isolator:** Chikuni, Tomoko  **Identified by:** Chikuni, Tomoko (2007-***)  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** C; 20°C; 10-15μmol/m²/s; 1 M  **Habitat:** Freshwater (Water)  **Other strain no.:** TKB-353

**CAFETERIA** : Bicoeece

**Cafeteria roenbergensis** Fenchel et Patterson

**History:** < Moriya, Mayumi  **Locality:** Nirigahama/Wakayama/Japan (2002-01-04)  **Isolator:** Moriya, Mayumi  **Identified by:** Moriya, Mayumi  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** SUY 1/10; 15°C; 0μmol/m²/s; 1 M  **Habitat:** Marine (Seawater)  **Characteristics:** Phagotrophic; Heterotrophic  **Other strain no.:** #106

**CALCIDISCUS** : Prymnesiophyceae

**Calcisicus leptoporus** (Murray et Blackman) Loeblich Jr. et Tappan

**History:** < Kawachi, Masanobu  **Locality:** Hachijo Isl., Yaene Harbor/Tokyo/Japan (2002-01-23)  **Isolator:** Noël, Mary-Hélène  **Identified by:** Noël, Mary-Hélène  **States:** Unialgal; Clonal; Non-axenic; Coccolith[+][2013 Jan]  **Culture conditions:** MNK; 20°C; 25-40μmol/m²/s; 14-20 D  **Habitat:** Marine (Seawater)  **Other strain no.:** MH 34

**History:** < Kawachi, Masanobu  **Locality:** East China Sea (2003-08-06)  **Isolator:** Noël, Mary-Hélène  **Identified by:** Noël, Mary-Hélène  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** MNK; 20°C; 25-40μmol/m²/s; 14-20 D  **Habitat:** Marine (Seawater)  **Other strain no.:** MH 68

**CALOTHRIX** : Cyanophyceae

**Calothrix brevisima** G.S. West

**History:** < IAM (1983)  **Other collection strain no.:** IAM M-7 (=M-249)  **Locality:** Palau Isl./Palau (1941-09-***)  **Isolator:** Watanabe, Atsushi  **Identified by:** Negoro, Ken-ichiro  **States:** Unialgal; Non-clonal; Axenic  **Culture conditions:** MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s)  **Habitat:** Freshwater (Soil)  **Characteristics:** Nitrogen fixation; Chromatic adaptation  **Gene data:** 16S rRNA (AB074504); gyrB (AB074768); rpoC1 (AB074791); rpoD1 (AB074818)  **References:** 235, 567, 843, 937, 1123, 1125  **Remarks:** Cryopreserved

**History:** < IAM (2007) < Tsuzuki, Mikio (2005) < IAM (1994)  **Other collection strain no.:** IAM M-277 (=M-37)  **Isolator:** Ishikawa, Masako  **Identified by:** Fukushima, Hiroshi; Maruyama, Ko  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** MDM (agar); 20°C; 13-18μmol/m²/s; 3
M Habitat: Terrestrial

**Calothrix crustacea** Thuret ex Bornet et Flauhault

266 History: < IAM (1983) Other collection strain no.: IAM M-171 Locality: Oshoro Bay/Hokkaido/Japan (1972-09-**) Isolator: Watanabe, Makoto M.; Ichimura, Terunobu

Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Non-axenic Conditions: f/2; 20°C; 4-10μmol/m²/s; 6 M (20°C; 15-27μmol/m²/s) Habitat: Marine (Seawater) References: 235, 567, 1147, 1163 Remarks: Cryopreserved

**Calothrix elenkinii** Kossinskaja

2098 History: < IAM (2007) < Ishikawa, Masako Other collection strain no.: IAM M-61 Isolator: Ishikawa, Masako Identified by: Maruyama, Ko States: Unialgal; Clonal; Axenic[2012 Feb] Culture conditions: MDM (agar); 20°C; 13-18μmol/m²/s; 3 M Other strain no.: Ishikawa 103X (1) W-N-F

**Calothrix gracilis** Fritsch

2099 History: < IAM (2007) < Ishikawa, Masako Other collection strain no.: IAM M-55 Isolator: Ishikawa, Masako Identified by: Maruyama, Ko States: Unialgal; Clonal; Non-axenic Conditions: MDM (agar); 20°C; 13-18μmol/m²/s; 3 M Other strain no.: Ishikawa 73. O161W

2100 History: < IAM (2007) < Ishikawa, Masako Other collection strain no.: IAM M-56 Isolator: Ishikawa, Masako Identified by: Maruyama, Ko States: Unialgal; Clonal; Axenic[2012 Feb] Culture conditions: MDM (agar); 20°C; 13-18μmol/m²/s; 3 M Other strain no.: Ishikawa 78. F243D

**Calothrix parasitica** Thuret ex Bornet et Flauhault


Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic Conditions: f/2; 20°C; 4-10μmol/m²/s; 6 M (20°C; 15-27μmol/m²/s) Habitat: Marine (Seaweed) Characteristics: Endophyte in Nemalion (Rhodophyceae) References: 139, 235, 567 Remarks: Cryopreserved


**Calothrix scopulorum** Agardh ex Bornet et Flauhault

268 History: < IAM (1983) Other collection strain no.: IAM M-174 Locality: Oshoro Bay/Hokkaido/Japan (1972-09-**) Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Non-axenic Conditions: f/2; MKM (agar); 20°C; 4-10μmol/m²/s; 6 M (20°C; 15-27μmol/m²/s) Habitat: Marine References: 139, 235, 567, 1147, 1163 Remarks: Cryopreserved

**Calothrix sp.**


**CALYPTROSPHAERA** : Prymnesiophyceae

**Calyptrrosphaera sphearoidea** Schiller

997 History: < Kawachi, Masanobu Locality: Hikimoto Bay/Mie/Japan (2001-08-06) Isolator: Hata, Naotsugu Identified by: Kawachi, Masanobu States: Unialgal; Clonal; Non-axenic; Coccolith+(2013 Jan) Culture conditions: MNK; 20°C; 20-30μmol/m²/s; 20 D Habitat: Marine (Seawater) Characteristics: Holococcolith stage Other strain no.: 13K Reference: 684
Remarks: Fragile species to transportaion stresses

1308 History: < Kawachi, Masanobu  Localilty: Miyake Isl., Chotaro-ike Pond/Tokyo/Japan (1999-11-23) Isolator: Kawachi, Masanobu  Identified by: Kawachi, Masanobu  States: Unialgal; Clonal; Non-axenic; Coccolith(+)[2013 Jan]  Culture conditions: MNK; 20℃; 22-32μmol/m²/s; 20 D  Habitat: Marine (Seawater)  Characteristics: Red tide; Heterococcolith stage  Other strain no.: MK18

1309 History: < Kawachi, Masanobu  Localilty: Miyake Isl., Chotaro-ike Pond/Tokyo/Japan (1999-11-23) Isolator: Kawachi, Masanobu  Identified by: Kawachi, Masanobu  States: Unialgal; Clonal; Non-axenic; Coccolith(+)[2013 Jan]  Culture conditions: MNK; 20℃; 22-32μmol/m²/s; 20 D  Habitat: Marine (Seawater)  Characteristics: Red tide; Holococcolith stage  Other strain no.: MK21  Remarks: Fragile species to transportaion stresses


2774 History: < Kawachi, Masanobu < Noël, Mary-Hélène  Localilty: Sagami Bay/Japan (2009-05-05) Isolator: Noël, Mary-Hélène (2010-**,**)  States: Unialgal; Clonal; Non-axenic  Culture conditions: MNK; 20℃; 22-32μmol/m²/s; 1 M  Habitat: Marine (Seawater)  Characteristics: Holococcolith stage  Other strain no.: MH 310  Remarks: Fragile species to transportaion stresses

2775 History: < Kawachi, Masanobu < Noël, Mary-Hélène  Localilty: Sagami Bay/Japan (2009-05-05) Isolator: Noël, Mary-Hélène (2010-**,**)  States: Unialgal; Clonal; Non-axenic  Culture conditions: MNK; 20℃; 22-32μmol/m²/s; 1 M  Habitat: Marine (Seawater)  Other strain no.: MH 311

CARTERIA : Chlorophyceae

Carteria cerasiformis  Nozaki, Aizawa et M.M. Watanabe

424 History: < Suda, Shoichiro  Localilty: Lake Kasumigaura/Ibaraki/Japan (1983-08-22) Isolator: Suda, Shoichiro  Identified by: Suda, Shoichiro  Formerly identified as: Carteria inversa (Korshikov) Bourrelly  States: Unialgal; Clonal; Axenic[2013 Jan]  Culture conditions: AF-6; 20℃; 22-27μmol/m²/s; 2 M  Habitat: Freshwater (Lake water)  Gene data: rbcL (D89767)  Other strain no.: Kas-10  References: 567, 710, 719

425 History: < Suda, Shoichiro  Localilty: Tsukuba/Ibaraki/Japan (1985-11-05) Isolator: Suda, Shoichiro  Identified by: Suda, Shoichiro  Formerly identified as: Carteria inversa (Korshikov) Bourrelly  States: Unialgal; Clonal; Axenic  Culture conditions: AF-6; 20℃; 22-27μmol/m²/s; 2 M  Habitat: Freshwater (Pond water)  Characteristics: Authentic strain  Gene data: atpB (AB084321); psaB (AB084359); rbcL (D89768)  Other strain no.: w-8-15  References: 378, 567, 710, 719, 740

Carteria crucifera  Korshikov ex Pascher

421 History: < Suda, Shoichiro  Localilty: Tsuchiura/Ibaraki/Japan (1986-02-**) Isolator: Suda, Shoichiro  Identified by: Suda, Shoichiro  States: Unialgal; Clonal; Axenic[2013 Jan]  Culture conditions: CYT; 20℃; 22-27μmol/m²/s; 2 M  Habitat: Freshwater (Sediment)  Gene data: atpB (AB084320); psaB (AB084358); rbcL (D63431)  Other strain no.: SIST3-1  References: 567, 710, 715, 719, 740

630 History: < Nozaki, Hisayoshi < UTEX  Other collection strain no.: UTEX 432  Localilty: New Haven/U.S.A.  Isolator: Lewin, Ralph A.  Identified by: Nozaki, Hisayoshi  States: Unialgal; Clonal; Non-axenic  Culture conditions: AF-6; 20℃; 22-27μmol/m²/s; 1 M  Habitat: Freshwater  Gene data: rbcL (D89758)  References: 567, 710, 719

Carteria eugametos  Mitra

Non-axenic Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Homothallic; Isogamy Gene data: rbcL (D89762) Other strain no.: 91-409-1 References: 567, 705, 719


633 History: < Nozaki, Hisayoshi Locality: Shirako/Chiba/Japan (1991-03.**) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater Gene data: rbcL (D89764) Other strain no.: 91-504-1 References: 567, 705, 710, 719

634 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 2161 Isolator: Vandover, B. Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater Gene data: rbcL (D89761) References: 567, 710, 719

635 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 233 Locality: Allahabad/India Isolator: Pringsheim, O. Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Authentic strain Gene data: rbcL (D89759) References: 567, 710, 719

636 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1032 Locality: California/U.S.A. Isolator: Waters, A. Identified by: Nozaki, Hisayoshi Formerly identified as: Carteria olivieri G.S. West States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Soil) Gene data: rbcL (D89760) References: 567, 710, 719

Carteria inversa (Korshikov) Bourrelly

422 History: < Suda, Shoichiro Locality: Tsukuba/Ibaraki/Japan (1982-11-02) Isolator: Kasai, Fumie Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 22-27μmol/m²/s; 3 M Habitat: Freshwater (Pond water) Gene data: rbcL (D89765) Other strain no.: 134-4 References: 204, 567, 710, 719, 1088

423 History: < Suda, Shoichiro Locality: Higashihiroshima/Hiroshima/Japan (1983-08.**) Isolator: Era, Mayumi Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 22-27μmol/m²/s; 3 M Habitat: Freshwater (Pond water) Gene data: rbcL (D89766) Other strain no.: 106 References: 567, 710, 719

Carteria klebsii (Dangeard) Francé

426 History: < Suda, Shoichiro Locality: Tsuchiura/Ibaraki/Japan (1986-02.**) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 2 M Habitat: Freshwater (Pond sediment) Other strain no.: SIST-7.4 Reference: 567

Carteria multifilis (Frenshenus) Dill

427 History: < Suda, Shoichiro Locality: Kashiwa/Chiba/Japan (1986-.**.**) Isolator: Watanabe, Makoto M. Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: VT; 20°C; 22-27μmol/m²/s; 2 M Habitat: Freshwater (Exudation from reclaimed land) Other strain no.: Ca1-2 Reference: 567

Carteria obtusa Dill

428 History: < Suda, Shoichiro Locality: Kashiwa/Chiba/Japan (1986-09.**) Isolator: Watanabe, Makoto M. Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 22-27μmol/m²/s; 2 M Habitat: Freshwater (Exudation from reclaimed land) Gene data:
atpB (AB084323); psaB (AB084361); psaB (AB084362); psaB (AB084363); rbcL (D89769)

429 History: < Suda, Shoichiro Locality: Tsuchiura/Ibaraki/Japan (1986-02-**) Isolator: Kasama, Mayumi Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 22-27μmol/m²/s; 2 M Habitat: Freshwater (Pond sediment) Other strain no.: SIS5-20 Reference: 567

430 History: < Suda, Shoichiro Locality: Kashiwa/Chiba/Japan (1986-09-**) Isolator: Watanabe, Makoto M. Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 22-27μmol/m²/s; 2 M Habitat: Freshwater (Exudation from reclaimed land) Other strain no.: Ca2-3 Reference: 567

431 History: < Suda, Shoichiro Locality: Tsuchiura/Ibaraki/Japan (1986-02-**) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 2 M Habitat: Freshwater (Pond sediment) Other strain no.: SIST6-3 Reference: 567

Carteria palmata Suda, Nozaki et M.M. Watanabe

1336 History: < Suda, Shoichiro Locality: Mitsukaido/Ibaraki/Japan (1985-07-03) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Authentic strain; mating type(−) Gene data: atpB (AB204870); psaB (AB204871); rbcL (AB204869) Other strain no.: KY-1 Reference: 985


Carteria radiosa Korshikov ex Pascher

432 History: < Suda, Shoichiro Locality: Tsukuba/Ibaraki/Japan (1985-11-05) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Gene data: atpB (AB084322); psaB (AB084360); rbcL (D89770) Other strain no.: w-5-2 References: 567, 719, 740

Carteria sp.

2311 History: < Suda, Shoichiro Locality: Shimokubo Dam/Gunma/Japan (1980-04-**) Isolator: Watanabe, Makoto M. Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Other strain no.: SM-6-3

2312 History: < Suda, Shoichiro Locality: Mitsukaido/Ibaraki/Japan (1986-04-12) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Other strain no.: 412KY-9

2313 History: < Suda, Shoichiro Locality: Tsukuba/Ibaraki/Japan (1985-11-05) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Other strain no.: w-39-4

CAVERNOMONAS : Sarcomonadea

Cavernomonas stercoris Vickerman
CERCOMONAS: Sarcomonadidae

Cercomonas ambigua Howe et Cavalier-Smith


Cercomonas dactyloptera Mylnikov et Karpov

History: <Bass, David> Locality: Russia (1979-**-***) Isolator: Mylnikov, Alexandre P. Identified by: Mylnikov, Alexandre P. (2004-**-***) Culture conditions: AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M Habitat: Freshwater (Sewerage water) Characteristics: Heterotrophic; Authentic strain; Resting spore forming Other strain no.: C-43 Reference: 32

Cercomonas effusa Vickerman

History: <Bass, David> Locality: Montezuma's Castle/Arizona/U.S.A. (2001-**-***) Isolator: Vickerman, Keith Identified by: Vickerman, Keith (2008-**-***) Culture conditions: AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M Habitat: Freshwater (Sediment) Characteristics: Heterotrophic; Authentic strain; Resting spore forming Other strain no.: Beaver-Creek Reference: 32

Cercomonas fastiga Bass et Cavalier-Smith


Cercomonas hederae Howe et Cavalier-Smith


Cercomonas hiberna Howe et Cavalier-Smith


Cercomonas laeva Bass, Mylnikov et Cavalier-Smith

History: <Bass, David> Locality: Russia (2000-**-***) Isolator: Mylnikov, Alexandre P. Identified by: Bass, David; Howe, Alexis T. (2008-**-***) Culture conditions: AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M Habitat: Terrestrial (Plant (Moss)) Characteristics: Heterotrophic; Authentic strain; Resting spore forming Other strain no.: C-72 Reference: 32

Cercomonas lata Bass, Mylnikov et Cavalier-Smith

History: <Bass, David> Locality: Russia (2001-**-***) Isolator: Mylnikov, Alexandre P. Identified by: Bass, David; Howe, Alexis T. (2008-**-***) Culture conditions: AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M Habitat: Freshwater (Pond water) Characteristics: Heterotrophic; Authentic strain; Resting spore forming Other strain no.: C-85 Reference: 32

Cercomonas magna Howe et Cavalier-Smith

Cercomonas mutans  Howe et Cavalier-Smith


Cercomonas parambigua  Howe et Cavalier-Smith


CHAETOCEROS  Bacillariophyceae

Chaetoceros didymus  Ehrenberg

586 History: < Ono, Sachiko  Locality: Hitachi/Ibaraki/Japan (1990-09-26)  Isolator: Ono, Sachiko  Identified by: Ono, Sachiko  States: Unialgal; Non-clonal; Non-axenic  Culture conditions: f/2; 15°C; 10-18μmol/m²/s; 1 M  Habitat: Marine (Seawater)  Characteristics: Red tide  Other strain no.: St-4

Chaetoceros sociale  Lauder

377 History: < Sawaguchi, Tomohiro  Locality: Shitaru Harbor/Shizuoka/Japan (1985-05-22)  Isolator: Sawaguchi, Tomohiro  Identified by: Sawaguchi, Tomohiro  States: Unialgal; Clonal; Non-axenic  Culture conditions: f/2; 10°C; 6-12μmol/m²/s; 2 M  Habitat: Marine (Seawater)  Other strain no.: STHB-4

553 History: < Ono, Sachiko  Locality: Tokyo Bay/Tokyo/Japan (1991-10-***)  Isolator: Ono, Sachiko  Identified by: Ono, Sachiko  States: Unialgal; Clonal; Non-axenic  Culture conditions: f/2; 5°C; 15-20μmol/m²/s; 1 M  Habitat: Marine (Seawater)  Characteristics: Red tide  Other strain no.: T-1

CHAMAESIPHON  Cyanophyceae

Chamaesiphon polymorphus  Geitler

433 History: < Kasai, Fumie  Locality: Lake Mashu/Hokkaido/Japan (1987-09-02)  Isolator: Kasai, Fumie  Identified by: Watanabe, Makoto M.  States: Unialgal; Non-clonal; Non-axenic  Culture conditions: CSi; 10°C; 6-12μmol/m²/s; 2 M (10°C; 10-15μmol/m²/s)  Habitat: Freshwater (Lake water)  Other strain no.: M-29  References: 139, 567, 1018, 1019

Chamaesiphon subglobosus  Lemmermann

434 History: < Kasai, Fumie  Locality: Miyata River/Ibaraki/Japan (1987-03-25)  Isolator: Kasai, Fumie  Identified by: Takamura, Noriko  States: Unialgal; Non-clonal; Non-axenic  Culture conditions: CSi; CSi + Cu; 20°C; 4-10μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s)  Habitat: Freshwater (River water)  Other strain no.: 2st-2-1  References: 139, 567, 1017, 1018, 1019  Remarks: Cryopreserved

CHANTRANSIA  Florideophyceae

Chantransia macrospora  Wood

### CHARA: Charophyceae

**Chara australis** R. Brown

<table>
<thead>
<tr>
<th>History</th>
<th>&lt; Shimmen, Teruo <strong>Isolator:</strong> Ishimoto, Miwa (Re-isolation) <strong>Identified by:</strong> Sakayama, Hidetoshi (2005-04-19) <strong>States:</strong> Clonal; Non-axenic <strong>Culture conditions:</strong> mSWC-2; SWCN-2; 22℃; 16-20μmol/m²/s; 3 M <strong>Habitat:</strong> Freshwater <strong>Characteristics:</strong> Dioecious; Male <strong>Other strain no.:</strong> CH-25</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>History:</strong> &lt; Shimmen, Teruo <strong>Isolator:</strong> Ishimoto, Miwa (Re-isolation) <strong>Identified by:</strong> Sakayama, Hidetoshi (2005-04-19) <strong>States:</strong> Clonal; Non-axenic <strong>Culture conditions:</strong> mSWC-2; SWCN-2; 22℃; 16-20μmol/m²/s; 3 M <strong>Habitat:</strong> Freshwater <strong>Characteristics:</strong> Dioecious; Female <strong>Other strain no.:</strong> CH-25</td>
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</tbody>
</table>

**Chara braunii** Gmelin

<table>
<thead>
<tr>
<th>History</th>
<th>&lt; Nozaki, Hisayoshi <strong>Locality:</strong> Lake Chuzenji/Tochigi/Japan (1994-09-07) <strong>Identified by:</strong> Nozaki, Hisayoshi <strong>States:</strong> Clonal; Non-axenic <strong>Culture conditions:</strong> mSWC-2; SWCN-2; 20℃; 16-20μmol/m²/s; 1 M <strong>Habitat:</strong> Freshwater <strong>Characteristics:</strong> Monocious; VU <strong>Gene data:</strong> atpB, atpB-rbcL IGS, rbcL (AB363923) <strong>Other strain no.:</strong> CH-6 <strong>Reference:</strong> 369</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>History:</strong> &lt; Sakayama, Hidetoshi <strong>Locality:</strong> Kasai/Hyogo/Japan (2004-06-18) <strong>Isolator:</strong> Ishimoto, Miwa <strong>Identified by:</strong> Sakayama, Hidetoshi (2004-06-19) <strong>States:</strong> Unialgal; Clonal; Non-axenic <strong>Culture conditions:</strong> mSWC-2; SWCN-2; 20℃; 16-20μmol/m²/s; 6 M <strong>Habitat:</strong> Freshwater <strong>Characteristics:</strong> Monocious; VU <strong>Gene data:</strong> atpB, atpB-rbcL IGS, rbcL (AB363924) <strong>Other strain no.:</strong> CH-70 <strong>Reference:</strong> 369</td>
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</tr>
<tr>
<td><strong>History:</strong> &lt; Sakayama, Hidetoshi <strong>Locality:</strong> Hazama-ohike Pond/Kagawa/Japan (2004-06-17) <strong>Isolator:</strong> Ishimoto, Miwa <strong>Identified by:</strong> Sakayama, Hidetoshi (2004-06-18) <strong>States:</strong> Unialgal; Clonal; Non-axenic <strong>Culture conditions:</strong> mSWC-2; SWCN-2; 20℃; 16-20μmol/m²/s; 6 M <strong>Habitat:</strong> Freshwater <strong>Characteristics:</strong> Monocious; VU <strong>Gene data:</strong> atpB, atpB-rbcL IGS, rbcL (AB363925) <strong>Other strain no.:</strong> CH-72 <strong>Reference:</strong> 369</td>
<td></td>
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<tr>
<td><strong>History:</strong> &lt; Sakayama, Hidetoshi <strong>Locality:</strong> Narasu-ike Pond/Kagawa/Japan (2004-06-16) <strong>Identified by:</strong> Sakayama, Hidetoshi (2004-06-17) <strong>States:</strong> Clonal; Non-axenic <strong>Culture conditions:</strong> mSWC-2; SWCN-2; 20℃; 16-20μmol/m²/s; 1 M <strong>Habitat:</strong> Freshwater <strong>Characteristics:</strong> Monocious; VU <strong>Gene data:</strong> atpB, atpB-rbcL IGS, rbcL (AB363926) <strong>Other strain no.:</strong> CH-75 <strong>Reference:</strong> 369</td>
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<td><strong>History:</strong> &lt; Sakayama, Hidetoshi <strong>Locality:</strong> Tsuchiura, Ohiwata/Ibaraki/Japan (2004-07-11) <strong>Isolator:</strong> Ishimoto, Miwa <strong>Identified by:</strong> Sakayama, Hidetoshi (2004-07-12) <strong>States:</strong> Unialgal; Clonal; Non-axenic <strong>Culture conditions:</strong> mSWC-2; SWCN-2; 20℃; 16-20μmol/m²/s; 6 M <strong>Habitat:</strong> Freshwater <strong>Characteristics:</strong> Monocious; VU <strong>Gene data:</strong> atpB, atpB-rbcL IGS, rbcL (AB363927) <strong>Other strain no.:</strong> CH-82 <strong>Reference:</strong> 369</td>
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<td><strong>History:</strong> &lt; Amano, Kunihihoko <strong>Locality:</strong> Lake Kasumigaura/Ibaraki/Japan <strong>Isolator:</strong> Ishimoto, Miwa <strong>Identified by:</strong> Sakayama, Hidetoshi <strong>States:</strong> Clonal; Non-axenic <strong>Culture conditions:</strong> mSWC-2; SWCN-2; 20℃; 16-20μmol/m²/s; 6 M <strong>Habitat:</strong> Freshwater <strong>Characteristics:</strong> Monocious; VU <strong>Gene data:</strong> atpB, atpB-rbcL IGS, rbcL (AB363928) <strong>Other strain no.:</strong> CH-88 <strong>Reference:</strong> 369</td>
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<td><strong>History:</strong> &lt; Amano, Kunihihoko <strong>Locality:</strong> Lake Kasumigaura/Ibaraki/Japan <strong>Identified by:</strong> Sakayama, Hidetoshi <strong>States:</strong> Clonal; Non-axenic <strong>Culture conditions:</strong> mSWC-2; SWCN-2; 20℃; 16-20μmol/m²/s; 1 M <strong>Habitat:</strong> Freshwater <strong>Characteristics:</strong> Monocious; VU <strong>Gene data:</strong> atpB, atpB-rbcL IGS, rbcL (AB363929) <strong>Other strain no.:</strong> CH-89 <strong>Reference:</strong> 369</td>
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<tr>
<td><strong>History:</strong> &lt; Amano, Kunihihoko <strong>Locality:</strong> Lake Kasumigaura/Ibaraki/Japan <strong>Identified by:</strong> Sakayama, Hidetoshi <strong>States:</strong> Clonal; Non-axenic <strong>Culture conditions:</strong> mSWC-2; SWCN-2; 20℃; 16-20μmol/m²/s; 1 M <strong>Habitat:</strong> Freshwater <strong>Characteristics:</strong> Monocious; VU <strong>Gene data:</strong> atpB, atpB-rbcL IGS, rbcL (AB363930) <strong>Other strain no.:</strong> CH-89 <strong>Reference:</strong> 369</td>
<td></td>
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</tbody>
</table>
Sakayama, Hidetoshi States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20°C; 16-20μmol/m²/s; 1 M
Habitat: Freshwater Characteristics: Monoecious; VU; Germinated from a buried oospore Gene data: atpB, atpB-rbcL IGS, rbcL (AB363930) Other strain no.: CH-91
Reference: 369

Isolator: Ishimoto, Miwa Identified by: Sakayama, Hidetoshi (2005-04-18) States: Unialgal; Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20°C; 16-20μmol/m²/s; 6 M
Habitat: Freshwater Characteristics: Monoecious; VU Other strain no.: CH-98

1604 History: < Watanabe, Makoto M. Locality: Hawaii/U.S.A. (1998-04-**) Isolator: Ishimoto, Miwa Identified by: Sakayama, Hidetoshi; Kato, Sho (2005-08-26) States: Unialgal; Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20°C; 16-20μmol/m²/s; 6 M
Habitat: Freshwater Characteristics: Monoecious Gene data: atpB, atpB-rbcL IGS, rbcL (AB363931)
Other strain no.: CH-33 Reference: 369

2500 History: < Ishimoto, Miwa Locality: Tokushima/Japan (2004-06-15) Identified by: Ishimoto, Miwa (2004-07-**) States: Unialgal; Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 22°C; 16-20μmol/m²/s; 6 M
Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-66

2661 History: < Ishimoto, Miwa Locality: Lake Kasumigaura/Ibaraki/Japan Isolator: Ishimoto, Miwa Identified by: Sakayama, Hidetoshi (2004-07-** States: Unialgal; Clonal; Non-axenic Culture conditions: mSWC-2; 22°C; 16-20μmol/m²/s; 6 M
Habitat: Freshwater (Germling from Oospore) Characteristics: Monoecious; VU Other strain no.: CH-90

Chara globularis Thuillier

Ch. globularis

1595 History: < Sakayama, Hidetoshi Locality: Lake Tanne-to/Hokkaido/Japan (1999-09-02)
Identified by: Sakayama, Hidetoshi (2006.** **) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-2; 17°C; 16-20μmol/m²/s; 2 M
Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-106; S001

1597 History: < Nozaki, Hisayoshi Locality: Lake Tsuta-numa/Aomori/Japan (1998-08-05) Identified by: Nozaki, Hisayoshi States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-2; 17°C; 16-20μmol/m²/s; 2 M
Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-35

Chara leptospora Sakayama

1599 History: < Sakayama, Hidetoshi Locality: Lake Ogawara/Aomori/Japan (1999-09-06) Identified by: Sakayama, Hidetoshi States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-2; 17°C; 16-20μmol/m²/s; 2 M
Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-109; S024

Chara sp.

1602 History: < Arai, Shogo Locality: Ogimi/Okinawa/Japan (1997-01-13) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 22°C; 16-20μmol/m²/s; 2 M
Habitat: Freshwater Other strain no.: CH-19

1603 History: < Arai, Shogo Locality: Ogimi/Okinawa/Japan (1997-01-13) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 22°C; 16-20μmol/m²/s; 2 M
Habitat: Freshwater Other strain no.: CH-20

1605 History: < Inouye, Isao Locality: Imperial Palace/Tokyo/Japan (1998-12-08) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 22°C; 16-20μmol/m²/s; 1 M
Habitat: Freshwater Other strain no.: CH-39

Chara zeylanica Klein ex Willdenow

1601 History: < Ueno, Ryuhei Locality: Minamidaitoh Isl/Okinawa/Japan (2000-02-11) Identified by: Sakayama, Hidetoshi (2005-** **) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 25°C; 16-20μmol/m²/s; 2 M
Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-55
**CHARACIOCHLORIS** : Chlorophyceae

**Characiochloris acuminata** Lee et Bold


**Characiochloris sasae** Nozaki

567 History: < Nozaki, Hisayoshi Locality: Kawasaki/Kanagawa/Japan (1990-10-29) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6: 20°C; 22-27μmol/m²/s; 2 M Habitat: Freshwater (Paddy soil) Characteristics: Authentic strain Aplanospore forming Gene data: atpB (AB084331); psaB (AB084376); rbcL (AB084328) Other strain no.: 91-0106-1 References: 567, 704

**CHARACIUM** : Chlorophyceae

**Characium angustum** A.Braun


**Characium polymorphum** Printz

436 History: < IAM Other collection strain no.: IAM C-340 Locality: Between Ghorepani and Billethadi/Nepal (1965-12-02) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Pond sediment) Other strain no.: N-76-0 References: 235, 567 Remarks: Cryopreserved

**CHATTONELLA** : Raphidophyceae

**Chattonella marina** (Subrahmanyan) Y.Hara et Chihara var. *antiqua* (Hada) Demura et Kawachi


2 History: < Watanabe, Makoto M. Locality: Osaka Bay/Osaka/Japan (1982-09-**) Isolator: Yamochi, Susumu Identified by: Yamochi, Susumu Formerly identified as: Chattonella antiqua (Hada) Ono States: Unialgal; Clonal; Axenic[2012 Feb] Culture conditions: f/2; ESM; 20°C; 32-40μmol/m²/s; 1M Habitat: Marine Characteristics: Red tide Gene data: CO1 (AB334445); ITS1-5.8S-ITS2 (AB334308); rbcL (AB334372) Other strain no.: OCH-a References: 64, 65, 198 Remarks: Fragile species to transportation stresses

83 History: < KAGAWA Locality: off Hiketa/Kagawa/Japan (1977-08-**) Isolator: Ono, Chitaru Identified by: Ono, Chitaru Formerly identified as: Chattonella antiqua (Hada) Ono States:
Chattonella antiqua (Hada) Ono

Chattonella antiqua (Hada) Yoshimatsu, Sadaaki

Chattonella antiqua (Hada) Ono

Chattonella marina

**CONTENTS**

**Unialgal; Clonal; Axenic[2012 Feb] Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M

**Habitat:** Marine

**Characteristics:** Red tide

**Gene data:** CO1 (AB334446); ITS1-5.8S-ITS2 (AB334309); rbcL (AB334373)

**Other strain no.:** KGW-2

**References:** 65, 198, 1109

**Remarks:** Fragile species to transportation stresses

**History:** < KAGAWA Locality: off Hiketa/Kagawa/Japan (1972-**,** **) Isolator:** Okaichi, Tomotoshi

**Identified by:** Okaichi, Tomotoshi

**Formerly identified as:** Chattonella antiqua (Hada) Ono

**Ono States:** Unialgal; Clonal; Axenic[2013 Jan]

**Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M

**Habitat:** Marine

**Characteristics:** Red tide

**Gene data:** CO1 (AB334447); ITS1-5.8S-ITS2 (AB334310); rbcL (AB334374)

**Other strain no.:** KGW-6

**References:** 65, 198

**Remarks:** Fragile species to transportation stresses

**History:** < KAGAWA Locality: Shodo Isl/Kagawa/Japan (1978-07-21)

**Isolator:** Yoshimatsu, Sadaaki

**Identified by:** Yoshimatsu, Sadaaki

**Formerly identified as:** Chattonella antiqua (Hada) Ono

**Ono States:** Unialgal; Clonal; Axenic[2013 Jan]

**Culture conditions:** f/2; ESM; 20°C; 32-40μmol/m²/s; 1 M

**Habitat:** Marine

**Characteristics:** Red tide

**Gene data:** CO1 (AB334448); ITS1-5.8S-ITS2 (AB334311); rbcL (AB334375)

**Other strain no.:** KGW-8-5

**References:** 65, 198

**Remarks:** Fragile species to transportation stresses

**History:** < KAGAWA Locality: Uranouchi Bay/Kochi/Japan (1980-11-01)

**Isolator:** Yoshimatsu, Sadaaki

**Identified by:** Yoshimatsu, Sadaaki

**Formerly identified as:** Chattonella antiqua (Hada) Ono

**Ono States:** Unialgal; Clonal; Non-axenic

**Culture conditions:** f/2; ESM; 20°C; 32-40μmol/m²/s; 1 M

**Habitat:** Marine

**Characteristics:** Red tide

**Gene data:** CO1 (AB334449); ITS1-5.8S-ITS2 (AB334312); rbcL (AB334376)

**Other strain no.:** KGW-42-4

**References:** 65, 137, 198, 1109

**Remarks:** Fragile species to transportation stresses

**History:** < KAGAWA Locality: Naoshima/Kagawa/Japan (1982-07-30)

**Isolator:** Yoshimatsu, Sadaaki

**Identified by:** Yoshimatsu, Sadaaki

**Formerly identified as:** Chattonella antiqua (Hada) Ono

**Ono States:** Unialgal; Clonal; Axenic[2013 Jan]

**Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M

**Habitat:** Marine

**Characteristics:** Red tide

**Gene data:** CO1 (AB334450); ITS1-5.8S-ITS2 (AB334313); rbcL (AB334377)

**Other strain no.:** KGW-74-8

**References:** 65, 198

**Remarks:** Fragile species to transportation stresses

**History:** < Takayama, Haruyoshi

**Locality:** Hiroshima Bay/Hiroshima/Japan Formerly identified as: Chattonella antiqua (Hada) Ono

**States:** Unialgal; Clonal; Axenic[2013 Jan]

**Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M

**Habitat:** Marine

**Characteristics:** Red tide

**Gene data:** CO1 (AB334451); ITS1-5.8S-ITS2 (AB334314); rbcL (AB334378)

**Other strain no.:** Hiroshima-70

**References:** 65, 148, 149

**Remarks:** Fragile species to transportation stresses

**History:** < Honjo, Tsuneo

**Locality:** Mikawa Bay/Aichi/Japan

**Isolator:** Toriumi, Saburo

**Identified by:** Toriumi, Saburo

**Formerly identified as:** Chattonella antiqua (Hada) Ono

**States:** Unialgal; Clonal; Axenic[2013 Jan]

**Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M

**Habitat:** Marine

**Characteristics:** Red tide

**References:** 65, 1215

**Remarks:** Fragile species to transportation stresses

**Chattonella marina** (Subrahamanyan) Y.Hara et Chihara var. marina

**History:** < Watanabe, Makoto M.

**Locality:** Osaka Bay/Osaka/Japan (1982-08-**,** **) Isolator:** Yamochi, Susumu

**Identified by:** Yamochi, Susumu

**Formerly identified as:** Chattonella marina (Subrahamanyan) Hara et Chihara

**States:** Unialgal; Clonal; Axenic[2012 Feb]

**Culture conditions:** f/2; ESM; 20°C; 32-40μmol/m²/s; 1 M

**Habitat:** Marine

**Characteristics:** Red tide

**Gene data:** 18S-ITS1-5.8S-ITS2-28S (AF137074); CO1 (AB334465); ITS1-5.8S-ITS2 (AB334328); rbcL (AB334392)

**Other strain no.:** OCH-m

**References:** 10, 65, 1064, 1065, 1109

**Remarks:** Fragile species to transportation stresses

**History:** < Watanabe, Makoto M.

**Locality:** Harima-Nada/Japan (1983-02-**,** **) Isolator:** Watanabe,
Makoto M. Identified by: Watanabe, Makoto M. Formerly identified as: Chattonella marina (Subrahmanyan) Har et Chihara States: Unialgal; Clonal; Axenic[2012 Feb] Culture conditions: f/2; ESM; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine (Sand) Characteristics: Red tide Gene data: CO1 (AB334466); ITS1-5.8S-ITS2 (AB334329); rbcL (AB334393) Other strain no.: H-53-11 References: 65, 198, 1217 Remarks: Fragile species to transportation stresses

115 History: < KAGAWA Locality: Kinko Bay/Kagoshima/Japan (1978-06-14) Isolator: Aramaki, Takayuki; Yoshimatsu, Sadaaki Identified by: Yoshimatsu, Sadaaki Formerly identified as: Chattonella marina (Subrahmanyan) Har et Chihara States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: f/2; ESM; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: KGW-9-1 References: 65, 198 Remarks: Fragile species to transportation stresses


118 History: < KAGAWA Locality: Harima-Nada/Japan (1983-07-29) Isolator: Yoshimatsu, Sadaaki Identified by: Yoshimatsu, Sadaaki Formerly identified as: Chattonella marina (Subrahmanyan) Har et Chihara States: Unialgal; Clonal; Axenic Culture conditions: f/2; ESM; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: KGW-75-2 References: 65, 198, 199, 335, 654, 1109 Remarks: Fragile species to transportation stresses

121 History: < Aramaki, Takayuki Locality: Kagoshima Bay/Kagoshima/Japan (1982-**-**) Isolator: Aramaki, Takayuki Identified by: Aramaki, Takayuki Formerly identified as: Chattonella marina (Subrahmanyan) Har et Chihara States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: f/2; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: KGO-57-1 References: 65, 198, 199, 335, 654, 1109 Remarks: Fragile species to transportation stresses

557 History: < Honjo, Tsuneo Locality: Hiroshima Bay/Hiroshima/Japan (1970-09-**) Isolator: Takayama, Haruyoshi Identified by: Kawachi, Masanobu (Reidentify) (2009-03-04) Formerly identified as: Chattonella marina (Subrahmanyan) Har et Chihara; Chattonella antiqua (Hada) Ono States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: f/2; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Gene data: CO1 (AB334469); ITS1-5.8S-ITS2 (AB334332); rbcL (AB334396) Reference: 65 Remarks: Fragile species to transportation stresses

559 History: < Honjo, Tsuneo Locality: Maizuru Bay/Kyoto/Japan (1975-10-04) Isolator: Takayama, Haruyoshi Identified by: Yoshimatsu, Sadaaki Formerly identified as: Chattonella marina (Subrahmanyan) Har et Chihara States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: f/2; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Reference: 65 Remarks: Fragile species to transportation stresses

Chattonella marina (Subrahmanyan) Y.Hara et Chihara var. ovata (Y.Hara et Chihara) Demura et Kawachi

603 History: < Sawaguchi, Tomohiro Locality: Harima-nada/Japan (1984-04-23) Identified by: Nozaki, Hisayoshi Formerly identified as: Chattonella ovata Har et Chihara States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: f/2; ESM; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine (Sediment) Gene data: 18S rRNA (AB217628); 18S-ITS1-5.8S-ITS2 (AB217650); 28S rRNA (AF210738); 28S rRNA (AB217640); CO1 (AB334482); ITS1-5.8S-ITS2 (AB334345); psaA (AB36795); rbcL (AB334409); tufA (AB367951) References: 65, 137, 147, 149, 335 Remarks: Fragile species to transportation stresses

**CONTENTS**

data: CO1 (AB334483); rbcL (AB334410) Reference: 65 Remarks: Fragile species to transportation stresses

849 History: < Hara, Yoshiaki Location: Japan Formerly identified as: Chattonella ovata Hara et Chihara States: Unialgal; Non-axenic Culture conditions: f/2; ESM; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine Characteristics: Red tide Gene data: CO1 (AB334484); rbcL (AB334411) References: 65, 149 Remarks: Fragile species to transportation stresses

1872 History: < Aramaki, Takayuki Location: Kagoshima Bay/Kagoshima/Japan (1982-**.**) Isolator: Aramaki, Takayuki Identified by: Demura, Mikihide (2007-08-01) Formerly identified as: Chattonella ovata Hara et Chihara States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: KGO-57-2 Reference: 65 Remarks: Fragile species to transportation stresses

1873 History: < KAGAWA Location: Naoshima Isls./Kagawa/Japan (1982-07-30) Isolator: Yoshimatsu, Sadaaki Identified by: Demura, Mikihide (2007-08-01) Formerly identified as: Chattonella ovata Hara et Chihara States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; ESM; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: KGW-60-3 Reference: 65 Remarks: Fragile species to transportation stresses

**Chattonella subsalsa** Biecheler

2633 History: < CCMP (2010) Other collection strain no.: CCMP 217 Location: Gulf of Mexico States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Remarks: Fragile species to transportation stresses


**CHLAMYDOMONAS** : Chlorophyceae

**Chlamydomonas applanata** Pringsheim

2202 History: < IAM (2007) < BIU (UTEX; 1967) Other collection strain no.: IAM C-214; SAG 2.72; UTEX 969 Location: Williamson County/Texas/U.S.A. Isolator: Deason, T. R. Formerly identified as: Chlamydomonas aggregata Deason et Bold States: Unialgal; Clonal; Axenic[2012 Feb] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Other strain no.: Deason T-1-12 Reference: 38

2204 History: < IAM (2007) < BIU (UTEX; 1967) Other collection strain no.: IAM C-218; CCAP 11/2; SAG 6.72; UTEX 230 Location: Franzensbad/Czechoslovakia Isolator: Pringsheim, E. G. States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: Freshwater (Lake mud) Reference: 38

2206 History: < IAM (2007) < BIU (UTEX; 1967) Other collection strain no.: IAM C-237; ATCC 30455; CCAP 11/9; SAG 11-9; UTEX 225 Location: Botanic Garden, Prague Univ./Czechoslovakia Isolator: Lucksch, I. Formerly identified as: Chlamydomonas humicola Lucksch States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Reference: 484

**Chlamydomonas asymetrica** Korshikov

2207 History: < IAM (2007) < BIU (UTEX; 1967) Other collection strain no.: IAM C-219; CCAP 11/41; SAG 11-41; UTEX 450 Location: Yale/Connecticut/U.S.A. Isolator: Lewin, Ralph A. States: Unialgal; Clonal; Axenic[2012 Feb] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: Terrestrial

2208 History: < IAM (2007) < BIU (UTEX; 1967) Other collection strain no.: IAM C-234; ATCC 30586; CCAP 11/7; SAG 11-7; UTEX 227; Rodhe 1635 Location: Siggeforasjon/Sweden Isolator: Rodhe, W. Formerly identified as: Chlamydomonas gloeopara Rodhe et Skuja States: Unialgal;
**Chlamydomonas debaryana** Goroshchkin

2212  
**History:** < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-549 (=C-1); Tsubo 116; UTEX 618; CCAP 11/59; SAG 4.72  
**Isolator:** Tsubo, Yoshihiro  
Formerly identified as: Chlamydomonas angulosa Dill  
**States:** Unialgal; Clonal; Axenic [2012 Feb]  
**Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M References: 628, 735, 863, 864

**Chlamydomonas debaryana** Goroshchkin var. *cristata* Ettl

884  
**History:** < Nozaki, Hisayoshi < UTEX Other collection strain no.: CCAP 11/74; UTEX 1344  
**Locality:** Nordmähren/Czech  
**Isolator:** Ettl, H.  
States: Unialgal; Clonal; Non-axenic  
**Culture conditions:** C; 20°C; 15-22μmol/m²/s; 2 M  
**Habitat:** (Soil)  
**Characteristics:** Authentic strain  
**Gene data:** atpB (AB044527); rbcL (D86838)  
**References:** 716, 733, 738

**Chlamydomonas eustigma** Ettl

437  
**History:** < Suda, Shoichiro  
**Locality:** Tsukuba/Ibaraki/Japan (1984-05-08)  
**Isolator:** Suda, Shoichiro  
Identified by: Suda, Shoichiro  
**States:** Unialgal; Clonal; Axenic  
**Culture conditions:** C; 20°C; 22-32μmol/m²/s; 2 M  
**Habitat:** Freshwater (Paddy soil)  
**Other strain no.:** H-3-4-2

**Chlamydomonas endlicheri** Ettl

2215  
**History:** < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-554 (=C-233); CCAP 11/72; SAG 20.72; UTEX 1348  
**Locality:** Schonhengst/Czechoslovakia  
**Isolator:** Ettl, H.  
States: Unialgal; Clonal; Axenic [2012 Feb]  
**Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M  
**Habitat:** Freshwater (Pond water)  
**Other strain no.:** Ettl 136

**Chlamydomonas globosa** J.Snow

2462  
**History:** < Nakada, Takashi  
**Locality:** Yamagata/Japan (2008-05-10)  
**Isolator:** Nakada, Takashi  
Identified by: Nakada, Takashi [2009-06-**]  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** AF-6; 20°C; 22-32μmol/m²/s; 1 M  
**Habitat:** Freshwater (Soil)  
**Other strain no.:** TkS0803C2  
**Reference:** 613

**Chlamydomonas инflexa** Pringsheim

2216  
**History:** < IAM (2007) < BIU (UTEK; 1967) Other collection strain no.: IAM C-253; SAG 24.72; UTEX 727  
**Isolator:** Lewin, Ralph A.  
States: Unialgal; Clonal; Non-axenic  
**Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M  
**Other strain no.:** R.A.Lewin DD1/72

**Chlamydomonas kuwadacae** Gerloff

968  
**History:** < Nozaki, Hisayoshi  
**Locality:** Lake Nojiri (depth 0-10m)/Nagano/Japan (1992-05-13)  
**Isolator:** Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** AF-6; 10°C; 15-20μmol/m²/s; 1 M  
**Habitat:** Freshwater (Lake water)  
**Gene data:** 18S rRNA (AB451190); atpB (AB084318); psaB (AB084356); rbcL (AB044334)  
**Other strain no.:** 92-514-H-13  
**References:** 609, 740

1021  
**History:** < Moriya, Mayumi  
**Locality:** Osaka Bay/Hyogo/Japan (2000-11-**)  
**Isolator:** Moriya, Mayumi  
Identified by: Moriya, Mayumi  
**Formerly identified as:** Chlamydomonas cocoides  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** ESM; 20°C; 15-22μmol/m²/s; 1 M  
**Habitat:** Marine (Seawater)  
**Other strain no.:** #95

**Chlamydomonas media** Klebs

Syn. Chlamydomonas media var. *eustigma* Gerloff

2743  
**History:** < Nakada, Takashi  
**Locality:** Ibaraki/Japan (2004-07-06)  
**Isolator:** Nakada, Takashi

CONTENTS
**CONTENTS**

**Chlamydomonas mexicana** Lewin

<table>
<thead>
<tr>
<th>No.</th>
<th>History</th>
<th>Other collection strain no.</th>
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<td>2218</td>
<td>History: &lt; IAM (2007) &lt; UTEX (1996)</td>
<td>IAM C-555 (=C-257); UTEX 730; SAG 11-60b</td>
<td>Isolator: Lewin, Ralph A. Identified by: Lewin, Ralph A. States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M</td>
<td>Mating type (+)</td>
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**Chlamydomonas moewusii** Gerloff

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<td>2219</td>
<td>History: &lt; IAM (2007) &lt; BIU (UTEX); 1967</td>
<td>IAM C-258; CCAP 11/16g; UTEX 96; SAG 11-16f; ATCC 30588; CGC 56</td>
<td>Isolator: Pringsheim, E. G. Formerly identified as: Chlamydomonas simplex Pascher States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M</td>
<td>Mating type (+)</td>
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**Chlamydomonas monadina** Stein var. *rotunda* Tsubo

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<td>2222</td>
<td>History: &lt; IAM (2007) &lt; Tsubo, Yoshihiro</td>
<td>IAM C-19</td>
<td>Isolator: Tsubo, Yoshihiro States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M</td>
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**Chlamydomonas nasuta** Korshikov

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<td>2225</td>
<td>History: &lt; IAM (2007) &lt; UTEX (1996)</td>
<td>IAM C-550 (=C-225); UTEX 451</td>
<td>Isolator: Lewin, Ralph A. Formerly identified as: Chlamydomonas conferta Korshikov States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M</td>
<td>Mating type (+)</td>
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**Chlamydomonas neoplanoconvexa** (Iyengar) Nakada

<table>
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<td>438</td>
<td>History: &lt; Suda, Shoichiro</td>
<td>Locality: Lake Kasumigaura/Ibaraki/Japan (1983-07-22) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: C: 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Other strain no.: Kas-7</td>
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**Chlamydomonas neoplanoconvexa** (Iyengar) Nakada

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<td>438</td>
<td>History: &lt; Suda, Shoichiro</td>
<td>Locality: Lake Kasumigaura/Ibaraki/Japan (1983-07-22) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: C: 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Other strain no.: Kas-7</td>
<td>Reference: 567</td>
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Syn. Chlamydomonas planoconvexa Iyengar non Lund

2570 History: < Nakada, Takashi Locality: Tokyo/Japan (2004-08-08) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2010-11-***) States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Sediment) Characteristics: Epitype Gene data: 18S rRNA (AB602849); psaB (AB602851); rbcL (AB602850) Other strain no.: IiS0801D6 Reference: 616

Chlamydomonas noctigama Korshikov

1048 History: < Nozaki, Hisayoshi Locality: Neuglobsow/Brandenburg/Germany (2001-08-14) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 2 M Habitat: Freshwater Gene data: cpn60 (1812) Other strain no.: IAM C-228; CCAP 11/4; UTEX 228; SAG 23.87; ATCC 30594; CGC C-1812 Locality: Dorfteich, Hirschberg/Czechoslovakia Isolator: Mainx, F. Formerly identified as: Chlamydomonas dorsoventralis Pascher States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M References: 38, 484, 735

2213 History: < IAM (2007) < BIU (UTEX; 1967) Other collection strain no.: IAM C-228; CCAP 11/4; UTEX 228; SAG 23.87; ATCC 30594; CGC C-1812 Locality: Soil (Soil) Isolator: Ettl, H. Formerly identified as: Chlamydomonas pinicola Ettl States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: Soil (Soil) Other strain no.: Ettl 108

2229 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-557 (=C-262); ATCC 30629; CCAP 11/17; SAG 33.72; UTEX 220 Locality: Czechoslovakia Isolator: Mainx, F. Formerly identified as: Chlamydomonas monica Strehlow States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: Freshwater References: 484, 1116

2579 History: < IAM (2007) < BIU (UTEX; 1961) Other collection strain no.: IAM C-264; SAG 35.72; UTEX 114 Isolator: Starr, R. C. States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Reference: 1159

Chlamydomonas orbicularis Pringsheim

2230 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-559 (=C-266); SAG 11-19; UTEX 218; CGC CC-1739; CCAP 11/19 Locality: near Celakovice/Czechoslovakia Isolator: Pringsheim, E. G. Formerly identified as: Chlamydomonas monica Strehlow States: Unialgal; Clonal; Axenic[2012 Mar] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: Freshwater (River sand)

Chlamydomonas parkeae Ettl

440 History: < Suda, Shoichiro Locality: Izumi Bay/Nagasaki/Japan (1986-03-12) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 22-32μmol/m²/s; 2 M Habitat: Marine (Seawater) Gene data: rbcL (AB127988) Other strain no.: I-29 References: 396, 567, 889, 916

Chlamydomonas perpusilla (Korshikov) Gerloff var. perpusilla

Syn. Chlamydomonas minima Korshikov

1848 History: < Nakada, Takashi Locality: Sakata-ga-ike Pond/Chiba/Japan (2003-07-23) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2006-12-***) States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond sediment) Other strain no.: SkCl-3 Reference: 608

1849 History: < Nakada, Takashi Locality: Sakata-ga-ike Pond/Chiba/Japan (2003-07-23) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2006-12-***) States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond sediment) Gene data: psaB (AB451199) Other strain no.: SkCr-10 References: 608, 609

Chlamydomonas proteus Pringsheim
2231 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-560 (=C-271); ATCC 30452; CCAP 11/21; SAG 41.72; UTEX 216 Locality: near Hirschberg/Czechoslovakia Isolator: Pringsheim, E. G. Identified by: Pringsheim, E. G. States: Unialgal; Clonal; Axenic[2012 Mar] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: Freshwater (Freshwater)


Chlamydomonas pulsatilla Wollenweber

122 History: < IAM (1983) Other collection strain no.: IAM C-385 (=C-561) Locality: Muroran/Hokkaido/Japan (1966-05-15) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Axenic Culture conditions: P35; 20°C; 4-10μmol/m²/s; 2 M (25°C); 70-80μmol/m²/s Habitat: Freshwater (Lake water) Gene data: psaB (AB451200) Other strain no.: MKF-50 References: 234, 235, 293, 567, 609, 1159, 1187

Chlamydomonas pulvinata Vischer

2233 History: < IAM (2007) < BIU (UTEX) Other collection strain no.: IAM C-276; CCAP 11/25; SAG 45.72; UTEX 212 Locality: Basel/Switzerland Isolator: Vischer, W. States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: Freshwater (Freshwater)

Chlamydomonas pulmilio Ettl var. pulmilio

1850 History: < Nakada, Takashi Locality: Arisugawa-no-miya Memorial Park/Tokyo/Japan (2003-04-28) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2006-12-**) States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Gene data: psaB (AB451201) Other strain no.: ArCp-7 References: 608, 609

Chlamydomonas rapa Ettl

2244 History: < IAM (2007) Other collection strain no.: IAM C-279 States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

Chlamydomonas reinhardtii Dangeard

2235 History: < IAM (2007) < Tsubo, Yoshihiro (1959) < Sager (1954) < Smith (1953) Other collection strain no.: IAM C-9 States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Characteristics: Mating type(−); Crosses with NIES-2239 (IAM C-562) Gene data: Amt protein mRNA(putative) (AF509497); CAH1 (D90206); CAH1(5′-upstream region) (AB026126); CAH2 (X54488); CrDES (AB239769); E Gene data (http://est.kazusa.or.jp/en/plant/chlamy/EST/index.html); GCS1 mRNA (AB206813); MMP1 (AB058411); MMP1 mRNA (AB058413); MMP2 mRNA (AB058412); MMP2 mRNA (AB058414); MMP3 mRNA (AB108850); mRNA for plastid DNA recombination (AB048829); NSG1 mRNA (AB167472); NSG11 mRNA (AB167476); NSG13 mRNA (AB167476); NSG17 mRNA (AB167476); NSG6 mRNA (AB167476); NSG7 mRNA (AB167476); SIG1 mRNA (AB049220); Total genome information (http://chlamy.pmb.lif.kyoto-u.ac.jp/chlamybase) Other strain no.: Tsubo R (−) References: 1, 5, 23, 24, 25, 28, 41, 68, 69, 70, 77, 114, 121, 122, 322, 341, 361, 449, 450, 452, 453, 517, 518, 519, 520, 522, 526, 558, 821, 822, 823, 827, 1011, 1072, 1073, 1094, 1097, 1100, 1101, 1159, 1193, 1196, 1232, 1237, 1265

Chlamydomonas sp.

1022 History: < Moriya, Mayumi Locality: Mitsu Bay/Hiroshima/Japan (2001-03-**) Isolator: Moriya, Mayumi Identified by: Moriya, Mayumi Formerly identified as: Chlamydomonas parkeae Ettl States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 15-22μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: #97

1733 History: < Sato, Mayumi Locality: Miyako Isl./Okinawa/Japan (2002-07-**) Isolator: Sato, Mayumi Identified by: Sato, Mayumi (2005-08-**) Formerly identified as: Chlamydomonas parkeae Ettl States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 18-23μmol/m²/s; 2 M Habitat: Marine (Seawater) Other strain no.: M-77

2211 History: < IAM (2007) < BIU (UTEX) Other collection strain no.: IAM C-215; CCAP 11/1; SAG 11-1; UTEX 231 Locality: near Grossteich, Hirschberg/Czechoslovakia Isolator: Mainf, F. Formerly identified as: Chlamydomonas debaryana Goroschankin; Chlamydomonas agloeiformis Pascher States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: Freshwater (Pool water) Reference: 38

2314 History: < Suda, Shoichiro Locality: Tsuchitura/Ibaraki/Japan (1983-07-22) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Other strain no.: SIS-ch

2315 History: < Suda, Shoichiro Locality: Tsukuba/Ibaraki/Japan (1984-05-04) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Paddy soil) Other strain no.: H-3-1

2316 History: < Suda, Shoichiro Locality: Osaka Bay/Osaka/Japan (1982-08-03) Isolator: Watanabe, Makoto M. Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 22-32μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: OChla
**Chlamydomonas sphaeroides** Gerloff

**Chlamydomonas subangulosa** Fritsch et John

**Chlamydomonas tetragama** (Bohlin) Ettl

**Chlamydomonas typica** Deason et Bold
2246 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-565 (=C-290); SAG 61.72; UTEX 971; CGC CC-1807 Locality: Williamson County/Texas/U.S.A. Isolator: Deason, T. R. States: Unialgal; Clonal; Axenic[2012 Mar] Culture conditions: C (agar); 20 °C; 8-15μmol/m²/s; 3 M Habitat: (Soil) Other strain no.: Deason T-2-11

Chlamydomonas alvaensis Lewin

2247 History: < IAM < UTEX (1996) Other collection strain no.: IAM C-566 (=C-291); CCAP 11/58; Lewin DD1/27; SAG 62.72; UTEX 724 Locality: Isle of Ulva /Scotland/U.K. Isolator: Lewin, Ralph A. States: Unialgal; Clonal; Axenic[2012 Mar] Culture conditions: C (agar); 20 °C; 8-15μmol/m²/s; 3 M Habitat: Terrestrial (Pasture plant)

Chlamydomonas zebra Korshikov ex Pascher

2248 History: < IAM (2007) < BIU (UTEX; 1967) Other collection strain no.: IAM C-221; SAG 8.72; UTEX 229; CCAP 11/3 Isolator: Brannon, M. A. Formerly identified as: Chlamydomonas brannonii Pringsheim States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20 °C; 8-15μmol/m²/s; 3 M Other strain no.: Brannon5

CHLORARACHNION : Chlorarachiophyceae

Chlorarachniun reptans Geitler

624 History: < CCAP Other collection strain no.: CCAP 815/1 Locality: Puerto Penasco/Mexico Isolator: Norris, Richard E. States: Unialgal Culture conditions: ESM2; 20 °C; 32-40μmol/m²/s; 2 M Habitat: Marine (Seawater) References: 125, 1014

Chlorarachnion sp.


CHLORELLA : Trebouxiiophyceae

'Chlorella ellipsoidea' Gernick

2150 History: < IAM (2007) < UTEX (1989) Other collection strain no.: IAM C-542 (=C-87); ATCC 30404; CCAP 211/1A; SAG 211-1a; UTEX 20 Isolator: Pringsheim, E. G. Identified by: Pringsheim, E. G.; Confirmed at NIES by DNA sequencing States: Unialgal; Clonal; Axenic Culture conditions: C; 10 °C; 6-12μmol/m²/s; 6 M (10 °C; 10-15μmol/m²/s) Habitat: Freshwater (River water) Gene data: 18S rRNA (AB488583) References: 385, 437, 1022 Remarks: Cryopreserved

'Chlorella' saccharophila' (Krüger) Migula

640 History: < Kasai, Fumie Locality: Otarunai River/Hokkaido/Japan (1987-07-02) Isolator: Kasai, Fumie Identified by: Kasai, Fumie; Confirmed at NIES by DNA sequencing States: Unialgal Culture conditions: C; 10 °C; 6-12μmol/m²/s; 6 M (10 °C; 10-15μmol/m²/s) Habitat: Freshwater (River water) Gene data: 18S rRNA (AB488790) Other strain no.: Tst-8-2 References: 567, 1018 Remarks: Cryopreserved

Chlorella sorokiniana Shihira et Krauss

2167 History: < IAM (2007) < Yakult < IAM < Watanabe, Atsushi Other collection strain no.: IAM C-43 Isolator: Watanabe, Atsushi Identified by: Kessler, E.; Confirmed at NIES by DNA sequencing (1994) Formerly identified as: Chlorella vulgaris Beijerinck States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 °C; 8-15μmol/m²/s; 3 M Gene data: 18S rRNA (AB488789) Remarks: Cryopreserved
2168 **History:** < IAM (2007) < Murano, Fumio **Other collection strain no.:** IAM C-133 **Isolator:** Murano, Fumio **Identified by:** Fukushima, Hiroshi; Kessler, E.; Confirmed at NIES by DNA sequencing (1993) **Formerly identified as:** Chlorella vulgaris Beijerinck **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M **Gene data:** 18S rRNA (AB488572) **Other strain no.:** Murano (407)U-145 **References:** 71, 794, 1212 **Remarks:** Cryopreserved

2169 **History:** < IAM (2007) < Meyers, Jack **Other collection strain no.:** IAM C-212; ATCC 22521; CAUP H1957; CCAP 211/8k; SAG 211-8K; UTEX 1230 **Locality:** Texas/U.S.A. **Isolator:** Sorokin, C. **Identified by:** Kessler, E.; Confirmed at NIES by DNA sequencing (1993) **Formerly identified as:** Chlorella pyrenoidosa Chick **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M **Gene data:** 18S rRNA (AB080307); 18S rRNA (AB488573); Actin (AB083011) **References:** 38, 385, 496, 795, 1224 **Remarks:** Cryopreserved

**Chlorella** sp.

2171 **History:** < IAM (2007) < Murano, Fumio **Other collection strain no.:** IAM C-135 **Locality:** Botanical garden, Sendai/Miyagi/Japan **Isolator:** Murano, Fumio **Identified by:** Fukushima, Hiroshi; Kessler, E.; Re-identified at NIES by DNA sequencing (1993) **Formerly identified as:** Chlorella vulgaris Beijerinck **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M **Gene data:** 18S rRNA (AB488574) **Other strain no.:** Kiyohara U-140 **References:** 190, 1212 **Remarks:** Cryopreserved

2330 **History:** < Watanabe, Yoshitomo **Locality:** Lake Kasumigaura/Ibaraki/Japan (1991-04-22) **Isolator:** Watanabe, Yoshitomo **Identified by:** Watanabe, Yoshitomo **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Pond sediment) **Other strain no.:** HA-1 **Remarks:** Cryopreserved

**Chlorella vulgaris** Beijerinck

1269 **History:** < Moriya, Mayumi **Locality:** Banzu Tidal Flat/Chiba/Japan (2002-05-14) **Isolator:** Moriya, Mayumi **Identified by:** Moriya, Mayumi; Re-identified at NIES by DNA sequencing **Formerly identified as:** Chlorella sp. **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** ESM; 20°C; 22-32μmol/m²/s; 1 M **Habitat:** (Tidal flat water) **Gene data:** 18S rRNA (AB488579) **Other strain no.:** M-56 **Remarks:** Cryopreserved

2170 **History:** < IAM (2007) < Tokugawa Institute for Biological Research **Other collection strain no.:** IAM C-27 **Locality:** Sendai/Miyagi/Japan **Identified by:** Takeda, H.; Kessler, E.; Confirmed at NIES by DNA sequencing (1991) **Formerly identified as:** Chlorella ellipsoidea Gerneck **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M **Gene data:** 16S rRNA (AF350259); 16S rRNA (AF350260); 16S rRNA (AJ242748); 16S rRNA (AJ242753); 18S rRNA (AB178085); 18S rRNA (AJ242757); 18S rRNA (AB488580); CvFAD2 mRNA (AB075526); CvFAD3 mRNA (AB075527); G6PDH mRNA (AB085846); HiC12 mRNA (AB035642); HiC6 mRNA (U38231); Plastid DNA (AB001684) **Other strain no.:** Tamiya strain **References:** 7, 12, 15, 16, 93, 120, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 171, 172, 174, 175, 176, 177, 178, 179, 180, 193, 194, 195, 196, 200, 201, 202, 209, 260, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 329, 330, 342, 343, 344, 345, 346, 373, 409, 498, 499, 504, 516, 525, 528, 529, 530, 531, 532, 533, 534, 536, 538, 542, 543, 544, 545, 546, 548, 550, 551, 552, 555, 556, 560, 570, 571, 667, 673, 674, 683, 752, 753, 754, 755, 761, 762, 763, 787, 810, 859, 860, 861, 862, 887, 888, 908, 942, 947, 966, 983, 996, 1001, 1010, 1013, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1094, 1101, 1114, 1205, 1211 **Remarks:** Cryopreserved

2172 **History:** < IAM < CCAP (Butcher, R. W.) **Other collection strain no.:** IAM C-176; CCAP 211/21A or B (?) **Isolator:** George, E. A. **Identified by:** Kessler, E.; Confirmed at NIES by DNA sequencing (1993) **Formerly identified as:** Chlorella ovalis Butcher (before 1993) **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M **Gene data:** 18S rRNA (AB488581) **Remarks:** Cryopreserved

2173 **History:** < IAM (2007) < Tsuzuki, Miki (1988) < Avramova, S. T. (1982) < probably Semenenko **Other collection strain no.:** IAM C-536; IPPAS C-3 **States:** Unialgal; Clonal; Axenic[2012 Nov]
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Gene data: 18S rRNA (AB080308); Actin-1 (AB080312); Actin-2 (AB080313) References: 5, 41, 548, 559, 560, 561, 1097, 1101, 1224 Remarks: Cryopreserved

CHLOROCOCCUM : Chlorophyceae

Chlorococcum echinogyotum Starr

CHLOROCOCCUM elkhartiense Archibald et Bold

Chlorococcum hypnosporum Starr

CHLOROGENIUM : Chlorophyceae
Chlorogonium capillatum Nozaki, M.M. Watanabe et Aizawa

**History:** < Nozaki, Hisayoshi **Locality:** Miyatoko Mire/Fukushima/Japan (1992-04-***) **Isolator:** Nozaki, Hisayoshi **Identified by:** Nozaki, Hisayoshi **States:** Unialgal; Clonal; Axenic **Culture conditions:** AF-6; 10°C; 22-27μmol/m²/s; 1 M **Habitat:** Freshwater (Bog soil) **Characteristics:** Authentic strain; Monoecious; Isogamy; Paedogamy; Type specimen (NIES-50001, Epitype) **Gene data:** rbcL (AB010230) **Other strain no.:** 92-517-6-2 **References:** 567, 607, 610, 614, 737

**History:** < Nozaki, Hisayoshi < IAM **Other collection strain no.:** CCAP 12/4; IAM C-295; UTEX 201 **Locality:** Leveret/Massachusetts/U.S.A. **Isolator:** Kugrens, P. **Identified by:** Nozaki, Hisayoshi (Reidentify) **Formerly identified as:** Chlorogonium tetragamum Bohlin **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Gene data:** rbcL (AB010234) **Reference:** 737

**History:** < Nozaki, Hisayoshi < UTEX **Other collection strain no.:** UTEX 1643 **Locality:** Leveret/Massachusetts/U.S.A. **Isolator:** Kugrens, P. **Identification by:** Nozaki, Hisayoshi (Reidentify) **Formerly identified as:** Chlorogonium tetragamum Bohlin **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Habitat:** (Soil) **Gene data:** rbcL (AB010235) **Reference:** 737

**History:** < Nozaki, Hisayoshi < UTEX **Other collection strain no.:** UTEX 2160 **Locality:** Leveret/Massachusetts/U.S.A. **Isolator:** Kugrens, P. **Identification by:** Nozaki, Hisayoshi (Reidentify) **Formerly identified as:** Chlorogonium sp. (in UTEX) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Gene data:** rbcL (AB010236) **Reference:** 737

**History:** < Nozaki, Hisayoshi < CCAP **Other collection strain no.:** CCAP 12/2A **Locality:** Berlin/Germany **Isolator:** Pringsheim, E. G. **Identification by:** Nozaki, Hisayoshi (Reidentify) **Formerly identified as:** Chlorogonium elongatum (Dangeard) Dangeard (in CCAP) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Habitat:** Freshwater (Lake water) **Gene data:** rbcL (AB010231) **Reference:** 737

**History:** < Nozaki, Hisayoshi < CCAP **Other collection strain no.:** CCAP 12/2B **Locality:** Cape Flats/South Africa **Isolator:** George **Identification by:** Nozaki, Hisayoshi (Reidentify) **Formerly identified as:** Chlorogonium elongatum (Dangeard) Dangeard (in CCAP) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Habitat:** (Soil) **Gene data:** rbcL (AB010232) **Reference:** 737

**History:** < Nozaki, Hisayoshi < CCAP **Other collection strain no.:** CCAP 12/5 **Isolator:** Pringsheim, E. G. **Identification by:** Nozaki, Hisayoshi (Reidentify) **Formerly identified as:** Chlorogonium sp. (in CCAP) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Habitat:** (Freshwater) **Gene data:** rbcL (AB010233) **Reference:** 737

**History:** < Nozaki, Hisayoshi < SAG **Other collection strain no.:** SAG 12-2e **Locality:** near Prague/Czechoslovakia **Isolator:** Pringsheim, E. G. **Identification by:** Nozaki, Hisayoshi (Reidentify) **Formerly identified as:** Chlorogonium elongatum (Dangeard) Dangeard (in SAG) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Gene data:** psaB (AB451203); rbcL (AB010237) **References:** 609, 737

**History:** < Nozaki, Hisayoshi < SAG **Other collection strain no.:** SAG 47.84 **Isolator:** Provasoli, L. **Identified by:** Nozaki, Hisayoshi (Reidentify) **Formerly identified as:** Chlorogonium euchlorum Ehrenberg (in SAG) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Gene data:** rbcL (AB010238) **Reference:** 737

**History:** < Nozaki, Hisayoshi < SAG **Other collection strain no.:** SAG 4.93 **Locality:** Leveret/Massachusetts/U.S.A. **Isolator:** Kugrens, P. **Identification by:** Nozaki, Hisayoshi (Reidentify) **Formerly identified as:** Chlorogonium tetragamum Bohlin (in SAG) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Habitat:** (Soil) **Gene data:** rbcL (AB010239) **Reference:** 737

Chlorogonium complexum Nakada

**History:** < Nakada, Takashi **Locality:** Saitama/Japan (2004-08-10) **Isolator:** Nakada, Takashi **Identified by:** Nakada, Takashi **(2007-12-***) **States:** Unialgal; Clonal; Non-axenic **Culture
Chlorogonium elongatum (Dangeard) Francé

751 History: < Nakada, Takashi Locality: Toyama/Japan (2005-09-22) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2007-12-**) States: Unialgal; Clonal; Non-axenic Culture conditions: AF; 20°C; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Mixotrophic; Unialgal; Axenic; Homothallic; Isogamy; Resting spore forming Other strain no.: SkCl-1 References: 606, 607, 610

Chlorogonium euchlorum (Ehrenberg) Ehrenberg

754 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1639 Locality: Chicago/Lake Illinois/USA. Isolator: Kugrens, P. Identified by: Nozaki, Hisayoshi (Reidentify) Formerly identified as: Chlorogonium elongatum (Dangeard) Dangeard (in UTEX) States: Unialgal; Clonal; Non-axenic Culture conditions: AF; 20°C; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Soil) Characteristics: Homothallic; Isogamy; Resting spore forming Other strain no.: ChCl-4-1 References: 614
Formerly identified as: Chlorogonium elongatum (Dangeard) Dangeard (in CCAP) States: Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Habitat:** (Freshwater) **Gene data:** rbcL. (AB010224) **Reference:** 737

**History:** < Nozaki, Hisayoshi < CCAP **Other collection strain no.:** CCAP 12/3 **Locality:** Berlin/Germany **Isolator:** Mainx Identified by: Nozaki, Hisayoshi (Reidentify) Formerly identified as: Chlorogonium euchlorum Ehrenberg (in CCAP) States: Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Habitat:** (Freshwater) **Gene data:** rbcL. (AJ001882) **Reference:** 737

759 **History:** < Nozaki, Hisayoshi < CCAP **Other collection strain no.:** CCAP 12/6 **Isolator:** Pringsheim, E. G. Identified by: Nozaki, Hisayoshi (Reidentify) Formerly identified as: Chlorogonium sp. (in CCAP) States: Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Habitat:** (Freshwater) **Gene data:** rbcL. (AB010225) **Reference:** 737

760 **History:** < Nozaki, Hisayoshi < SAG **Other collection strain no.:** SAG 12-2d **Locality:** Cape Flats/South Africa **Isolator:** Pringsheim, E. G. Identified by: Nozaki, Hisayoshi (Reidentify) Formerly identified as: Chlorogonium elongatum (Dangeard) Dangeard (in SAG) States: Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 2 M **Habitat:** (Soil) **Gene data:** psaB (AB451206); rbcL (AB010229) **References:** 609, 737

**CHLOROKYBUS** : Charophyceae

**Chlorokybus** sp.

160 **History:** < Watanabe, Shin **Locality:** Tottori/Japan (1972-05-19) **Isolator:** Watanabe, Shin Identified by: Watanabe, Shin Formerly identified as: Chlorosarcinopsis caeca S.Watanabe States: Unialgal; Non-clonal; Non-axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Soil) **Other strain no.:** TOT-24 **References:** 567, 1186

**CHLOROMONAS** : Chlorophyceae

**Chloromonas actinochloris** (Deason et Bold) Pröschold, Marin, Schlösser et Melkonian

2201 **History:** < IAM (2007) < BIU (UTEX; 1960) **Other collection strain no.:** IAM C-213; SAG 1.72; UTEX 965 **Locality:** Caldwell County/Texas/U.S.A. **Isolator:** Deason, T. R. Formerly identified as: Chlamydomonas actinochloris Deason et Bold States: Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M **Characteristics:** Hydrogen evolution **Other strain no.:** Deason C-2-14 **Reference:** 38

2224 **History:** < IAM (2007) < UTEX (1996) **Other collection strain no.:** IAM C-558 (=C-7); UTEX 578; SAG 34.72 **Isolator:** Tsubo, Yoshihiro Formerly identified as: Chlamydomonas mutabilis Gerloff States: Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M **Other strain no.:** Tsubo T-A

**Chloromonas augustae** (Skuja) Pröschold, Marin, Schlösser et Melkonian

158 **History:** < Watanabe, Shin **Locality:** Sumatra/Indonesia (1979-08-21) **Isolator:** Watanabe, Shin Identified by: Watanabe, Shin Formerly identified as: Chlamydomonas augustae Skuja var. ellipssoidea S.Watanabe States: Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Authentic strain **Other strain no.:** ASE-242 **References:** 374, 567, 1186, 1187

**Chloromonas carrizoensis** (Ettl et Schwarz) Pröschold, Marin, Schlösser et Melkonian

2575 **History:** < IAM (2007) < BIU (UTEX; 1967) **Other collection strain no.** IAM C-277; SAG 46.72; UTEX B 968 **Locality:** Caldwell County/Texas/U.S.A. **Isolator:** Deason, T. R. Formerly identified as: Chlamydomonas chlorococcoides Ettl et Schwarz States: Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M **Habitat:** (Soil) **Other strain no.** Deason C-2-4

**Chloromonas insignis** (Anachin) Gerloff et Ettl
**CONTENTS**

447  **History:** < Suda, Shoichiro  **Locality:** Lake Kasumigaura/Ibaraki/Japan (1983-08-22)  **Isolator:** Suda, Shoichiro  **Identified by:** Suda, Shoichiro  **States:** Unialgal; Clonal; Axenic  **Culture conditions:** C; 20°C; 22-32μmol/m²/s; 2 M  **Habitat:** Freshwater (Lake water)  **Gene data:** atpB (AB084313); psaB (AB084348); rbcL (AB022226)  **Other strain no.:** Kas-8  **References:** 567, 572, 740

*Chloromonas pseudoplatyphyncha* (Pascher) Silva

Syn. Chlamydomonas planyphyncha Pascher 1927 p.308; Chlamydomonas polychloris Korshikov non Pascher; Chloromonas planyphyncha Ettl

2563  **History:** < Nozaki, Hisayoshi  **Locality:** Hojo-ike Pond/Kagawa/Japan (2003-10-21)  **Isolator:** Nakada, Takashi  **Identified by:** Matsuzaki, Ryo (2009-08-28)  **States:** Unialgal; Clonal; Axenic  **Culture conditions:** AF-6; 20°C; 32-40μmol/m²/s; 1 M  **Habitat:** Freshwater (Sediment)  **Other strain no.:** HJCl-3  **Reference:** 510

*Chloromonas* sp.

2203  **History:** < IAM (2007) < BIU (UTEX; 1967)  **Other collection strain no.:** IAM C-216; SAG 3.72; UTEX 967  **Locality:** Caldwell County/Texas/U.S.A.  **Isolator:** Deason, T. R.  **Formerly identified as:** Chlamydomonas planyphyncha Prinsheim; Chlamydomonas akinetos Deason et Bold  **States:** Unialgal; Clonal; Axenic[2013 Jan]  **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M  **Habitat:** (Soil)  **Other strain no.:** Deason C-1-11  **Reference:** 38

2379  **History:** < Muramoto, Kyoohei  **Locality:** Mt. Gassan/Yamagata/Japan (2006-06-15)  **Isolator:** Muramoto, Kyoohei  **Identified by:** Muramoto, Kyoohei; Nozaki, Hisayoshi (2008-02-06)  **Formerly identified as:** Chloromonas miwae (Fukushima) Muramoto  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** AF-6; 10°C; 20-32μmol/m²/s; 2 M  **Habitat:** Terrestrial (Snow)  **Characteristics:** Stenothermal; Cryophilic  **Other strain no.:** GS1  **Reference:** 588

2380  **History:** < Muramoto, Kyoohei  **Locality:** Mt. Gassan/Yamagata/Japan (2006-06-15)  **Isolator:** Muramoto, Kyoohei  **Identified by:** Muramoto, Kyoohei; Nozaki, Hisayoshi (2008-02-06)  **Formerly identified as:** Chloromonas miwae (Fukushima) Muramoto  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** AF-6; 10°C; 20-32μmol/m²/s; 2 M  **Habitat:** Terrestrial (Snow)  **Characteristics:** Stenothermal; Cryophilic  **Other strain no.:** STR  **Reference:** 588

**CHLOROTETRAEDRON** : Chlorophyceae

*Chlorotetraedron incus* (Teiling) MacEntee et al.

Syn. Tetraëdron incus (Teiling) G.M. Smith

392  **History:** < Kasai, Fumie  **Locality:** Tsukuba/Ibaraki/Japan (1984-05-07)  **Isolator:** Kasai, Fumie  **Identified by:** Watanabe, Masayuki  **States:** Unialgal; Clonal; Axenic  **Culture conditions:** C; 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s)  **Habitat:** Freshwater (Pond water)  **Other strain no.:** F115  **Remarks:** Cryopreserved

**CHORICYSTIS** : Trebouxioiphyceae

*Choricystis minor* (Skuja) Fott

1436  **History:** < TKB  **Locality:** Hyotaro-ike Pond/Ibaraki/Japan (2003-01-**)  **Isolator:** Nakayama, Takeshi  **Identified by:** Nakayama, Takeshi  **States:** Unialgal; Non-clonal; Non-axenic  **Culture conditions:** AF-6; 15°C; 20-30μmol/m²/s; 2 M  **Habitat:** Freshwater (Pond water)  **Other strain no.:** TKB-052 (nak-07)

*Choricystis* sp.

1840  **History:** < TKB  **Locality:** Shishizuka-ohike Pond/Ibaraki/Japan (2004-06-24)  **Isolator:** Nakayama, Takeshi  **Identified by:** Nakayama, Takeshi (2004-***)  **States:** Unialgal; Non-clonal; Non-axenic  **Culture conditions:** C; 20°C; 20-30μmol/m²/s; 2 M  **Habitat:** Freshwater (Pond water)  **Other strain no.:** TKB-198

2333  **History:** < Takamura, Noriko  **Locality:** Lake Misuzu/Nagano/Japan (1991-05-17)  **Isolator:** Takamura, Noriko  **Identified by:** Takamura, Noriko; Re-identified at NIES by DNA sequencing
Formerly identified as: Mychonastes sp. States: Unialgal Culture conditions: CB; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: 18S rRNA (AB488792); 18S rRNA (AB488793) Other strain no.: MSZ 3

2335 History: < Takamura, Noriko Locality: Lake Kuttara/Hokkaido/Japan (1991-07-15) Isolator: Takamura, Noriko Identified by: Takamura, Noriko; Re-identified at NIES by DNA sequencing Formerly identified as: Mychonastes sp. States: Unialgal Culture conditions: CB; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: 18S rRNA (AB488584) Other strain no.: KUTA 1

2337 History: < Takamura, Noriko Locality: Lake Shikotsu/Hokkaido/Japan (1991-05-27) Isolator: Takamura, Noriko Identified by: Takamura, Noriko; Re-identified at NIES by DNA sequencing Formerly identified as: Mychonastes sp. States: Unialgal Culture conditions: C; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: 18S rRNA (AB488585) Other strain no.: SKT 1

2338 History: < Takamura, Noriko Locality: Lake Toya/Hokkaido/Japan (1991-05-30) Isolator: Takamura, Noriko Identified by: Takamura, Noriko; Re-identified at NIES by DNA sequencing Formerly identified as: Mychonastes sp. States: Unialgal Culture conditions: C; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: 18S rRNA (AB488586) Other strain no.: TOYA

2342 History: < Takamura, Noriko Locality: Lake Otadominuma/Hokkaido/Japan (1991-05-29) Isolator: Takamura, Noriko Identified by: Takamura, Noriko; Re-identified at NIES by DNA sequencing Formerly identified as: Auxenochlorella sp. States: Unialgal Culture conditions: CB; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: 18S rRNA (AB488587) Other strain no.: OTD 1 Remarks: Cryopreserved

CHROMULINA: Chrysophyceae
Chromulina sp.

2304 History: < Suda, Shoichiro Locality: Harima-nada/Japan (1984-08-10) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 22-32μmol/m²/s; 3 M Habitat: Marine (Seawater) Other strain no.: 810YB-10

CHROODACTYLON: Stylonematophyceae
Chroodactylon ornatum (C.Agardh) Basson
Syn. Asterocystis smargadina Reinsch; Asterocystis ramosa (Thwaites) Gobi; Chroodactylon ramosum (Thwaites) Hansgirg


CHROOGLOEOCYSTIS: Cyanophyceae
Chroogloeocystis siderophila I.I. Brown et Cooksey

1031 History: < Brown, Igor I. Locality: La Duke Hot Spring/Montana/U.S.A. (2001-7.*) Isolator:
Brown, Igor I. Identified by: Brown, Igor; Mummey, Daniel States: Unialgal; Clonal; Non-axenic Culture conditions: DH + Fe (agar); MDM (agar); 24 °C; 20-30μmol/m²/s; 4 M (37 °C; 15-25μmol/m²/s) Habitat: Hot spring (Bottom mud) Characteristics: Biofilm process; Thermophilic Gene data: 16S rRNA (AY380791) Other strain no.: #00171

CHROOMONAS: Cryptophyceae

Chroomonas caudata Geitler

712 History: < Erata, Mayumi Locality: Funada-ike Pond/Chiba/Japan (1985-09-***) Isolator: Erata, Mayumi Identified by: Erata, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 15 °C; 8-15μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Gene data: 18S rRNA (AB240963); Nuclear actin (AB126024) Other strain no.: #00171 References: 86, 1248

Chroomonas coerulae (Geitler) Skuja

Syn. Cryptomonas coerulea Geitler

713 History: < Erata, Mayumi Locality: Sugadaira Moor/Nagano/Japan (1985-11-10) Isolator: Erata, Mayumi Identified by: Erata, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 15 °C; 8-15μmol/m²/s; 2 M Habitat: Freshwater (Bog water) Other strain no.: #00191 References: 84, 86

714 History: < Erata, Mayumi Locality: Sugadaira Moor/Nagano/Japan (1985-11-10) Isolator: Erata, Mayumi Identified by: Erata, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 15 °C; 8-15μmol/m²/s; 2 M Habitat: Freshwater (Bog water) Other strain no.: #00217 References: 84, 86, 87

1004 History: < Moriya, Mayumi Locality: Bibi River/Hokkaido/Japan (1999-11-***) Isolator: Moriya, Mayumi Identified by: Moriya, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 15 °C; 20-30μmol/m²/s; 2 M Habitat: Freshwater (River water) Other strain no.: #74

Chroomonas collegionis Butcher

703 History: < Erata, Mayumi < Hara, Yoshiaki < CCAP Other collection strain no.: CCAP 978/11 Locality: River Thames/Essex/U.K. (1961-****) States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15 °C; 20-30μmol/m²/s; 1 M Habitat: Brackish water Characteristics: Authentic strain Other strain no.: M08

Chroomonas dispersa Butcher

704 History: < Erata, Mayumi < Hara, Yoshiaki < CCAP Other collection strain no.: CCAP 978/10 Locality: Bristol Channel/U.K. (1960-08-***) States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15 °C; 20-30μmol/m²/s; 1 M Habitat: Marine Characteristics: Authentic strain Gene data: 18S rRNA (AB240961) Other strain no.: M09

Chroomonas mesostigmatica Butcher

1370 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2004-02-09) Isolator: Kai, Atsushi Identified by: Kai, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: f/2 + NH₄Cl; 20 °C; 15-22μmol/m²/s; 1 M Habitat: Marine (Sand and seawater) Other strain no.: TKB-112 (AK-13)

Chroomonas nordstedtii Hansgirg

706 History: < Erata, Mayumi Locality: Sugadaira Moor/Nagano/Japan (1976-09-***) Isolator: Inouye, Isao Identified by: Erata, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 15 °C; 8-15μmol/m²/s; 2 M Habitat: Freshwater (Bog water) Other strain no.: #00165 References: 84, 85, 86, 142, 1036

707 History: < Erata, Mayumi Locality: Funada-ike Pond/Chiba/Japan (1985-09-***) Isolator: Erata, Mayumi Identified by: Erata, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 15 °C; 8-15μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Other strain no.: #00173 References: 86, 87
708 **History:** Erata, Mayumi **Locality:** Hokkaido University/Hokkaido/Japan (1987-09-24) **Isolator:** Erata, Mayumi **Identified by:** Erata, Mayumi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 15°C; 8-15μmol/m²/s; 2 M **Habitat:** Freshwater (Pond water) **Gene data:** 18S rRNA (AB240962); 28S rRNA (HE820916); Nuclear actin (AB126023) **Other strain no.:** #00324 **Reference:** 86

709 **History:** Erata, Mayumi **Locality:** Hokkaido University/Hokkaido/Japan (1987-09-24) **Isolator:** Erata, Mayumi **Identified by:** Erata, Mayumi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 15°C; 8-15μmol/m²/s; 2 M **Habitat:** Freshwater (Pond water) **Other strain no.:** #00330 **Reference:** 86

710 **History:** Erata, Mayumi **Locality:** Hokkaido University/Hokkaido/Japan (1987-09-24) **Isolator:** Erata, Mayumi **Identified by:** Erata, Mayumi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 15°C; 8-15μmol/m²/s; 2 M **Habitat:** Freshwater (Pond water) **Other strain no.:** #00331 **Reference:** 86

711 **History:** Erata, Mayumi **Locality:** Mitsukaido/Ibaraki/Japan (1987-01-17) **Isolator:** Suda, Shoichiro **Identified by:** Erata, Mayumi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 15°C; 8-15μmol/m²/s; 2 M **Habitat:** Freshwater (Sediment) **Other strain no.:** #00354

*Chroomonas placoea* Butcher

705 **History:** Erata, Mayumi < Haru, Yoshiaki < CCAP **Other collection strain no.:** CCAP 978/8 **Locality:** Yorkshire/U.K. (1959.**)** **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** ESM; 15°C; 20-30μmol/m²/s; 1 M **Habitat:** Marine **Characteristics:** Authentic strain **Other strain no.:** M11 **Reference:** 85

*Chroomonas* sp.

2331 **History:** Hatakeyama, Noriko **Locality:** Naka River/Ibaraki/Japan (1992-04-14) **Isolator:** Hatakeyama, Noriko **Identified by:** Hatakeyama, Noriko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** ESM; WESM; 20°C; 15-27μmol/m²/s; 2 M **Habitat:** Brackish water (Sediment) **Other strain no.:** NAK-1

*CHRYSOCROMULINA* : Prymnesiophyceae

*Chrysochromulina hirta* Manton

741 **History:** Kawachi, Masanobu **Locality:** Chiba Harbor/Chiba/Japan (1986-06-23) **Isolator:** Kawachi, Masanobu **Identified by:** Kawachi, Masanobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** ESM; 15°C; 35-50μmol/m²/s; 1 M **Habitat:** Marine (Seawater) **Characteristics:** Mixotrophic; Phagotrophic **Other strain no.:** CH1 **Reference:** 142

*Chrysochromulina parva* Lackey

562 **History:** Hatakeyama, Noriko **Locality:** inside NIES/Ibaraki/Japan (1992-02-13) **Isolator:** Hatakeyama, Noriko **Identified by:** Kawachi, Masanobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 15°C; 35-50μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water)

*Chrysochromulina quadrikonta* Kawachi et Inouye

998 **History:** Kawachi, Masanobu **Locality:** off Uramura/Mie/Japan (2001-01-12) **Isolator:** Hata, Naotsugu **Identified by:** Inouye, Isao **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MNK; 20°C; 20-30μmol/m²/s; 14 D **Habitat:** Marine (Seawater) **Characteristics:** Red tide **Other strain no.:** CQ13T

*Chrysochromulina simplex* Estep, Davis, Hargraves et Sieburth

1392 **History:** TKB **Locality:** Chiba Harbor/Chiba/Japan (2004-07.**) **Isolator:** Nakayama, Takeshi **Identified by:** Nakayama, Takeshi **States:** Unialgal; Non-axenic; Non-axenic **Culture conditions:** mIMR; 20°C; 15-22μmol/m²/s; 1 M **Habitat:** Marine (Seawater) **Other strain no.:** TKB-129 (nak23)

*Chrysochromulina* sp.
**CONTENTS**

**CHRYSOCLUSTER** : Prymnesiophyceae

*Chryscocler rhomboideus* Nakayama, Yoshida, Noël, Kawachi et Inouye

**CHRYSPHAEUM** : Pelagophyceae

*Chrysopeaeum taylorii* Lewis et Bryan

**Closterium acerosum** Ehrenberg ex Ralfs

1333 **History**: < TKB **Locality**: Tokyo Bay/Japan (2003-10-16) **Isolator**: Okamoto, Noriko **Identified by**: Okamoto, Noriko **States**: Unialgal; Non-clonal; Non-axenic **Culture conditions**: ESM; 20°C; 40-50μmol/m²/s; 14 D **Habitat**: Marine (Seawater) **Characteristics**: Prey for Kathablepharis japonica (NIES-1334) and Leucocryptos marina (NIES-1335) **Gene data**: 18S rRNA (DQ980478); β-tubulin (AB194979) **Other strain no.**: TKB-079 (nrc063) **References**: 392, 799

1391 **History**: < TKB **Locality**: Tokyo Bay/Tokyo/Japan (2003-08-**) **Isolator**: Yoshida, Masaki **Identified by**: Yoshida, Masaki (2003-**-**) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: WESM; 20°C; 40-50μmol/m²/s; 2 M **Habitat**: Marine (Seawater) **Other strain no.**: TKB-210 (yn-12)

2506 **History**: < Inouye, Isao **Locality**: Ashikita Beach/Kumamoto/Japan (2006-03-26) **Isolator**: Chikuni, Tomoko **Identified by**: Chikuni, Tomoko (2006-***-**) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: IMK; 20°C; 10-15μmol/m²/s; 14 D **Habitat**: Marine (Seawater) **Other strain no.**: TKB-348

**Chlorella acerosa** Nakayama, Takeshi

1874 **History**: < Nakayama, Takeshi **Locality**: Okumatsushima/Miyagi/Japan (1998-10-**) **Isolator**: Nakayama, Takeshi **Identified by**: Nakayama Takeshi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: MNK; 20°C; 22-32μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Characteristics**: Authentic strain **Other strain no.**: TKB-54 **Reference**: 660

**Closterium acerosum** Ikeda, Tomoko

1699 **History**: < Honda, Daiske **Locality**: Irionotke Isl., Funaura/Okinawa/Japan (2000-08-04) **Isolator**: Fukaya, Sachiko **Identified by**: Fukaya, Sachiko **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: MNK; 20°C; 25-40μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Other strain no.**: SEK-105

1700 **History**: < Honda, Daiske **Locality**: Guam Isl., Agat Bay, Haps Reef/U.S.A. (2001-05-13) **Isolator**: Fukaya, Sachiko **Identified by**: Fukaya, Sachiko **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: MNK; 20°C; 25-40μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Other strain no.**: SEK-109

**Closterium acerosum** Nakayama, Yoshida

124 **History**: < Watanabe, Masayuki **Locality**: Daramshara/Nepal (1965-10-25) **Isolator**: Ichimura, Terunobu **Identified by**: Ichimura, Terunobu **States**: Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s) **Habitat**: Freshwater (Pond sediment) **Other strain no.**: N-20-1 **References**: 229, 567

125 **History**: < Watanabe, Masayuki **Locality**: Rukumkot/Nepal (1965-10-29) **Isolator**: Ichimura, Terunobu **Identified by**: Ichimura, Terunobu **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s) **Habitat**: Freshwater (Pond sediment) **Gene data**: 18S rRNA (AF352230) **Other strain no.**: N-25-22 **References**: 66, 229, 567

127 **History**: < IAM (1983) **Other collection strain no.**: IAM C-435 **Locality**: Sapporo/Hokaido/Japan **Isolator**: Nishihama, Yuji **Identified by**: Niiyama, Yuko **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s) **Habitat**: Freshwater (Stream sediment) **Characteristics**: Homothallic **Other strain no.**: H-2-2 **References**: 229, 235, 567

448 **History**: < IAM (1983) **Other collection strain no.**: IAM C-314; UTEX 1075 **Locality**: Japan **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 3 M (20°C;
Closterium calosporum

**T. West var. subpronum** W. et G.S. West

258 History: < Watanabe, Makoto M. **Locality:** Lake Biwa/Shiga/Japan (1983-12-13) **Isolator:** Watanabe, Makoto M. **Identified by:** Watanabe, Makoto M. **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** CA; 20°C; 32-40µmol/m²/s; 2 M **Habitat:** Freshwater (Lake water) **Characteristics:** Other water bloom; Heterothallic; Mating type(+); Crosses with NIES-259 and 260 Other strain no.: Bca-25 Reference: 55

259 History: < Watanabe, Makoto M. **Locality:** Lake Biwa/Shiga/Japan (1983-12-13) **Isolator:** Watanabe, Makoto M. **Identified by:** Watanabe, Makoto M. **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** CA; 20°C; 32-40µmol/m²/s; 2 M **Habitat:** Freshwater (Lake water) **Characteristics:** Other water bloom; Heterothallic; Mating type(−); Crosses with NIES-258 Other strain no.: Bca-26 Reference: 567

Closterium calosporum

271 History: < IAM (1983) **Other collection strain no.:** IAM C-318 **Locality:** Vermont/U.S.A. **Isolator:** Cook, P. W. **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 8-15µmol/m²/s; 3 M (20°C; 22-32µmol/m²/s) **Habitat:** Freshwater (Pool soil) **Gene data:** 18S rRNA (AF352225) **References:** 66, 235, 241, 567, 1137, 1138

Closterium calosporum

Wittrock var. galiciense Gutwinski

128 History: < Watanabe, Masayuki **Locality:** Ibaraki/Japan **Isolator:** Watanabe, Makoto M. **Identified by:** Watanabe, Makoto M. **States:** Unialgal; Clonal; Axenic **Culture conditions:** CA; 20°C; 8-15µmol/m²/s; 3 M (20°C; 22-32µmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Mating type(−); Crosses with NIES-162 Other strain no.: IB-21-20 Reference: 567

162 History: < Watanabe, Masayuki **Locality:** Ibaraki/Japan **Isolator:** Watanabe, Makoto M. **Identified by:** Watanabe, Makoto M. **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** CA; 20°C; 8-15µmol/m²/s; 3 M (25°C; 60-70µmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Mating type(+); Crosses with NIES-128, 163 and 168 Other strain no.: IB-21-21 Reference: 567

163 History: < IAM (1983) **Other collection strain no.:** IAM C-455 **Locality:** Ginama/Okinawa/Japan (1973-06-15) **Isolator:** Ichimura, Terunobu **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Axenic **Culture conditions:** CA; 20°C; 8-15µmol/m²/s; 3 M (20°C; 22-32µmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Mating type(−); Crosses with NIES-162, 164 and 165 Other strain no.: R-5-3 References: 241, 567, 1137, 1138

164 History: < IAM (1983) **Other collection strain no.:** IAM C-454 **Locality:** Ginama/Okinawa/Japan (1973-06-15) **Isolator:** Ichimura, Terunobu **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** CA; 20°C; 8-15µmol/m²/s; 3 M (20°C; 22-32µmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Mating type(+); Crosses with NIES-163 and 166 Other strain no.: R-5-2 References: 241, 567, 1137, 1138

165 History: < IAM (1983) **Other collection strain no.:** IAM C-457 **Locality:** Iriomote Isl./Okinawa/Japan (1973-03-25) **Isolator:** Ichimura, Terunobu **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Axenic **Culture conditions:** CA; 20°C; 8-15µmol/m²/s; 3 M (25°C; 60-70µmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Mating type(−); Crosses with NIES-163, 166 and 168 **Gene data:** 18S rRNA (AF352239) **Other strain no.:** R-11-6 References: 66, 241, 567, 1137, 1138

166 History: < Watanabe, Masayuki **Locality:** Kagawa/Japan (1974-09-**) **Isolator:** Ichimura, Terunobu **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Axenic **Culture conditions:** CA; 20°C; 8-15µmol/m²/s; 3 M (20°C; 22-32µmol/m²/s) **Characteristics:** Heterothallic; Mating type(−); Crosses with NIES-164, 165 and 167 **Other strain no.:** J5-56-11 Reference: 567
167 History: < Watanabe, Masayuki Locality: Kagawa/Japan (1974-09-**); Isolator: Ichimura, Terunobu Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 8.15μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Characteristics: Heterothallic; Mating type( ); Crosses with NIES-166 Other strain no.: J5-56-12 Reference: 567

168 History: < Watanabe, Masayuki Locality: Iriomote Isl/Okinawa/Japan (1973-03-**); Isolator: Ichimura, Terunobu Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 8.15μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Mating type( ); Crosses with NIES-165 Other strain no.: R-11-5 References: 241, 567, 1137, 1138

Closterium calosporum Wittrock var. himalayense M.Watanabe

169 History: < Watanabe, Masayuki Locality: Shewaden/Nepal (1972-06-**); Isolator: Watanabe, Makoto M. Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 8.15μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Stream sediment) Characteristics: Homothallic Other strain no.: N-134-5 References: 567, 1137, 1138

170 History: < Watanabe, Masayuki Locality: Suke/Nepal (1972-06-**); Isolator: Watanabe, Makoto M. Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CA; 20°C; 8.15μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Pond sediment) Characteristics: Homothallic Gene data: 18S rRNA (AF352229) Other strain no.: N-143-19 References: 66, 567

171 History: < Watanabe, Masayuki Locality: Suke/Nepal (1972-06-**); Isolator: Watanabe, Makoto M. Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 8.15μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Pond sediment) Characteristics: Homothallic Other strain no.: N-147-3 References: 357, 567, 1137

336 History: < Watanabe, Masayuki Locality: Suke/Nepal (1972-06-**); Isolator: Watanabe, Makoto M. Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 22°C; 60-70μmol/m²/s; 2 M Habitat: Freshwater (Pond sediment) Characteristics: Homothallic Other strain no.: N-147-12 References: 567, 1137

Closterium ehrenbergii Meneghini ex Ralfs

228 History: < Ichimura, Terunobu Locality: Ebina/Kanagawa/Japan (1975-12-04); Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C; 20°C; 8.15μmol/m²/s; 3 M (25°C; 60-70μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Mating type( ); Mating group B; Crosses with NIES-229 Gene data: 18S rRNA (AY148818); 5.8S-ITS2-28S (AY148895); cdip-1 mRNA (AB066448) Other strain no.: KK-33-1 References: 54, 67, 116, 117, 118, 119, 191, 232, 233, 236, 237, 239, 259, 357, 358, 396, 567, 756, 891, 917, 956

229 History: < Ichimura, Terunobu Locality: Ebina/Kanagawa/Japan (1975-12-04); Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C; 20°C; 8.15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Mating type( ); Mating group B; Crosses with NIES-228 Gene data: 18S rRNA (AY148821); 5.8S-ITS2-28S (AY148898); scdip-1mRNA (AB066448) Other strain no.: KK-33-6 References: 54, 67, 116, 117, 118, 119, 191, 232, 233, 236, 237, 239, 357, 358, 567, 756, 757, 917

Closterium gracile Brébisson ex Ralfs

179 History: < IAM (1983) Other collection strain no.: IAM C-444 (=C-570) Locality: Kathmandu/Nepal (1968-05-18); Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 8.15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s) Habitat: Freshwater (Sediment) Characteristics: Heterothallic; Mating type( ); Crosses with NIES-180 Other strain no.: N-90-58 References: 228, 229, 235, 567

180 History: < IAM (1983) Other collection strain no.: IAM C-445 (=C-571) Locality: Kathmandu/Nepal (1968-05-18); Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: CA; 20°C; 8.15μmol/m²/s; 3 M (20°C;
15-27μmol/m²/s) **Habitat**: Freshwater (Sediment) **Characteristics**: Heterothallic: Mating type(−); Crosses with NIES-179 **Gene data**: 18S rRNA (AF352227); 18S rRNA (AF352237) **Other strain no.**: N-90-59 **References**: 66, 228, 229, 235, 567

**Closterium incurvum** Brébisson

181 **History**: < IAM (1983) Other collection strain no.: IAM C-438 (=C-572) **Locality**: Dhorpatan/Nepal (1965-11-09) **Isolator**: Ichimura, Terunobu **Identified by**: Ichimura, Terunobu **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CA; 20℃; 8-15μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) **Habitat**: Freshwater (Sphagnum) **Characteristics**: Homothallic **Gene data**: 18S rRNA (AF352231) **Other strain no.**: N-34-2 **References**: 66, 228, 229, 235, 567

**Closterium moniliferum** Ehrenberg ex Ralfs var. *moniliferum*

172 **History**: < Watanabe, Masayuki **Locality**: Nepal **States**: Unialgal; Non-clonal; Non-axenic **Culture conditions**: C; 20℃; 8-15μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) **Characteristics**: Homothallic **Gene data**: 18S rRNA (AY148874); 18S rRNA (AY148875); 5.8S-ITS2-28S (AY148948) **Other strain no.**: N-100-1 **References**: 67, 567

173 **History**: < IAM (1983) Other collection strain no.: IAM C-432 (=C-573) **Locality**: Kitamoto/Saitama/Japan (1969-01.***) **Isolator**: Ichimura, Terunobu **Identified by**: Ichimura, Terunobu **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20℃; 8-15μmol/m²/s; 3 M (20℃; 15-27μmol/m²/s) **Habitat**: Freshwater (Paddy soil) **Characteristics**: Homothallic **Gene data**: 5.8S-ITS2-28S (AY148950) **Other strain no.**: S-1-22 **References**: 67, 228, 229, 567

174 **History**: < Watanabe, Masayuki **Locality**: Ghorepani/Nepal (1965-12-02) **Isolator**: Ichimura, Terunobu **Identified by**: Ichimura, Terunobu **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: C; 20℃; 8-15μmol/m²/s; 3 M (20℃; 15-27μmol/m²/s) **Habitat**: Freshwater (Pond sediment) **Characteristics**: Homothallic **Gene data**: 18S rRNA (AF352233); 5.8S-ITS2-28S (AY148949) **Other strain no.**: N-76-30 **References**: 66, 67, 229, 567

**Closterium moniliferum** Ehrenberg ex Ralfs var. *submoniliferum* (Woronichin) Krieger

182 **History**: < IAM (1983) Other collection strain no.: IAM C-433 **Locality**: Kitamoto/Saitama/Japan (1969-01.***) **Isolator**: Ichimura, Terunobu **Identified by**: Ichimura, Terunobu **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20℃; 8-15μmol/m²/s; 3 M (20℃; 15-27μmol/m²/s) **Habitat**: Freshwater (Sediment) **Characteristics**: Heterothallic: Mating type(−); Crosses with NIES-183 **Gene data**: 18S rRNA (AY148869); 18S rRNA (AY148870); 5.8S-ITS2-28S (AY148940) **Other strain no.**: S-1-13 **References**: 67, 229, 235, 567, 941

183 **History**: < IAM (1983) Other collection strain no.: IAM C-434 (=C-574) **Locality**: Kitamoto/Saitama/Japan (1969-01.***) **Isolator**: Ichimura, Terunobu **Identified by**: Ichimura, Terunobu **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: C; 20℃; 8-15μmol/m²/s; 3 M (20℃; 15-27μmol/m²/s) **Habitat**: Freshwater (Sediment) **Characteristics**: Heterothallic: Mating type(−); Crosses with NIES-182 **Gene data**: 18S rRNA (AY148871); 18S rRNA (AY148872); 5.8S-ITS2-28S (AY148942) **Other strain no.**: S-1-24 **References**: 67, 228, 229, 235, 567

**Closterium navicula** (Brébisson) Lütkemüller

175 **History**: < IAM (1983) Other collection strain no.: IAM C-443 (=C-575) **Locality**: Chingkholo/Nepal (1965-11-18) **Isolator**: Ichimura, Terunobu **Identified by**: Ichimura, Terunobu **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: AF-6; 20℃; 8-15μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) **Habitat**: Freshwater (Paddy soil) **Characteristics**: Homothallic **Gene data**: 18S rRNA (AF352232) **Other strain no.**: N-49-7 **References**: 66, 228, 229, 235, 567

176 **History**: < Watanabe, Masayuki **Locality**: Ghorepani/Nepal (1965-12-02) **Isolator**: Ichimura, Terunobu **Identified by**: Ichimura, Terunobu **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20℃; 8-15μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) **Habitat**: Freshwater (Paddy soil) **Characteristics**: Homothallic **Other strain no.**: N-75-10 **References**: 229, 567
Closterium peracerosum-strigosum-littorale complex

51 History: < Watanabe, Makoto M. Locality: Katsuta/Ibaraki/Japan (1974-08-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic. Culture conditions: C; 15℃; 10-18μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(+); Mating group II A Other strain no.: IB-6-8 References: 567, 1147, 1152, 1153, 1154

52 History: < Watanabe, Makoto M. Locality: Katsuta/Ibaraki/Japan (1974-08-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic. Culture conditions: C; 15℃; 10-18μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(−); Mating group II A Gene data: 18S rRNA (AF352226) Other strain no.: IB-4-9 References: 66, 567, 941, 1147, 1152, 1153, 1154

53 History: < Watanabe, Makoto M. Locality: Katsuta/Ibaraki/Japan (1974-08-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic. Culture conditions: C; 15℃; 10-18μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(+); Mating group II A Other strain no.: IB-6-8 References: 567, 1147, 1152, 1153, 1154

54 History: < Watanabe, Makoto M. Locality: Katsuta/Ibaraki/Japan (1974-08-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic. Culture conditions: C; 15℃; 10-18μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(−); Mating group II A Other strain no.: IB-6-9 References: 567, 1147, 1152, 1153

55 History: < Watanabe, Makoto M. Locality: Katsuta/Ibaraki/Japan (1975-05-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic. Culture conditions: C; 15℃; 10-18μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(−); Mating group II C Other strain no.: IB-8-15 References: 567, 1147, 1152, 1153

56 History: < Watanabe, Makoto M. Locality: Katsuta/Ibaraki/Japan (1975-05-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic. Culture conditions: C; 15℃; 10-18μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(−); Mating group II A Other strain no.: IB-8-24 References: 567, 838, 1147, 1152, 1153

57 History: < Watanabe, Makoto M. Locality: Katsuta/Ibaraki/Japan (1975-05-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic. Culture conditions: C; 15℃; 10-18μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(+); Mating group II A Other strain no.: IB-8-25 References: 567, 838, 1147, 1152, 1153

58 History: < Watanabe, Makoto M. Locality: Mito/Ibaraki/Japan (1975-06-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Non-axenic. Culture conditions: C; 15℃; 10-18μmol/m²/s; 3 M (20℃; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(−); Mating group II A Other strain no.: IB-10-1 References: 567, 1147, 1152, 1153

59 History: < Watanabe, Makoto M. Locality: Mito/Ibaraki/Japan (1975-06-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic.
conditions: C; 15°C; 10-18μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(+); Mating group II A Other strain no.: IB-10-2 References: 567, 1147, 1152, 1153

History: < Watanabe, Makoto M. Locality: Mito/Ibaraki/Japan (1975-06.-***) Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic Culture conditions: C; 15°C; 10-18μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(+); Mating group II B Other strain no.: IB-12-1 References: 567, 1147, 1152, 1153

History: < Watanabe, Makoto M. Locality: Mito/Ibaraki/Japan (1975-06.-***) Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic Culture conditions: C; 15°C; 10-18μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(−); Mating group II B Other strain no.: IB-12-2 References: 567, 1147, 1152, 1153

History: < Watanabe, Makoto M. Locality: Katsuta/Ibaraki/Japan (1975-06.-***) Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Non-axenic Culture conditions: C; 15°C; 10-18μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Lake water) Characteristics: Heterothallic: Mating type(−); Mating group II A Other strain no.: IB-13-1 References: 567, 1147, 1152, 1153


History: < Ichimura, Terunobu Other collection strain no.: IAM C-440 (=C-576) Locality: Piuthan/Nepal (1965-10-14) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: C; 15°C; 10-18μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Pond sediment) Characteristics: Heterothallic: Mating type(+); Mating group I A Other strain no.: N-13-1 References: 227, 228, 229, 567, 1147

History: < Ichimura, Terunobu Locality: Damchan/Nepal (1965-11-05) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: C; 15°C; 10-18μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Pool soil) Characteristics: Heterothallic: Mating type(+); Mating group I B Gene data: 5.8S-ITS2-28S (AB625554); CpMADS1 mRNA (AB091476); CpPl (AB012698); ESTs(cDNA) (AU294770-AU295959); PR-IP(two subunits) (AB000908); PR-IP(two subunits) (AB000909) Other strain no.: N-31-19 References: 8, 83, 229, 257, 567, 686, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 1014, 1055, 1084, 1085, 1147

History: < Ichimura, Terunobu Locality: Damchan/Nepal (1965-11-05) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Axenic Culture conditions: C; 15°C; 10-18μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Pool soil) Characteristics: Heterothallic: Mating type(−); Mating group I B Gene data: CpMADS1
mRNA (AB091476); CpPI (AB012698); ESTs(cDNA) (AU294770-AU295959) Other strain no.: N-31-24 References: 8, 83, 229, 257, 567, 686, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 930, 931, 932, 1055, 1084, 1085, 1147

69 History: < Watanabe, Makoto M. Locality: Lake Teganuma/Chiba/Japan (1974-06-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Non-axenic Culture conditions: C; 15 °C; 10-18 μmol/m²/s; 3 M (20 °C; 22-32 μmol/m²/s) Habitat: Freshwater Characteristics: Heterothallic: Mating type(†); Mating group II B Other strain no.: TG-2-21 References: 567, 1147, 1152, 1153

70 History: < Watanabe, Makoto M. Locality: Lake Teganuma/Chiba/Japan (1974-06-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Non-axenic Culture conditions: C; 15 °C; 10-18 μmol/m²/s; 3 M (20 °C; 22-32 μmol/m²/s) Habitat: Freshwater Characteristics: Heterothallic: Mating type(†); Mating group II B Other strain no.: TG-2-22 References: 567, 1147, 1152, 1153

261 History: < Watanabe, Makoto M. Locality: Katsuta/Ibaraki/Japan (1974-08-**). Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Non-axenic Culture conditions: C; 15 °C; 10-18 μmol/m²/s; 3 M (20 °C; 22-32 μmol/m²/s) Habitat: Freshwater (Paddy water) Characteristics: Heterothallic: Mating type(†); Mating group II C Other strain no.: IB-8-14 References: 567, 1147, 1152, 1153

262 History: < Ichimura, Terunobu Other collection strain no.: IAM C-441(=C-577) Locality: Piuthan/Nepal (1965-10-14). Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: C; 15 °C; 10-18 μmol/m²/s; 3 M (20 °C; 22-32 μmol/m²/s) Habitat: Freshwater (Reservoir sediment) Characteristics: Heterothallic; Mating type(†); Mating group IA Other strain no.: N-13-4 References: 227, 228, 229, 567, 1147

266 History: < Sekimoto, Hiroyuki Locality: Saitama/Japan (2004-08-08). Isolator: Tsuchikane, Yuki Identified by: Tsuchikane, Yuki (2004-09-**). States: Unialgal; Clonal; Non-axenic Culture conditions: CA; 22 °C; 60-70 μmol/m²/s; 2 M Habitat: Freshwater (Water) Characteristics: Homothallic; Isogamy Other strain no.: kodama20

Closterium pleuromermatum W. et G.S. West

449 History: < Ichimura, Terunobu Other collection strain no.: IAM C-518 Locality: Irionote Isl./Okinawa/Japan (1973-03-25). Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: C; 15 °C; 10-18 μmol/m²/s; 3 M (25 °C; 60-70 μmol/m²/s) Habitat: Freshwater (Paddy soil) Gene data: 18S rRNA (AF352238) Other strain no.: R-11-20 References: 66, 567

Closterium praelongum Brébisson var. brevius (Nordstedt) Krieger


451 History: < Watanabe, Masayuki Locality: Bilethadi/Nepal (1965-12-03). Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20 °C; 8-15 μmol/m²/s; 3 M (20 °C; 22-32 μmol/m²/s) Habitat: Freshwater (Pond sediment) Characteristics: Homothallic Other strain no.: N-78-8 References: 229, 567

Closterium pusillum Hantzsch var. maurus Raciborski


Closterium rostratum Ehrenberg ex Ralfs var. subrostratum (Krieger) Krieger Syn. Closterium subrostratum Krieger

77
Closterium selenastrum M.Watanabe


Closterium spinosorum Hodgetts var. crassum M.Watanabe

339 History: < Watanabe, Masayuki Locality: Mt.Yonahadake/Okinawa/Japan (1972-10-**) Isolator: Ichimura, Terunobu Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CA; 20°C; 8-15μmol/m²/s; 3 M (25°C; 60-70μmol/m²/s) Habitat: Freshwater (Rush field soil) Characteristics: Homothallic Gene data: 18S rRNA (AF352242) Other strain no.: R-9-40 References: 66, 241, 567, 1137, 1138

Closterium spinosorum Hodgetts var. malaysiense M.Watanabe

340 History: < Watanabe, Masayuki Locality: Mt.Yonahadake/Okinawa/Japan (1972-10-**) Isolator: Ichimura, Terunobu Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 8-15μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Rush field soil) Characteristics: Homothallic Other strain no.: R-9-42 References: 241, 567, 1138

Closterium spinosorum Hodgetts var. ryukyuense M.Watanabe

341 History: < Watanabe, Masayuki Locality: Mt.Yonahadake/Okinawa/Japan (1972-10-**) Isolator: Ichimura, Terunobu Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 8-15μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Rush field soil) Characteristics: Homothallic Other strain no.: R-9-12 References: 241, 567, 1137, 1138

Closterium spinosorum Hodgetts var. malaysiense M.Watanabe

342 History: < Watanabe, Masayuki Locality: Penang/Malaysia (1974-01-**) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 8-15μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic: Mating type(+) Gene data: 18S rRNA (AF352227) Other strain no.: M-10-1 References: 66, 567, 1137, 1138

Closterium spinosorum Hodgetts var. ryukyuense M.Watanabe

343 History: < Watanabe, Masayuki Locality: Penang/Malaysia (1974-01-**) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 8-15μmol/m²/s; 3 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic: Mating type(−) Other strain no.: M-10-4 References: 567, 1137, 1138
**Closterium spinosporum** Hodgetts var. *spinosporum*

194 History: < Watanabe, Masayuki

- **Locality**: Tsukude/Aichi/Japan (1972-10-***)
- **Isolator**: Ichimura, Terunobu
- **Identified by**: Watanabe, Masayuki
- **States**: Unialgal; Clonal; Axenic
- **Culture conditions**: CAM; 20°C; 8-15μmol/m²/s; 3 M (20°C; 60-70μmol/m²/s)
- **Habitat**: Freshwater (Pond water)
- **Characteristics**: Homothallic
- **Gene data**: 18S rRNA (AF352224)
- **Other strain no.**: R-12-2G3
- **References**: 567, 1137

**Closterium tumidum** Johnson

198 History: < IAM (1983) Other collection strain no.: IAM C-450 (=C-580)

- **Locality**: Billenhadi/Nepal (1965-12-03)
- **Isolator**: Ichimura, Terunobu
- **Identified by**: Ichimura, Terunobu
- **States**: Unialgal; Clonal; Non-axenic
- **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 3 M (20°C; 60-70μmol/m²/s)
- **Habitat**: Freshwater (Pond sediment)
- **Characteristics**: Homothallic
- **Gene data**: 18S rRNA (AF352234)
- **Other strain no.**: N-79-11
- **References**: 66, 228, 229, 235, 567

**Closterium venus** Kützing ex Ralfs

199 History: < IAM (1983) Other collection strain no.: IAM C-451

- **Locality**: Kathmandu/Nepal (1968-***)
- **Isolator**: Ichimura, Terunobu
- **Identified by**: Ichimura, Terunobu
- **States**: Unialgal; Clonal; Non-axenic
- **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 3 M (20°C; 60-70μmol/m²/s)
- **Habitat**: Freshwater (Pond sediment)
- **Gene data**: 18S rRNA (AF352236)
- **Other strain no.**: N-90-48
- **References**: 66, 567

**Closterium waltichii** Turner

200 History: < IAM (1983) Other collection strain no.: IAM C-450

- **Locality**: Kitamoto/Saitama/Japan (1969-01-***)
- **Isolator**: Ichimura, Terunobu
- **Identified by**: Ichimura, Terunobu
- **States**: Unialgal; Clonal; Non-axenic
- **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s)
- **Characteristics**: Homothallic
- **Gene data**: 18S rRNA (AF352243)
- **Other strain no.**: S-1-0
- **References**: 66, 228, 235, 567

201 History: < Kasai, Fumie

- **Locality**: Lake Kasumigaura/Ibaraki/Japan (1983-09-26)
- **Isolator**: Kasai, Fumie
- **Identified by**: Kasai, Fumie
- **States**: Unialgal; Clonal; Axenic[2013 Jan]
- **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s)
- **Habitat**: Freshwater (Lake water)
- **Characteristics**: Homothallic
- **Other strain no.**: F60-21
- **Reference**: 567

202 History: < Watanabe, Masayuki

- **Locality**: Ghasa/Nepal (1965-11-23)
- **Isolator**: Ichimura, Terunobu
- **Identified by**: Ichimura, Terunobu
- **States**: Unialgal; Clonal; Axenic
- **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s)
- **Habitat**: Freshwater (Sediment)
- **Characteristics**: Homothallic
- **Other strain no.**: N-63-0
- **References**: 229, 567
**COCCOLITHUS** : Prymnesiophyceae

_Coccolithus braarudii_

2696 **History**: < RCC (2010) **Other collection strain no.**: RCC 1200 **Locality**: South Atlantic (2000-10-01) **Isolator**: Probert, I. **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: K/2; 15°C; 10-18μmol/m²/s; 14 D **Habitat**: Marine (Seawater) **Other strain no.**: AC400

**COCCOMYXA** : Trebouxiophyceae

_Coccomyxa dispar_ Schmidle

2252 **History**: < IAM (2007) < Ishikawa, Masako **Other collection strain no.**: IAM C-137 **Isolator**: Ishikawa, Masako **Identified by**: Fukushima, Hiroyoshi; Confirmed at NIES by DNA sequencing **States**: Unialgal; Clonal; Axenic[2012 Mar] **Culture conditions**: C (agar); 20°C; 8-15μmol/m²/s; 3 M **Gene data**: 18S rRNA (AB488787); 18S rRNA (AB488788) **Other strain no.**: Ishikawa U-109

2353 **History**: < IAM (2007) < Holm-Hansen, O. **Other collection strain no.**: IAM C-168 **Locality**: Cape Royals/Antarctica **Isolator**: Holm-Hansen, O. **Identified by**: Confirmed at NIES by DNA sequencing **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: C (agar); 20°C; 8-15μmol/m²/s; 3 M **Habitat**: (Dried "algal mat") **Gene data**: 18S rRNA (AB488794); 18S rRNA (AB488795) **Other strain no.**: Holm-Hansen R-1

_Coccomyxa_ sp.

2166 **History**: < IAM (2007) < Holm-Hansen, O. **Other collection strain no.**: IAM C-169 **Locality**: Marble Point/Antarctica **Isolator**: Holm-Hansen, O. **Identified by**: Kessler, E. (1994) Formerly identified as: Chlorella vulgaris Beijerinck; 'Chlorella' saccharophila (Krüger) Migula **States**: Unialgal; Clonal; Axenic **Culture conditions**: C (agar); 20°C; 8-15μmol/m²/s; 3 M **Habitat**: (Dried "algal peat") **Other strain no.**: Holm-Hansen M-42-a **References**: 190, 1212 **Remarks**: Cryopreserved

**COCHLODINIUM** : Dinophyceae

_Cochlodinium_ sp.

2327 **History**: < Sawaguchi, Tomohiro **Locality**: Shimoda Harbor/Shizuoka/Japan (1985-05-23) **Isolator**: Sawaguchi, Tomohiro **Identified by**: Sawaguchi, Tomohiro **States**: Unialgal; Clonal; Axenic **Culture conditions**: ESM; 15°C; 15-22μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Other strain no.**: SMHD-7 **Remarks**: Fragile species to transportation stresses

**COELASTRUM** : Chlorophyceae

_Coelastrum astroideum_ De Notaris

129 **History**: < TAC **Locality**: Lake Shoji/Yamanashi/Japan (1981-10-27) **Isolator**: Watanabe, Masayuki **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 2 M (25°C; 70-80μmol/m²/s) **Habitat**: Freshwater **Other strain no.**: TAC 56 (TAN-56-7) **Reference**: 567 **Remarks**: Cryopreserved

130 **History**: < TAC **Locality**: Lake Shoji/Yamanashi/Japan (1981-08-31) **Isolator**: Watanabe, Masayuki **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 2 M (25°C; 70-80μmol/m²/s) **Habitat**: Freshwater **Other strain no.**: TAC 51-9A (TAN-51-9A) **Reference**: 567 **Remarks**: Cryopreserved

244 **History**: < Watanabe, Masayuki **Locality**: Lake Kasumigaura/Ibaraki/Japan (1983-08-23) **Isolator**: Kasai, Fumie **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat**: Freshwater (Lake water) **Reference**: 567 **Remarks**: Cryopreserved

342 **History**: < TAC **Locality**: Lake Kawaguchi/Yamanashi/Japan (1981-10-27) **Isolator**: Watanabe, Masayuki **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: ESM; 15°C; 15-22μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Other strain no.**: AC400 **Remarks**: Fragile species to transportation stresses
**CONTENTS**

**Coelastrum morus** W. et G.S. West

231 History: < Kasai, Fumie **Localaty:** Hachijo Isl./Tokyo/Japan (1984-04-18) **Isolator:** Kasai, Fumie **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Lake water) **Other strain no.:** F78-4-2 **References:** 360, 567 **Remarks:** Cryopreserved

**Coelastrum proboscideum** Bohlin

131 History: < IAM (1983) **Other collection strain no.:** IAM C-344 **Localaty:** Near Tukcha/Nepal (1965-11-23) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater **Other strain no.:** N-63-20 **References:** 235, 567, 1159 **Remarks:** Cryopreserved

**Coelastrum reticulatum** (Dangeard) Senn

132 History: < TAC **Localaty:** Lake Yamanaka/Yamanashi/Japan (1981-10-26) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Axenic **Culture conditions:** C; 20°C; 8-15μmol/m²/s; 2 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater **Other strain no.:** TAC 53-5A (TAN-53-5A) **Reference:** 567 **Remarks:** Cryopreserved

**COOLIA** : Dinophyceae

**Coolia monocis** Meunier

343 History: < Suda, Shoichiro **Localaty:** Hachijo Isl./Tokyo/Japan (1984-04-17) **Isolator:** Suda, Shoichiro **Identified by:** Suda, Shoichiro **States:** Unialgal; Clonal; Axenic **Culture conditions:** ESM; 20°C; 15-22μmol/m²/s; 3 M **Habitat:** Marine (Seawater) **Other strain no.:** 8-1 ISL-1 **Remarks:** Unstable; Fragile species to transportation stresses

615 History: < Murata, Michio **Localaty:** Motobu/Okinawa/Japan (1993-06-06) **Isolator:** Kobayashi,
CORYNOPLASTIS: Rhodophyceae

Corynoplastis japonica Yokoyama, Scott, Zuccarello, Kajikawa, Hara et West

COSMARUM: Charophyceae

Cosmarium askenasyi Schmidle

Cosmarium contractum Kirchner

Cosmarium dilatatum Lütkemüller in Järnefeld et Grönblad

Cosmarium hians Borge

CONTENTS

Hidetaka Identified by: Fukuyo, Yasuo States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Plant) Characteristics: Toxic Other strain no.: CM-01 Remarks: Fragile species to transportation stresses

1833 History: < TKB Locality: Naha/Okinawa/Japan (2005-01-22) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi (2006-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-260 Remarks: Fragile species to transportation stresses

COSMARUM

COSMARUM: Charophyceae

Cosmarium askenasyi Schmidle

Cosmarium contractum Kirchner

Cosmarium dilatatum Lütkemüller in Järnefeld et Grönblad

Cosmarium hians Borge
COSMOCLadium: Charophyceae

Cosmoladum constrictum (Archer) Archer

248 History: < Kasai, Fumie Locality: Lake Biwa/Shiga/Japan (1983-12-13) Isolator: Kasai, Fumie Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 8-15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s) Habitat: Freshwater (Lake water) Other strain no.: F75-2 Reference: 567

CRYPTOGLENA: Euglenophyceae

Cryptoglena pigra Ehrenberg

1407 History: < TKB Locality: Tsukuba, Kuribara/Ibaraki/Japan (2004-09-08) Isolator: Yubuki, Naoji Identified by: Yubuki, Naoji States: Unialgal; Clonal; Non-axenic Culture conditions: URO; DY-V; 20°C; 40-50μmol/m²/s; 20 D Habitat: Freshwater Other strain no.: TKB-137 (NY0156)

Cryptoglena skujae Marin et Melkonian

Syn. Phacus agili Euglenophyceae

387 History: < Watanabe, Makoto M. Locality: Kashiwa/Chiba/Japan (1986-09-16) Isolator: Watanabe, Makoto M.; Ichimura, Terunobu Identified by: Watanabe, Makoto M.; Ichimura, Terunobu States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: MAE-6; AF-6; 20°C; 32-40μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: PhD-3 Reference: 143

CRYPTOMONAS: Cryptophyceae

Cryptomonas acuta Butcher

697 History: < Erata, Mayumi < Hara, Yoshiaki < CCAP Other collection strain no.: CCAP 979/10 Locality: N.Wales/U.K. Isolator: Butcher, R. W. Identified by: Butcher, R. W. States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15°C; 20-30μmol/m²/s; 1 M Habitat: Marine Characteristics: Authentic strain Gene data: 18S rRNA (AB240956); Nuclear actin-1 (AB126018); Nuclear actin-2 (AB126019) Other strain no.: M01 Reference: 85

Cryptomonas irregularis Butcher

698 History: < Erata, Mayumi < Hara, Yoshiaki < CCAP Other collection strain no.: CCAP 979/7 Locality: Plymouth/Devon/U.K. (1960.*.**) States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15°C; 20-30μmol/m²/s; 1 M Habitat: Marine Characteristics: Authentic strain Other strain no.: M04 Reference: 85

Cryptomonas ovata Ehrenberg

274 History: < Ishimitsu, Mayumi Locality: Tsuchiura/Ibaraki/Japan (1982-10-28) Isolator: Ishimitsu, Mayumi Identified by: Ishimitsu, Mayumi States: Unialgal; Clonal; Axenic Culture conditions: VT; 15°C; 20-30μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Gene data: 18S rRNA (AB073109); 18S rRNA (AB240952); CO1 (AB009419) Other strain no.: #00046 References: 142, 208, 245, 261, 284, 1034, 1248

275 History: < Ishimitsu, Mayumi Locality: Tsuchiura/Ibaraki/Japan (1982-09-10) Isolator: Ishimitsu, Mayumi Identified by: Ishimitsu, Mayumi States: Unialgal; Clonal; Axenic Culture conditions: VT; 15°C; 20-30μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Other strain no.: #00042 References: 14, 284, 360, 760, 1036, 1203, 1204

Cryptomonas paramecium Ehrenberg Hoef-Emden et Melkonian

Syn. Chilomonas paramecium Ehrenberg

715 History: < Erata, Mayumi Locality: Sugadaira Moor/Nagano/Japan (1985-11-10) Isolator: Erata, Mayumi Identified by: Erata, Mayumi States: Unialgal; Clonal; Axenic[2012 Nov] Culture conditions: CYT; 15°C; 8-15μmol/m²/s; 2 M Habitat: Freshwater (Bog water) Characteristics: Heterotrophic Gene data: 18S rRNA (AB073108); 18S rRNA (AB240955) Other strain no.: #00210 References: 84, 142, 1034

766 History: < Erata, Mayumi Locality: Lake Jusanko/Aomori/Japan (1987-07-**) Isolator: Erata,
Mayumi Identified by: Erata, Mayumi Status: Unialgal; Clonal; Non-axenic Culture conditions: CYT; 15°C; 8-15μmol/m²/s; 2 M Habitat: Brackish water (Water) Characteristics: Heterotrophic Other strain no.: #00318

767 History: < Erata, Mayumi Locality: Lake Jusanko/Aomori/Japan (1987-07-***) Isolator: Erata, Mayumi Identified by: Erata, Mayumi Status: Unialgal; Clonal; Non-axenic Culture conditions: CYT; 15°C; 8-15μmol/m²/s; 2 M Habitat: Brackish water (Water) Characteristics: Heterotrophic Other strain no.: #00319

Cryptomonas platyuris Skuja

276 History: < Ishimitsu, Mayumi Locality: Higashihiroshima/Hiroshima/Japan (1983-08-23) Isolator: Ishimitsu, Mayumi Identified by: Ishimitsu, Mayumi Status: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: VT; 10°C; 15-20μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: #0096 References: 142, 208, 284

344 History: < Ishimitsu, Mayumi Locality: Higashihiroshima/Hiroshima/Japan (1983-08-23) Isolator: Ishimitsu, Mayumi Identified by: Ishimitsu, Mayumi Status: Unialgal; Clonal; Axenic Culture conditions: VT; 10°C; 15-20μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Other strain no.: #00103 Reference: 284

Cryptomonas rostratiformis Skuja

277 History: < Ishimitsu, Mayumi Locality: Hongo/Hiroshima/Japan (1983-10-19) Isolator: Ishimitsu, Mayumi Identified by: Ishimitsu, Mayumi Status: Unialgal; Clonal; Axenic Culture conditions: VT; 15°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Gene data: 18S rRNA (AB240953) Other strain no.: #00148 References: 142, 284

278 History: < Ishimitsu, Mayumi Locality: Hongo/Hiroshima/Japan (1983-10-19) Isolator: Ishimitsu, Mayumi Identified by: Ishimitsu, Mayumi Status: Unialgal; Clonal; Axenic Culture conditions: VT; 15°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: #00154 Reference: 284

345 History: < Ishimitsu, Mayumi Locality: Sugadaira Moor/Nagano/Japan (1982-07-31) Isolator: Ishimitsu, Mayumi Identified by: Ishimitsu, Mayumi Status: Unialgal; Clonal; Axenic Culture conditions: VT; 15°C; 20-30μmol/m²/s; 2 M Habitat: Freshwater (Bog water) Other strain no.: #00006 Reference: 284

1327 History: < Erata, Mayumi Locality: Sugadaira Moor/Nagano/Japan (1985-11-10) Isolator: Erata, Mayumi Identified by: Erata, Mayumi Status: Unialgal; Clonal; Non-axenic Culture conditions: VT; 15°C; 35-50μmol/m²/s; 2 M Habitat: Freshwater (Bog water) Other strain no.: #00266

Cryptomonas tetrapyrenoidosa Skuja

279 History: < Ishimitsu, Mayumi Locality: Higashihiroshima, Hachihonmatsu/Hiroshima/Japan (1983-08-23) Isolator: Ishimitsu, Mayumi Identified by: Ishimitsu, Mayumi Status: Unialgal; Clonal; Axenic Culture conditions: VT; 10°C; 15-20μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Gene data: 18S rRNA (AM051199); 18S rRNA (AJ566183); 5.8S-ITS2-28S (AJ715455); rbcL (AM051220) Other strain no.: #00099 References: 208, 284

280 History: < Ishimitsu, Mayumi Locality: Sugadaira Moor/Nagano/Japan (1982-07-31) Isolator: Ishimitsu, Mayumi Identified by: Ishimitsu, Mayumi Status: Unialgal; Clonal; Axenic Culture conditions: VT; 15°C; 15-20μmol/m²/s; 2 M Habitat: Freshwater (Bog water) Gene data: 18S rRNA (AB240954) Other strain no.: #00014 References: 283, 284, 360


**Cyanidioschyzon** : Cyanidiophyceae

*Cyanidoschyzon merolae* De Luca, Taddei et Varano

1332 History: < Kuroiwa, Tsuneyoshi Locality: Sardinia Isl./Italy Isolator: Toda, Kyoko States: Unialgal; Clonal; Non-axenic Culture conditions: M-Allen; 37°C; 15-25μmol/m^2/s; 2 M Habitat: Hot spring (Water) Characteristics: Acidophilic; Thermophilic Gene data: aladh (AB159595); atpC (AB159600); gnd (AB159596); Hsp70 (AB095185); Hsp90 (AB095179); Hsp90 (AB095186); Mitochondrial DNA (D89861); Nuclear DNA (chromosome 1-20) (AP006483-AP006502); pgk (AB159598); Plastid DNA (AB002583); psbO (AB159597); RPB1 (AB095180); RPB1 (AB095187); RpS8b (AB095181); RpS8b (AB095188); TPI (AB095182); TPI (AB095189); VatA (AB095183); VatA (AB095190); VatB (AB095184); VatB (AB095191) Other strain no.: VT; 10°C; 15-20μmol/m^2/s; 2 M Habitat: Freshwater (Pond water) Other strain no.: #00009 References: 61, 142, 509, 730, 731, 744, 790, 791, 793 Remarks: Fragile species to temperature changes

1804 History: < Tanaka, Kan Locality: Sardinia Isl./Italy Isolator: Toda, Kyoko Identified by: Ohnuma, Mio States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: M-Allen; 37°C; 15-25μmol/m^2/s; 2 M Habitat: Hot spring Characteristics: Acidophilic; Pigmentation paler than wild type Gene data: Chromosome unassigned contigs (AP006600-AP006614); Mitochondrial DNA (D89861); Nuclear DNA (chromosome 1-20) (AP006483-AP006502); Plastid DNA (AB002583) Other strain no.: MO Remarks: Fragile species to temperature changes

1805 History: < Tanaka, Kan Locality: Sardinia Isl./Italy Isolator: Toda, Kyoko Identified by: Minoda, Ayumi States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: M-Allen (+ U); 37°C; 15-25μmol/m^2/s; 2 M Habitat: Hot spring Characteristics: Acidophilic; Mutant (Uracil-required; 5-FOA tolerant) Gene data: Chromosome unassigned contigs (AP006600-AP006614); Mitochondrial DNA (D89861); Nuclear DNA (chromosome 1-20) (AP006483-AP006502); Plastid DNA (AB002583) Other strain no.: M4 Remarks: Fragile species to temperature changes

1806 History: < Tanaka, Kan Locality: Sardinia Isl./Italy Isolator: Toda, Kyoko Identified by: Inoue, Takayuki States: Unialgal; Clonal; Axenic Culture conditions: M-Allen (+ U); 37°C; 15-25μmol/m^2/s; 2 M Habitat: Hot spring Characteristics: Acidophilic; Mutant (Uracil-required; 5-FOA tolerant) Gene data: Chromosome unassigned contigs (AP006600-AP006614); Mitochondrial DNA (D89861); Nuclear DNA (chromosome 1-20) (AP006483-AP006502); Plastid DNA (AB002583) Other strain no.: HUT1-1 Remarks: Fragile species to temperature changes

**Cyanidium** : Cyanidiophyceae

*Cyanidium caldarium* (Tilden) Geitler

**CYANOPHORA** : Glaucophyceae

*Cyano phora paradoxa* Korshikov

547  **History**: < Kikuchi, Tadatoshi < UTEX  
**Other collection strain no.**: UTEX 555  
**Locality**: U.K.  
**Isolator**: Pringsheim, E. G.  
**Identified by**: Pringsheim, E. G.  
**States**: Unialgal; Clonal; Axenic[2013 Jan]  
**Culture conditions**: C; 20°C; 8-15μmol/m²/s; 2 M (25°C; 70-80μmol/m²/s)  
**Habitat**: Freshwater (Lake water)  
**Characteristics**: Alkaline water  
**Gene data**: FtsZ (AB183875); psaD (AJ132477)  
**References**: 246, 435, 713, 729, 892, 943, 1181

763  **History**: < Suda, Shoichiro  
**Locality**: Mitsukaido/Ibaraki/Japan (1987-01-17)  
**Isolator**: Suda, Shoichiro  
**Identified by**: Suda, Shoichiro  
**States**: Unialgal; Clonal; Axenic  
**Culture conditions**: CSi; 20°C; 15-22μmol/m²/s; 2 M  
**Habitat**: Freshwater (Soil)  
**Other strain no.**: S117  
**Reference**: 142

*Cyanophora tetracyanea* Korshikov

764  **History**: < Suda, Shoichiro  
**Locality**: Mitsukaido/Ibaraki/Japan (1987-01-17)  
**Isolator**: Suda, Shoichiro  
**Identified by**: Suda, Shoichiro  
**States**: Unialgal; Clonal; Axenic  
**Culture conditions**: CSi; 20°C; 15-22μmol/m²/s; 2 M  
**Habitat**: Freshwater (Soil)  
**Other strain no.**: S118  
**Reference**: 142

**CYCLOTELLA** : Bacillariophyceae

*Cyclotella meneghiniana* Kützing

803  **History**: < Kasai, Fumie  
**Locality**: Mitsukaido/Ibaraki/Japan (1993-05-03)  
**Isolator**: Kasai, Fumie  
**Identified by**: Niiyama, Yuko  
**States**: Unialgal; Clonal; Non-axenic  
**Culture conditions**: CSi; 15°C; 10-18μmol/m²/s; 1 M  
**Habitat**: Freshwater (River water)  
**Other strain no.**: 506-26  
**Reference**: 356

804  **History**: < Kasai, Fumie  
**Locality**: Mitsukaido/Ibaraki/Japan (1993-05-18)  
**Isolator**: Kasai, Fumie  
**Identified by**: Niiyama, Yuko  
**States**: Unialgal; Clonal; Non-axenic  
**Culture conditions**: CSi; 15°C; 10-18μmol/m²/s; 1 M  
**Habitat**: Freshwater (River water)  
**Other strain no.**: 518-39  
**Reference**: 356

805  **History**: < Kasai, Fumie  
**Locality**: Mitsukaido/Ibaraki/Japan (1993-06-13)  
**Isolator**: Kasai, Fumie  
**Identified by**: Niiyama, Yuko  
**States**: Unialgal; Clonal; Non-axenic  
**Culture conditions**: CSi; 15°C; 10-18μmol/m²/s; 1 M  
**Habitat**: Freshwater (River water)  
**Other strain no.**: 613-2  
**Reference**: 356

2363  **History**: < Shirokawa, Yuka  
**Locality**: Arakawa River/Tokyo/Japan (2006-10-15)  
**Isolator**: Shirokawa, Yuka  
**Identified by**: Mayama, Shigeki  
**States**: Unialgal; Clonal; Non-axenic  
**Culture conditions**: CSi; 20°C; 15-22μmol/m²/s; 3 M  
**Habitat**: Brackish water (River water)  
**Characteristics**: Euryhaline  
**Other strain no.**: HK

2364  **History**: < Shirokawa, Yuka  
**Locality**: Meguro River/Tokyo/Japan (2006-07-01)  
**Isolator**: Shirokawa, Yuka  
**Identified by**: Mayama, Shigeki  
**States**: Unialgal; Clonal; Non-axenic  
**Culture conditions**: CSi; 20°C; 15-22μmol/m²/s; 3 M  
**Habitat**: Brackish water (River water)  
**Characteristics**: Euryhaline  
**Other strain no.**: MG

2365  **History**: < Shirokawa, Yuka  
**Locality**: Saitama/Japan (2006-07-10)  
**Isolator**: Shirokawa, Yuka  
**Identified by**: Mayama, Shigeki  
**States**: Unialgal; Clonal; Non-axenic  
**Culture conditions**: CSi; 20°C; 15-22μmol/m²/s; 3 M  
**Habitat**: Freshwater (Lake water)  
**Characteristics**: Euryhaline  
**Other strain no.**: SR-0

2367  **History**: < Shirokawa, Yuka  
**Locality**: Saitama/Japan (2006-07-10)  
**Isolator**: Shirokawa, Yuka  
**Identified by**: Mayama, Shigeki  
**States**: Unialgal; Clonal; Non-axenic  
**Culture conditions**: CSi; 20°C; 15-22μmol/m²/s; 3 M  
**Habitat**: Freshwater (Lake water)  
**Characteristics**: Euryhaline  
**Other strain no.**: SR-2

2368  **History**: < Shirokawa, Yuka  
**Locality**: Saitama/Japan (2006-07-10)  
**Isolator**: Shirokawa, Yuka  
**Identified by**: Mayama, Shigeki  
**States**: Unialgal; Clonal; Non-axenic  
**Culture conditions**: CSi; 20°C; 15-22μmol/m²/s; 3 M  
**Habitat**: Freshwater (Lake water)  
**Characteristics**: Euryhaline  
**Other strain no.**: SR-2
Cylindrospermopsis raciborskii (Ralfs) De Bary var. brebissonii

349 History: < IAM Other collection strain no.: IAM C-354 Locality: Lake Ohnuma/Hokkaido/Japan (1967-06-15) Isolator: Haga, Masaru Identified by: Haga, Masaru States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Sediment) Characteristics: Homothallic Other strain no.: 6801-68 Reference: 567

Cylindrospermopsis crassa De Bary

2283 History: < IAM (2007) Other collection strain no.: IAM C-334 States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

Cylindrocytis sp.

2284 History: < IAM (2007) Other collection strain no.: IAM C-630 (=C-382) States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

2301 History: < IAM (1983) Other collection strain no.: IAM C-353 Locality: Ebetsu/Hokkaido/Japan (1967-05-24) Isolator: Haga, Masaru Identified by: Haga, Masaru States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (High moor pool soil) Characteristics: Homothallic Other strain no.: 6801-15

2302 History: < IAM (1983) Other collection strain no.: IAM C-351 Locality: Ebetsu/Hokkaido/Japan (1967-05-24) Isolator: Haga, Masaru Identified by: Haga, Masaru States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (High moor pool soil) Characteristics: Homothallic Other strain no.: 6801-01

2303 History: < IAM (1983) Other collection strain no.: IAM C-350 Locality: Lake Akan/Hokkaido/Japan (1967-03-14) Isolator: Haga, Masaru Identified by: Haga, Masaru States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Sediment) Characteristics: Homothallic Other strain no.: 6707-01

Cylindrospermopsis raciborskii (Woloszynska) Seenayya et S.Raju

930 History: < Otsuka, Shigeto Locality: Shinobazu-no-ike Pond/Tokyo/Japan (2000-07-04) Isolator: Otsuka, Shigeto Identified by: Otsuka, Shigeto States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 25°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: CYL1


Cylindrotheca fusiformis

Identification:
- Takahashi, Yuko

States:
- Marine (Seawater)

Characteristics:
- axenic

Culture conditions:
- f/2; 15 °C; 10-18μmol/m²/s; 2 M

Habitat:
- Marine (Seawater)

Cylindrotheca fusiformis Reimann et Lewin

Cylindrotheca sp.

Identification:
- Mayama, Shigeki

States:
- Unialgal; Clonal; Non-axenic

Culture conditions:
- 20 μmol/m²/s; 1 M

Habitat:
- Freshwater (Pond water)

Cylindrotheca sp.
**DESmodesmus** : Chlorophyceae

*Desmodesmus abundans* (Kirchner) Hegewald
Syn. Scenedesmus abundans (Kirchner) Chodat

685  
**History:** < Katagiri, Masayuki < IAM  
**Other collection strain no.:** IAM C-101  
**Locality:** Japan  
**Isolator:** Lewin, Ralph A.  
**Identified by:** Confirmed at NIES by DNA sequencing  
**Formerly identified as:** Chlorella fusca Shihira et Krauss var. fusca  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** C (agar); 20 °C; 4-10μmol/m²/s; 3 M (25 °C; 70-80μmol/m²/s)  
**Characteristics:** Authentic strain  
**References:** 424, 425, 436, 498, 499, 567, 1211

*Desmodesmus serratus* (Corda) Friedl et Hegewald
Syn. Scenedesmus serratus (Corda) Bohlin

97  
**History:** < TAC  
**Locality:** Lake Shoji/Yamanashi/Japan (1981-08-31)  
**Isolator:** Watanabe, Masayuki  
**Identified by:** Watanabe, Masayuki; Confirmed at NIES by DNA sequencing  
**States:** Unialgal; Clonal; Axenic  
**Culture conditions:** C; 20 °C; 4-10μmol/m²/s; 3 M (25 °C; 70-80μmol/m²/s)  
**Habitat:** Freshwater (Lake water)  
**Other strain no.:** TAC 51-3C (TAN-51-3C)  
**Reference:** 567  
**Remarks:** Cryopreserved

*Desmodesmus* sp.

96  
**History:** < TAC  
**Locality:** Lake Shoji/Yamanashi/Japan (1981-08-31)  
**Isolator:** Watanabe, Masayuki  
**Identified by:** Watanabe, Masayuki; Re-identified at NIES by DNA sequencing  
**Formerly identified as:** Scenedesmus quadricauda (Turpin) Brébisson seu Chodat  
**States:** Unialgal; Clonal; Axenic  
**Culture conditions:** C; 20 °C; 4-10μmol/m²/s; 3 M (25 °C; 70-80μmol/m²/s)  
**Habitat:** Freshwater (Lake water)  
**Gene data:** atpB (AB084305); CO1 (D63658); CO1 (AB011524); psaB (AB084339); rbcL (AB084332)  
**Other strain no.:** TAC 51-3B (TAN-51-3B)  
**References:** 188, 567, 625, 740, 1135, 1236  
**Remarks:** Cryopreserved

2277  
**History:** < IAM (2007) < Watanabe, Atsushi  
**Other collection strain no.:** IAM C-70  
**Isolator:** Watanabe, Atsushi  
**Identified by:** Fukushima, Hiroshi; Re-identified at NIES by DNA sequencing  
**Formerly identified as:** Scenedesmus nanus Chodat  
**States:** Unialgal; Clonal; Axenic[2013 Jan]  
**Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M

2278  
**History:** < IAM (2007) < Watanabe, Atsushi  
**Other collection strain no.:** IAM C-71  
**Isolator:** Watanabe, Atsushi  
**Identified by:** Fukushima, Hiroshi; Re-identified at NIES by DNA sequencing  
**Formerly identified as:** Scenedesmus nanus Chodat  
**States:** Unialgal; Clonal; Axenic[2013 Jan]  
**Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M

*Desmodesmus subspicatus* (Chodat) Hegewald et Schmidt
Syn. Scenedesmus gutwinskii Chodat var. heterospina Bodrokgözy

797  
**History:** < Kasai, Fumie  
**Locality:** inside NIES/Ibaraki/Japan (1992-06-17)  
**Isolator:** Kasai, Fumie  
**Identified by:** Nakano, Taketo; Confirmed at NIES by DNA sequencing  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** C; 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s)  
**Habitat:** Freshwater (Pond water)  
**Characteristics:** Herbicide (simetryn) susceptible  
**Other strain no.:** B8-7  
**Reference:** 354

798  
**History:** < Kasai, Fumie  
**Locality:** inside NIES/Ibaraki/Japan (1992-06-17)  
**Isolator:** Kasai, Fumie  
**Identified by:** Nakano, Taketo; Confirmed at NIES by DNA sequencing  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** C; 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s)  
**Habitat:** Freshwater (Pond water)  
**Characteristics:** Herbicide (simetryn) susceptible  
**Other strain no.:** B8-16  
**Reference:** 354

799  
**History:** < Kasai, Fumie  
**Locality:** inside NIES/Ibaraki/Japan (1992-06-17)  
**Isolator:** Kasai, Fumie  
**Identified by:** Kasai, Fumie; Confirmed at NIES by DNA sequencing  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** C; 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s)  
**Habitat:** Freshwater (Pond water)  
**Characteristics:** Herbicide (simetryn) susceptible  
**Other strain no.:** B8-23  
**Reference:** 354

800  
**History:** < Kasai, Fumie  
**Locality:** inside NIES/Ibaraki/Japan (1992-06-17)  
**Isolator:** Kasai,
Fumie Identified by: Nakano, Taketo; Confirmed at NIES by DNA sequencing States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Pond water) Characteristics: Herbicide (simetryn) tolerant Other strain no.: B3-12 Reference: 354  

History: < Kasai, Fumie Locality: inside NIES/Ibaraki/Japan (1992-06-17) Isolator: Kasai, Fumie Identified by: Nakano, Taketo; Confirmed at NIES by DNA sequencing States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Pond water) Characteristics: Herbicide (simetryn) tolerant Other strain no.: B3-15 Reference: 354  

History: < Kasai, Fumie Locality: inside NIES/Ibaraki/Japan (1992-06-17) Isolator: Kasai, Fumie Identified by: Nakano, Taketo; Confirmed at NIES by DNA sequencing States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Pond water) Characteristics: Herbicide (simetryn) tolerant Other strain no.: B12-2 References: 353, 354, 1239, 1240, 1241, 1242  

DESMOTETRA : Chlorophyceae  
Desmotetra delicata (S.Watanabe) S.Watanabe  
Syn. Chlorosarcinopsis delicata S.Watanabe  

History: < Watanabe, Shin Locality: Kyoto/Japan (1975-04-07) Isolator: Watanabe, Shin Identified by: Watanabe, Shin States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (Soil) Characteristics: Authentic strain Other strain no.: KUC3-6 References: 567, 1186  

DEVELOPAYELLA : Bigyromonadea  
Developayella elegans Tong  

History: < TKB Locality: Chiba Harbor/Chiba/Japan (2002-11-29) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Clonal; Non-axenic Culture conditions: f/2 + Wheat; 15°C; 0μmol/m²/s; 20 D Habitat: Marine (Seawater) Characteristics: Heterotrophic Other strain no.: TKB-017 (NY0124)  

DICTYCHLOROPSIS : Trebouxiophyceae  
Dictyochloropsis irregularis Nakano et Isagi  

History: < Nakano, Taketo Locality: Akkeshi/Hokkaido/Japan (1982-07-25) Isolator: Isagi, Yuji Identified by: Nakano, Taketo States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (Plant (Bark of Picea yezoensis)) Characteristics: Aerial; Epiphytic Other strain no.: CCHU-2227 References: 567, 655 Remarks: Cryopreserved  

DICTYOSPHAERIUM : Trebouxiophyceae  
Dictyosphaerium pulchellum Wood  


DIMORPHOCOCCUS : Chlorophyceae  
Dimorphococcus lunatus A.Brown  

History: < Kasai, Fumie Locality: Ozegahara/Gunma/Japan (1983-08-29) Isolator: Kasai, Fumie Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: CA; 20°C; 4-10μmol/m²/s; 2 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Bog water) Other strain no.: 34-5 Reference: 567
**DINOBRYON** : Chrysophyceae

*Dinobryon divergens* Imhof

### History
- *History*: < Kasai, Fumie
- *Locality*: Lake Biwa/Shiga/Japan (1983-12-13)
- *Isolator*: Kasai, Fumie
- *Identified by*: Kasai, Fumie
- *States*: Unialgal; Clonal; Non-axenic
- *Culture conditions*: f/2; 15°C; 6-12μmol/m²/s; 2 M
- *Habitat*: Freshwater (Lake water)
- *Other strain no.*: F-75-26

**DITYLUM** : Bacillariophyceae

*Ditylum brightwellii* (T.West) Grunow et Heurck

### History
- *History*: < Sawaguchi, Tomohiro
- *Isolator*: Sawaguchi, Tomohiro
- *Identified by*: Sawaguchi, Tomohiro
- *States*: Unialgal; Clonal; Non-axenic
- *Culture conditions*: f/2; 10°C; 6-12μmol/m²/s; 2 M
- *Habitat*: Marine (Seawater)
- *Other strain no.*: KBB-10

**DOCIDIUM** : Charophyceae

*Docidium undulatum* Bailey var. *undulatum*

### History
- *History*: < Kasai, Fumie
- *Locality*: Ozegahara/Fukushima/Japan (1983-08-29)
- *Isolator*: Kasai, Fumie
- *Identified by*: Kasai, Fumie
- *States*: Unialgal; Clonal; Non-axenic
- *Culture conditions*: SW; 20°C; 8-15μmol/m²/s; 3 M
- *Habitat*: Freshwater (Bog water)
- *Other strain no.*: 41-11

**DUNALIELLA** : Chlorophyceae

*Dunalieia bioculata* Butcher

### History
- *Other collection strain no.*: IAM C-523; CCAP 19/4; UTEX LB 199; Prague 281a; SAG 19-4
- *Localities*: Russia
- *Isolator*: Mainx, F.
- *Identified by*: Mainx, F.
- *States*: Unialgal; Clonal; Axenic[2013 Jan]
- *Culture conditions*: f/2; 20°C; 8-15μmol/m²/s; 3 M
- *Habitat*: Salt water
- *Characteristics*: Authentic strain
- *References*: 33, 913, 914

*Dunalieia parva* Lerche

### History
- *Other collection strain no.*: IAM C-527; UTEX 1983
- *Isolator*: Ben-Amotz, A.
- *States*: Unialgal; Clonal; Axenic[2013 Jan]
- *Culture conditions*: f/2; 20°C; 8-15μmol/m²/s; 3 M
- *Reference*: 1005

*Dunalieia peireei* Nicolai

### History
- *Other collection strain no.*: IAM C-528; CCAP 19/2; SAG 19-2; UTEX LB 2192; IUCC 295
- *Localities*: Lake Marina/California/U.S.A
- *Isolator*: Nicolai, E.
- *States*: Unialgal; Clonal; Axenic[2013 Jan]
- *Culture conditions*: f/2; 20°C; 8-15μmol/m²/s; 3 M

*Dunalieia primolecta* Butcher

### History
- *Other collection strain no.*: IAM C-525; CCAP 11/34; UTEX LB 1000; SG 183.30; UTEX L 2355
- *Localities*: Plymouth/Devon/U.K.
- *Isolator*: Gross, F.
- *States*: Unialgal; Clonal; Axenic[2013 Jan]
- *Culture conditions*: f/2; 20°C; 8-15μmol/m²/s; 3 M
- *References*: 794, 1249

*Dunalieia salina* (Dunal) Teodoresco

### History
- *Other collection strain no.*: IAM C-522; CCAP 19/3; SAG 19-3; UTEX LB 200
- *Localities*: EUN (Soviet Union)
- *Isolator*: Mainx, F.
- *States*: Unialgal; Clonal; Axenic[2012 Feb]
- *Culture conditions*: f/2; 20°C; 8-15μmol/m²/s; 3 M
8-15μmol/m²/s; 3 M **Habitat**: Salt water **References**: 472, 1005

*Dunaliella tertiolecta* Butcher

2258 **History**: < IAM (2007) < Hara, Yoshiaki (1989) < UTEX **Other collection strain no.**: IAM C-524; UTEX LB 999; CCAP 19/6B **Locality**: Oslofjord/Norway **Isolator**: Foyn, B. **States**: Unialgal; Clonal; Axenic[2012 Feb] **Culture conditions**: f/2; 20℃; 8-15μmol/m²/s; 3 M **References**: 34, 972, 1005, 1006, 1249

*DYSNECTES* : Metamonada incertae sedis

*Dysnecites brevis* Yubuki, Inagaki, Nakayama et Inouye

1843 **History**: < TKB **Locality**: Yamakawa Harbor/Kagoshima/Japan (2005-03-15) **Isolator**: Yubuki, Naoji **Identified by**: Yubuki, Naoji (2005-**.***) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: f/2 + mTYGM-9 + Rice; SUY 1/10 + mTYGM-9 + Rice; 15℃; 0μmol/m²/s; 1 M **Habitat**: (Seawater) **Characteristics**: Heterotrophic; Benthic; Authentic strain **Other strain no.**: TKB-272 **Reference**: 1270

*ECHINOSPHAERIDIUM* : Chlorophyceae

*Echinospaeridium nordstedtii* Lemmermann

137 **History**: < Kasai, Fumie **Locality**: Lake Kasumigaura/Ibaraki/Japan (1983-08-23) **Isolator**: Kasai, Fumie **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Axenic **Culture conditions**: C (agar); 20℃; 4-10μmol/m²/s; 3 M (25℃; 70-80μmol/m²/s) **Habitat**: Freshwater (Lake water) **Other strain no.**: F-56-3 **References**: 360, 567, 1159

*EMILIANIA* : Prymnesiophyceae

*Emiliania huxleyi* (Lohmann) Hay et Mohler

837 **History**: < Kawachi, Masanobu **Locality**: Great Barrier Reef/Australia (1990-11-***) **Isolator**: Inouye, Isao **Identified by**: Inouye, Isao **States**: Unialgal; Clonal; Non-axenic; Coccolith(+)[2013 Jan] **Culture conditions**: mIMR; MNK; 20℃; 20-30μmol/m²/s; 20 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Gene data**: EhSEP2 (AB205027) **Other strain no.**: EH-2 **References**: 62, 296, 565, 746, 747, 748, 909, 910, 911, 933, 934, 935, 936, 957, 958, 961, 962 **Remarks**: Unstable

1310 **History**: < Kawachi, Masanobu **Locality**: South Pacific (2002-08-11) **Isolator**: Noël, Mary-Hélène **Identified by**: Noël, Mary-Hélène **States**: Unialgal; Clonal; Non-axenic; Coccolith(+/-)[2013 Jan] **Culture conditions**: ESM; 20℃; 22-32μmol/m²/s; 14-20 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: MH 9

1311 **History**: < Kawachi, Masanobu **Locality**: Bearing Sea (2002-08-02) **Isolator**: Noël, Mary-Hélène **Identified by**: Noël, Mary-Hélène **States**: Unialgal; Clonal; Non-axenic; Coccolith(+)[2013 Jan] **Culture conditions**: MNK; 15℃; 10-18μmol/m²/s; 14-20 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: MH 27

1312 **History**: < Kawachi, Masanobu **Locality**: Bearing Sea (2002-08-02) **Isolator**: Noël, Mary-Hélène **Identified by**: Noël, Mary-Hélène **States**: Unialgal; Clonal; Non-axenic; Coccolith(+)[2013 Jan] **Culture conditions**: MNK; 15℃; 10-18μmol/m²/s; 14-20 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: MH 28

1313 **History**: < Kawachi, Masanobu **Locality**: East China Sea (2003-08-06) **Isolator**: Noël, Mary-Hélène **Identified by**: Noël, Mary-Hélène **States**: Unialgal; Clonal; Non-axenic; Coccolith(+/-)[2013 Jan] **Culture conditions**: MNK; 20℃; 22-32μmol/m²/s; 14-20 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: MH 74

1314 **History**: < Kawachi, Masanobu **Locality**: East China Sea (2003-08-06) **Isolator**: Kawachi, Masanobu **Identified by**: Kawachi, Masanobu **States**: Unialgal; Clonal; Non-axenic; Coccolith(+/-)[2013 Jan] **Culture conditions**: MNK; 20℃; 22-32μmol/m²/s; 14 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: YK3-87
2697 History: < RCC (2010) Other collection strain no.: RCC 1216 Località: Tasman Sea/Australia (1998-09-01) Isolator: Probert, I. States: Unialgal; Clonal; Non-axenic Culture conditions: K/2; 15°C; 10-18μmol/m²s; 1 M Habitat: Marine (Seawater) Other strain no.: AC472

EOCERCOMONAS : Sarcomonadae
Eocерcomonas echina Howe et Cavalier-Smith


EPIPYXIS : Chrysophyceae

Epipyxis glabra (Matvienko) Hilliard


EREMOSPHERA : Trebouxiophyceae

Eremosphaera gigas (Archer) Fott et Kalina

379 History: < IAM Other collection strain no.: IAM C-338 Località: Osaka/Japan (1968-11-10) Isolator: Ichimura, Terunobu Identified by: Nakano, Taketo States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 4-10μmol/m²s; 3 M (25°C; 70-80μmol/m²s) Habitat: Freshwater (Paddy soil) Other strain no.: O-2 References: 235, 567, 1159 Remarks: Cryopreserved

Eremosphaera viridis De Bary

380 History: < Kasai, Fumie Località: Ozegahara/Fukushima/Japan (1983-08-30) Isolator: Kasai, Fumie Identified by: Nakano, Taketo States: Unialgal; Clonal; Non-axenic Culture conditions: CAM; 20°C; 4-10μmol/m²s; 3 M (25°C; 70-80μmol/m²s) Habitat: Freshwater (Pond water) Other strain no.: 43-23 Reference: 567


ESQUAMULA : Imbricatea

Esquamula lacrimiformis Shiratori, Yabuki et Ishida

2745 History: < Shiratori, Takashi Località: Miyagi/Japan (2007-02-02) Isolator: Yabuki, Akinori Identified by: Shiratori, Takashi (2012-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 0μmol/m²s; 14 D Habitat: Marine (Sand) Characteristics: Heterotrophic; Benthic Gene data: 18S rRNA (AB714270); 28S rRNA (AB714271) Other strain no.: YPF708 Reference: 967

EUASTRUM : Charophyceae

Euastrum diverrucosum Gontcharov et M.M. Watanabe
Syn. Euastrum englerii Schmidle var. madagascariense Bourrelly et Mangium


Euastrum turgidum Wallich

772 History: < Kasai, Fumie Locality: Ishigaki Isl./Okinawa/Japan (1984-03-21) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Lake water) Characteristics: Heterothallic; Crosses with NIES-773 Other strain no.: 84-15-75

773 History: < Kasai, Fumie Locality: Ishigaki Isl./Okinawa/Japan (1984-03-21) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Lake water) Characteristics: Heterothallic; Crosses with NIES-772 Other strain no.: 84-15-76

EUCAMPIA : Bacillariophyceae

Eucampia sp.

2668 History: < Hagiwara, Tomiji Locality: Chiba/Japan (2009-02-09) Isolator: Hagiwara, Tomiji Identified by: Hagiwara, Tomiji (2009-10-06) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 15°C; 10-18μmol/m²/s; 1 M Habitat: Marine (Seawater)

EUDORINA : Chlorophyceae

Eudorina cylindrica Korshikov

722 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1197 Locality: Iowa/U.S.A. States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Soil) Characteristics: Heterothallic Gene data: atpB (AB014033); psaA (AB044210); psaB (AB044441); psbC (AB044493); rbcL (D86833) References: 567, 716, 733, 738, 1208

Eudorina elegans Ehrenberg


Eudorina elegans Ehrenberg var. carteri (G.M. Smith) Goldstein

721 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1212 Locality: Kentucky/U.S.A. States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Characteristics: Homothallic; Monoecious Gene data: atpB (AB014012); psaA (AB044202); psaA (AB044203); psbB (AB044438); psbC (AB044487); psbC (AB044488); rbcL (D88806) References: 567, 662, 717, 733, 738

Eudorina elegans Ehrenberg var. elegans

456 History: < Nozaki, Hisayoshi Locality: Imperial Palace/Tokyo/Japan (1977-09-***) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Axenic Culture conditions: VT; 20°C; 15-22μmol/m²/s; 1 M Habitat: Freshwater (Moat water) Characteristics: Heterothallic; Mating type(male); Crosses with NIES-457 Gene data: atpB (AB014009); psaA (AB044499); psbB (AB044435); psbC (AB044485); rbcL (D63432) Other strain no.: A-5 (m) References: 567, 691, 714, 715, 733, 738, 740

457 History: < Nozaki, Hisayoshi Locality: Imperial Palace/Tokyo/Japan (1977-09-***) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Axenic Culture conditions: VT; 20°C; 15-22μmol/m²/s; 1 M Habitat: Freshwater (Moat water) Characteristics:
Heterothallic; Mating type (female); Crosses with NIES-456 Other strain no.: I-14 (f)
References: 567, 691

717 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1193 Locality: Indiana/U.S.A. States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20 °C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Pond soil) Characteristics: Heterothallic Gene data: atpB (AB047071); rbcL (D88803) References: 567, 662, 717, 1208

718 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1195 Locality: Indiana/U.S.A. States: Unialgal; Clonal; Axenic Culture conditions: VT; 20° C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Pond soil) Characteristics: Heterothallic Gene data: atpB (AB047072); rbcL (D88810) References: 567, 717

719 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1199 Locality: Indiana/U.S.A. States: Unialgal; Clonal; Axenic Culture conditions: VT; 20° C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Pond soil) Characteristics: Heterothallic Gene data: atpB (AB047073); rbcL (D88807) References: 567, 717

720 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1205 Locality: Indiana/U.S.A. States: Unialgal; Clonal; Axenic Culture conditions: VT; 20° C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Heterothallic Gene data: atpB (AB014010); psaA (AB044200); psaA (AB044201); psaB (AB044436); psaB (AB044437); psbC (AB044486); rbcL (D88805) References: 567, 717, 733, 738

Eudorina elegans Ehrenberg var. synoica Goldstein


568 History: < Nozaki, Hisayoshi Locality: Kathmandu/Nepal (1986-09-22) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Homothallic; Monoecious Gene data: atpB (AB014011); rbcL (D88808) Other strain no.: 7914-E-6 References: 567, 698, 717, 738

Eudorina illinoisensis (Kofoid) Pascher
Syn. Pleodorina illinoisensis Kofoid


460 History: < Nozaki, Hisayoshi Locality: Kawasaki, Saiwai-ku/Kanagawa/Japan (1984-01-**) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Axenic Culture conditions: VT; 20 °C; 15-22μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Mating type (male); Crosses with NIES-459 Gene data: atpB (AB014013); psaA (AB044198); psaB (AB044434); psbC (AB044484); rbcL (D63433) Other strain no.: 5630-E-3 (m) References: 567, 694, 714, 715, 733, 738

723 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 808 Locality: Missouri/U.S.A. States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20 °C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Soil) Characteristics: Heterothallic Gene data: atpB (AB047069); rbcL (D88809) References: 567, 717, 1208

Mating type (female) Other strain no.: 94-409-E-10


Eudorina minodii (Chodat) Nozaki et Krienitz

856  History: < Nozaki, Hisayoshi Locality: Lake Altglobosow/Brandenburg/Germany (1997-07-27) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Homothallic; Dioecious; Anisogamy Gene data: atpB (AB047068); rbcL (AB047074); rbcL (AB047075); rbcL (AB047076) Other strain no.: 970728-E-8 Reference: 722

Eudorina peripheralis (Goldstein) T.K. Yamada
Syn. Eudorina unicoeca G.M. Smith var. peripheralis Goldstein

726  History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1218 Locality: British Columbia/Canada Identified by: Nozaki, Hisayoshi; Yamada, Toshihiro (Reidentify) States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Road side ditch) Characteristics: Heterothallic Gene data: atpB (AB047070); rbcL (D86830) References: 567, 716, 1208, 1209

Eudorina unicoeca G.M. Smith

724  History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 737 Locality: Indiana/U.S.A. Identified by: Nozaki, Hisayoshi; Yamada, Toshihiro (Reidentify) Formerly identified as: Eudorina unicoeca G.M. Smith var. unicoeca G.M. Smith var. unicoeca States: Unialgal; Clonal; Axenic Culture conditions: VT; 20°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater Characteristics: Heterothallic Gene data: atpB (AB014008); psaA (AB044204); psaA (AB044205); psaA (AB044206); psaB (AB044439); psbC (AB044489); psbC (AB044490); rbcL (D86829) References: 567, 716, 733, 738, 1208, 1209

725  History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1215 Locality: Ohio/U.S.A. Identified by: Nozaki, Hisayoshi; Yamada, Toshihiro (Reidentify) Formerly identified as: Eudorina unicoeca G.M. Smith var. unicoeca States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20°C ; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Soil) Characteristics: Heterothallic Gene data: atpB (AB014007); psaA (AB044207); psaA (AB044208); psaA (AB044209); psaB (AB044440); psbC (AB044491); psbC (AB044492); rbcL (D63434) References: 567, 715, 733, 738, 1208, 1209


EUGLENA : Euglenophyceae

Euglena clara Skuja


Euglena gracilis Klebs

47 History: < IAM (1983) Other collection strain no.: IAM E-3 Locality: Japan States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: HUT (semi-solid); 20°C; 4-10μmol/m²/s; 1 M (25°C; 70-80μmol/m²/s) Characteristics: Material for Vitamin B₁₂ bioassay References: 235, 319, 460, 1067, 1125

Euglena gracilis Klebs var. bacillaris Pringsheim

49 History: < IAM (1983) Other collection strain no.: IAM E-6; UTEX 753 Locality: Japan States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: HUT; 20°C; 4-10μmol/m²/s; 2 M (25°C; 70-80μmol/m²/s) References: 235, 293, 319, 682, 1125

Euglena mutabilis Schmitz


Euglena sp.

2345 History: < Nozaki, Hisayoshi Locality: Lake Nojiri (depth 3.5m)/Nagano/Japan (1992-05-14) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 10°C; 15-20μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Other strain no.: 92-517-E-1

Euglena viridis Ehrenberg

2149 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM E-11 (=E-9); UTEX 85; CCAP 1224/17A Isolator: Pringsheim, E. G. States: Unialgal; Clonal; Axenic[2012 Mar] Culture conditions: HUT (semi-solid); 20°C; 40-50μmol/m²/s; 20 D

EUNOTIA : Bacillariophyceae

Eunotia pectinalis (Kützing) Rabenhorst var. minor (Kützing) Rabenhorst

461 History: < Kasai, Fumie Locality: Mt. Tsukuba, Hatorisawa/Ibaraki/Japan (1987-04-17) Isolator: Kasai, Fumie Identified by: Takamura, Noriko States: Unialgal; Non-clonal; Non-axenic Culture conditions: CSI; 15°C; 15-22μmol/m²/s; 4 M Habitat: Freshwater (River water) Other strain no.: (1)-16 Reference: 1018

EUTREPTIELLA : Euglenophyceae

Eutreptiella gymnastica Throndsen

conditions: f/2; ESM; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine Characteristics: Red tide Gene data: CO1 (AB000136); PAC1 (AB126953); PAC2 (AB126954) Other strain no.: KGW-63-1 References: 143, 262, 448, 1014

Eutreptiella sp.

2305 History: < Suda, Shoichiro Locality: Onagawa Bay/Miyagi/Japan (1984-08-28) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: ESM2; 20℃; 15-22μmol/m²/s; 20 D Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: 8280G27-10

2325 History: < Suda, Shoichiro Locality: Harima-nada/Japan (1988-08-***) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20℃; 22-32μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: 813H-4

FIBROCAPSA : Raphidophyceae

Fibrocapsa japonica Toriumi et Takano

136 History: < KAGAWA Locality: Tsudo Bay/Kagawa/Japan (1978-07-19) Isolator: Yuki, Katsuhisa Identified by: Yuki, Katsuhisa States: Unialgal; Clonal; Axenic Culture conditions: f/2; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine Characteristics: Red tide Other strain no.: KGW-20-2 References: 245, 495, 1115 Remarks: Fragile species to transportation stresses


560 History: < Honjo, Tsuneo Locality: Mikawa Bay/Aichi/Japan Isolator: Toriumi, Saburo Identified by: Honjo, Tsuneo States: Unialgal; Non-clonal; Axenic[2013 Jan] Culture conditions: ESM; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Remarks: Fragile species to transportation stresses


1303 History: < Kawachi, Masanobu Locality: East China Sea (2003-08-01) Isolator: Kawachi, Masanobu Identified by: Kawachi, Masanobu States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20℃; 32-40μmol/m²/s; 14 D Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: YK03-75 Reference: 137 Remarks: Fragile species to transportation stresses

1829 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2005-07-***) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine (Sand) Characteristics: Red tide Other strain no.: TKB-301 Remarks: Fragile species to transportation stresses

Fibrocapsa sp.

1378 History: < TKB Locality: Tokyo Bay/Kanagawa/Japan (2003-09-30) Isolator: Kai, Atsushi Identified by: Kai, Atsushi States: Unialgal; Non-clonal; Non-axenic Culture conditions: f/2; 20℃; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: TKB-067 (AK-09) Remarks: Fragile species to transportation stresses

FISCHERELLA : Cyanophyceae

Fischerella major Gomont

592 History: < Hagiwara, Tomiji Locality: Yukawa Hot Spring/Iwate/Japan (1990-09-09) Isolator: Hagiwara, Tomiji Identified by: Hagiwara, Tomiji States: Unialgal; Clonal; Non-axenic Culture
CONTENTS

FLECTOMONAS: Sarcomonadida
Flectomonas lenta
Howe, Bass, Vickerman, Chao et Cavalier-Smith

FLORENCIELLA: Dictyochophyceae
Florenciella parvula
Eikrem
2684 History: < RCC (2010) Other collection strain no.: RCC 446; CCMP 2471 Locality: English Channel/Britanny Coast/France (2000-04-12) Isolator: Le Gall, F.; Le Gall, F. (Re-isolation) States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15°C; 10-18μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Authentic strain Other strain no.: RA000412-1-1

FRAGILARIA: Bacillariophyceae
Fragilaria capucina
Desmazières
391 History: < Sawaguchi, Tomohiro Locality: Lake Kasumigaura/Ibaraki/Japan (1985-04-25) Isolator: Sawaguchi, Tomohiro Identified by: Idei, Masahiko States: Unialgal; Clonal; Non-axenic Culture conditions: CSi; 15°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: KEB-24

GEPHYROCAPSA: Prymnesiophyceae
Gephyrocapsa oceanica
Kampfrich
353 History: < Sawaguchi, Tomohiro Locality: Tsushima Isl./Nagasaki/Japan (1986-03-13) Isolator: Sawaguchi, Tomohiro Identified by: Inouye, Isao States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 15-22μmol/m²/s; 20 D Habitat: Marine (Seawater) Gene data: CO1 (AB000118) Other strain no.: TMCO-2 References: 142, 187, 434, 676
838 History: < Kawachi, Masanobu Locality: Mutsu Bay/Aomori/Japan (1990-11.**) Isolator: Kawachi, Masanobu Identified by: Kawachi, Masanobu States: Unialgal; Clonal; Non-axenic; Coccolith(+) [2013 Jan] Culture conditions: mIMR; MNK; 20°C; 20-30μmol/m²/s; 20 D Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: GO-01 References: 62, 910, 958, 961 Remarks: Unstable
1000 History: < Kawachi, Masanobu Other collection strain no.: CCMP 2054 Locality: Miyake Isl., Chotaro-ike Pond/Tokyo/Japan (1999-11-23) Isolator: Kawachi, Masanobu Identified by: Kawachi, Masanobu States: Unialgal; Clonal; Non-axenic; Coccolith(+) [2013 Jan] Culture conditions: MNK; 20°C; 20-30μmol/m²/s; 14 D Habitat: Marine (Seawater) Characteristics: Red tide
1315 History: < Kawachi, Masanobu Locality: Hachijo Isl., Yaene Harbor/Tokyo/Japan (2002-01-22) Isolator: Noël, Mary-Hélène Identified by: Noël, Mary-Hélène States: Unialgal; Clonal; Non-axenic; Coccolith(+-) [2013 Jan] Culture conditions: MNK; 20°C; 22-32μmol/m²/s; 14-20 D Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: MH 38
1316 History: < Kawachi, Masanobu Locality: East China Sea (2003-08-06) Isolator: Noël, Mary-Hélène Identified by: Noël, Mary-Hélène States: Unialgal; Clonal; Non-axenic; Coccolith(+-) [2013 Jan] Culture conditions: MNK; 20°C; 22-32μmol/m²/s; 14-20 D Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: MH 63
1317 History: < Kawachi, Masanobu Locality: East China Sea (2003-08-06) Isolator: Noël, Mary-Hélène Identified by: Noël, Mary-Hélène States: Unialgal; Clonal; Non-axenic;
Coccolith(+)[2013 Jan] **Culture conditions**: MNK; 20°C; 22-32μmol/m²/s; 14-20 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: MH 64

1318 **History**: < Kawachi, Masanobu **Locality**: East China Sea (2003-08-06) **Isolator**: Noël, Mary-Hélène **Identified by**: Noël, Mary-Hélène **States**: Unialgal; Clonal; Non-axenic; Coccolith(+) [2013 Jan] **Culture conditions**: MNK; 20°C; 22-32μmol/m²/s; 14-20 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: MH 73

1319 **History**: < Kawachi, Masanobu **Locality**: East China Sea (2003-07-29) **Isolator**: Kawachi, Masanobu **Identified by**: Kawachi, Masanobu **States**: Unialgal; Clonal; Non-axenic; Coccolith(+-)[2013 Jan] **Culture conditions**: MNK; 20°C; 22-32μmol/m²/s; 14 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: YK3-7

1328 **History**: < TKB **Locality**: Hachijo Isl., Yaene Harbor/Tokyo/Japan (2002-12-13) **Isolator**: Yoshida, Masaki **Identified by**: Yoshida, Masaki (2003-**-**) **States**: Unialgal; Clonal; Non-axenic; Coccolith(+/-)[2013 Jan] **Culture conditions**: MNK; 20°C; 25-40μmol/m²/s; 14 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: TKB-001 (ym-01)

1329 **History**: < TKB **Locality**: Seto Inland Sea/Okayama/Japan (2002-08-**) **Isolator**: Yoshida, Masaki **Identified by**: Yoshida, Masaki (2002-**-**) **States**: Unialgal; Clonal; Non-axenic; Coccolith(+)[2013 Jan] **Culture conditions**: MNK; 20°C; 25-40μmol/m²/s; 14 D **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: TKB-061 (ym-06)

2699 **History**: < RCC (2010) **Other collection strain no.**: RCC 1314 **Locality**: Atlantic (French Coast)/France (1998-06-01) **Isolator**: Probert, I. **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: IMK; 15°C; 10-18μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Other strain no.**: AC279

2700 **History**: < RCC (2010) **Other collection strain no.**: RCC 1315 **Locality**: Atlantic (French Coast)/France (1998-06-01) **Isolator**: Probert, I. **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: ESM; 15°C; 10-18μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Other strain no.**: ARC1(N)

**GIRAUDYOPSIS** : Chrysomerophyceae

**Giraudyopsis** sp.

1862 **History**: < TKB **Locality**: Awaji Isl/Hyogo/Japan (2005-12-**) **Isolator**: Kai, Atsushi **Identified by**: Kai, Atsushi (2006-**-**) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: IMK; 20°C; 15-22μmol/m²/s; 2 M **Habitat**: Marine (Seawater) **Other strain no.**: TKB-334

**GLAUCOCYSTIS** : Glaucophyceae

**Glaucocystis nostochinearum** Itzigsohn

966 **History**: < Kasai, Fumie **Locality**: Renge-numa/Fukushima/Japan (1987-08-11) **Isolator**: Kasai, Fumie **Identified by**: Kasai, Fumie **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: MG; 20°C; 15-22μmol/m²/s; 2 M **Habitat**: Freshwater (Pond water) **Other strain no.**: F(6)-5

1369 **History**: < TKB **Locality**: Kanazawa, Kakuma-cho/Ishikawa/Japan (2003-07-01) **Isolator**: Kai, Atsushi **Identified by**: Kai, Atsushi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: C; 20°C; 15-22μmol/m²/s; 2 M **Habitat**: Freshwater (Lake water) **Other strain no.**: TKB-066 (AK-08)

1961 **History**: < TKB **Locality**: Kanazawa/Ishikawa/Japan (2003-07-01) **Isolator**: Kai, Atsushi **Identified by**: Kai, Atsushi (2003-**-**) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: AF-6; 20°C; 15-22μmol/m²/s; 2 M **Habitat**: Freshwater (Lake water) **Other strain no.**: TKB-333

2141 **History**: < IAM (2007) < UTEX (1989) **Other collection strain no.**: IAM M-124; UTEX 64; SAG B 229-1; CCAP 229/1; CAUP H2801; CAUP O101 **Isolator**: Lewin, Ralph A. **States**: Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions**: CSi; 20°C; 13-18μmol/m²/s; 3 M
GLENODINIOPSIS : Dinophyceae

Glenodinopsis uliginosa (Schilling) Woloszynska


GLOEOCAPSA : Cyanophyceae

Gloeocapsa decorticans (A.Brown) PRichter


GLOEMONAS : Chlorophyceae

Gloeomonas lateperforata (Skuja) Ettl

464 History: < Kasai, Fumie Locality: Tskuba/Ibaraki/Japan (1982-11-15) Isolator: Kasai, Fumie Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Gene data: atpB (AB504761) Other strain no.: 1/4 References: 567, 736

GLOSSOMASTIX : Pinguiophyceae

Glossomastix chrysoplasta O'Kelly

1002 History: < Kawachi, Masanobu < CCMP Other collection strain no.: CCMP 1537 Locality: Phillip Bay/Victoria/Australia Isolator: O'Kelly, Charles J. Identified by: O'Kelly, Charles J. States: Unialgal; Clonal; Non-axenic Culture conditions: MNK; 22°C; 20-30μmol/m²/s; 14 D Habitat: Marine Characteristics: Attached Reference: 137

1302 History: < Kogame, Kazuhiro Locality: Kumano/Mie/Japan (2001-03-27) Isolator: Kogame, Kazuhiro Identified by: Kogame, Kazuhiro States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 30-40μmol/m²/s; 14 D Habitat: Marine (Seaweed) Characteristics: Attached Other strain no.: GLOSSO

Glossomastix sp.

2503 History: < Inouye, Isao Locality: Shizuoka/Japan (2004-05.*) Isolator: Chikuni, Tomoko States: Unialgal; Clonal; Non-axenic Culture conditions: IMK; 20°C; 10-15μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-256

2504 History: < Inouye, Isao Locality: Izuura Beach/Ibaraki/Japan (2005-**.*) Isolator: Chikuni, Tomoko Identified by: Chikuni, Tomoko States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 10-15μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-257

GOMPHONEMA : Bacillariophyceae

Gomphonema angustatum (Kützing) Rabenhorst var. obtusatum (Kützing) Grunow


Gomphonema gracile Ehrenberg var. gracile

Kasai, Fumie **Identified by**: Takamura, Noriko **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CSi; 15°C; 15-22μmol/m²/s; 2 M **Habitat**: Freshwater (River water) **Other strain no.**: Ast-1-1 **Reference**: 1018

**Goniomonas parvula var parvulum** Kützing var. parvulum

466 **History**: < Kasai, Fumie **Locality**: Shirai River/Hokkaido/Japan (1987-07-02) **Isolator**: Kasai, Fumie **Identified by**: Takamura, Noriko **States**: Unialgal; Non-clonal; Non-axenic **Culture conditions**: CSi; 10°C; 10-15μmol/m²/s; 2 M **Habitat**: Freshwater (River water) **Other strain no.**: Tst-1-18 **Reference**: 1018

467 **History**: < Kasai, Fumie **Locality**: Shirai River/Hokkaido/Japan (1987-07-02) **Isolator**: Kasai, Fumie **Identified by**: Takamura, Noriko **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: CSi; 10°C; 10-15μmol/m²/s; 2 M **Habitat**: Freshwater (River water) **Other strain no.**: Tst-4-3 **Reference**: 1018

**GONATOZYGON** : Charophyceae

**Gonatozygon brebissonii** De Bary

138 **History**: < IAM (1983) **Locality**: Lake Kasumigaura/Ibaraki/Japan (1974-11-***) **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 4 M (20°C; 15-27μmol/m²/s) **Habitat**: Freshwater **Other strain no.**: KAS-4-43 **Reference**: 567

139 **History**: < TAC **Locality**: Lake Shoji/Yamanashi/Japan (1981-10-27) **Isolator**: Watanabe, Masayuki **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 4 M (20°C; 15-27μmol/m²/s) **Habitat**: Freshwater **Other strain no.**: TAC 56-1 (TAN-56-1) **Reference**: 567

**Gonatozygon monotaenium** De Bary

247 **History**: < Kasai, Fumie **Locality**: Tsukiyono/Gunma/Japan (1984-06-01) **Isolator**: Kasai, Fumie **Identified by**: Kasai, Fumie **States**: Unialgal; Clonal; Axenic **Culture conditions**: C; 20°C; 8-15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s) **Habitat**: Freshwater (Paddy water) **Characteristics**: Homothallic **Other strain no.**: 84-25-109

287 **History**: < TAC **Locality**: Lake Yamanaka/Yamanashi/Japan (1981-10-26) **Isolator**: Watanabe, Masayuki **Identified by**: Watanabe, Masayuki **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: MG; 20°C; 8-15μmol/m²/s; 2 M (20°C; 15-27μmol/m²/s) **Habitat**: Freshwater **Other strain no.**: TAC 53-3 (TAN-53-3) **Reference**: 567

**GONIOMONAS** : Goniomonadea

**Goniomonas amphinema** Larsen et Patterson

1371 **History**: < TKB **Locality**: Hachijo Isl./Tokyo/Japan (2002-12-13) **Isolator**: Yubuki, Naoji **Identified by**: Yubuki, Naoji **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: f/2 + Wheat; 15°C; 0μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Characteristics**: Heterotrophic **Other strain no.**: TKB-022 (NY0129)

**Goniomonas pacifica** Larsen et Patterson

1372 **History**: < TKB **Locality**: Hachijo Isl./Tokyo/Japan (2002-12-13) **Isolator**: Yoshida, Masaki **Identified by**: Yubuki, Naoji (2004-**+***) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: f/2 + Wheat; 15°C; 0μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Characteristics**: Heterotrophic **Other strain no.**: TKB-003 (ym-03)

**Goniomonas sp.**

1374 **History**: < TKB **Locality**: Tateyama, Sakata/Chiba/Japan (2003-01-22) **Isolator**: Yubuki, Naoji **Identified by**: Yubuki, Naoji **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: f/2 + Wheat; 15°C; 0μmol/m²/s; 1 M **Habitat**: Marine (Water) **Characteristics**: Heterotrophic **Other strain no.**: TKB-024 (NY0135)

**Goniomonas truncata** (Fresenius) Stein
Contents

1373 History: < TKB Locality: Mito/Ibaraki/Japan (2002-05-15) Isolator: Yubuki, Naoji Identified by: Yubuki, Naoji States: Unialgal; Clonal; Non-axenic Culture conditions: URO + Wheat; 15°C; 0μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Heterotrophic Other strain no.: TKB-015 (NY0120)

Gonium : Chlorophyceae

Gonium maiaprilis Hayama, Nakada, Hamaji et Nozaki

2455 History: < Hayama, Mahoko Locality: Fukuoka/Japan (2004-03-28) Isolator: Hayama, Mahoko Identified by: Hayama, Mahoko; Nozaki, Hisayoshi (2009-04-06) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 18-26μmol/m²/s; 14 D Habitat: Freshwater (Soil) Characteristics: Phototaxis; Heterothallic; Isogamy; Mating type (+); Resting spore forming Other strain no.: Asa041901 References: 186, 938

2456 History: < Hayama, Mahoko Locality: Fukuoka/Japan (2004-03-28) Isolator: Hayama, Mahoko Identified by: Hayama, Mahoko; Nozaki, Hisayoshi (2009-04-06) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 18-26μmol/m²/s; 14 D Habitat: Freshwater (Soil) Characteristics: Phototaxis; Heterothallic; Isogamy; Mating type (−); Resting spore forming Other strain no.: Asa041902 Reference: 186

2457 History: < Hayama, Mahoko Locality: Fukuoka/Japan (2004-03-28) Isolator: Hayama, Mahoko Identified by: Hayama, Mahoko; Nozaki, Hisayoshi (2009-04-06) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 18-26μmol/m²/s; 14 D Habitat: Freshwater (Soil) Characteristics: Phototaxis; Authentic strain; Heterothallic; Isogamy; Mating type (−); Resting spore forming Other strain no.: Asa041903 References: 186, 938

2458 History: < Hayama, Mahoko Isolator: Hayama, Mahoko Identified by: Hayama, Mahoko; Nozaki, Hisayoshi (2009-04-06) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 18-26μmol/m²/s; 14 D Habitat: Freshwater (Zygote of NIES-2455 x 2457) Characteristics: Phototaxis; Heterothallic; Isogamy; Mating type (+); Resting spore forming Other strain no.: AsaF1A1 Reference: 186

2459 History: < Hayama, Mahoko Isolator: Hayama, Mahoko Identified by: Hayama, Mahoko; Nozaki, Hisayoshi (2009-04-06) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 18-26μmol/m²/s; 14 D Habitat: Freshwater (Zygote of NIES-2455 x 2457) Characteristics: Phototaxis; Heterothallic; Isogamy; Mating type (−); Resting spore forming Other strain no.: AsaF1A2 Reference: 186

2460 History: < Hayama, Mahoko Isolator: Hayama, Mahoko Identified by: Hayama, Mahoko; Nozaki, Hisayoshi (2009-04-06) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 18-26μmol/m²/s; 14 D Habitat: Freshwater (Zygote of NIES-2455 x 2457) Characteristics: Phototaxis; Heterothallic; Isogamy; Mating type (+); Resting spore forming Other strain no.: AsaF1A3 Reference: 186

2461 History: < Hayama, Mahoko Isolator: Hayama, Mahoko Identified by: Hayama, Mahoko; Nozaki, Hisayoshi (2009-04-06) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 18-26μmol/m²/s; 14 D Habitat: Freshwater (Zygote of NIES-2455 x 2457) Characteristics: Phototaxis; Heterothallic; Isogamy; Mating type (−); Resting spore forming Other strain no.: AsaF1A4 Reference: 186

Gonium multicoccum Pocock

737 History: < Nozaki, Hisayoshi Other collection strain no.: UTEX 2580 States: Unialgal; Clonal; Axenic[2012 Mar] Culture conditions: VT; 20°C; 32-40μmol/m²/s; 1 M Characteristics: F1 clone of UTEX 2579 Gene data: atpB (AB014020); psaA (AB044239); psaA (AB044240); psaB (AB044461); psbC (AB044481); rbcL (D63435) Other strain no.: 90-530-F1-5 References: 715, 727, 733, 738

885 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 783 Locality: Lemoncove/California/U.S.A. Isolator: Stein, J. R. States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 1 M Habitat: (Soil or Mud) References: 702, 727

103
1038 History: < Nozaki, Hisayoshi Locality: Texas/U.S.A. Isolator: Starr, R. C. Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 15-27μmol/m²/s; 2 M Gene data: ITS2 (AB246191); rbcL (AB246187) Other strain no.: GQ-M-Tx-1 Reference: 1210


1708 History: < Nozaki, Hisayoshi Locality: Chikuzen/Fukuoka/Japan (2004-03-** Isolator: Yamada, Toshihiro Identified by: Yamada, Toshihiro (2004-06-** States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 23 °C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Resting spore forming; Homothallic; Isogamy Gene data: ITS2 (AB246192); rbcL (AB246188) Other strain no.: Asa.Goni.84 References: 613, 1210

1709 History: < Nozaki, Hisayoshi Locality: Chikuzen/Fukuoka/Japan (2004-03-** Isolator: Yamada, Toshihiro Identified by: Yamada, Toshihiro (2004-06-** States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 23 °C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Resting spore forming; Homothallic; Isogamy Other strain no.: AsCl-1 Reference: 1210

Gonium octonarium Pocock

851 History: < Nozaki, Hisayoshi Isolator: Starr, R. C. States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 15-27μmol/m²/s; 2 M Gene data: atpB (AB014018); psaA (AB044241); psaB (AB044462); psbC (AB044520) Other strain no.: GO-LC-1 References: 733, 738, 740

852 History: < Nozaki, Hisayoshi Isolator: Starr, R. C. States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 15-27μmol/m²/s; 2 M Other strain no.: GO-LC-3 Reference: 738

Gonium pectorale O.F. Müller

1710 History: < Nozaki, Hisayoshi Locality: Kin/Okinawa/Japan (2000-03-**) Isolator: Nozaki, Hisayoshi; Kaneko, Daisuke Identified by: Nozaki, Hisayoshi (2001-10-** States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 23 °C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Dioecious; Isogamy; Mating type(−); Crosses with NIES-1711 Other strain no.: Kaneko3 References: 136, 474, 566, 662

1711 History: < Nozaki, Hisayoshi Locality: Kin/Okinawa/Japan (2000-03-**) Isolator: Nozaki, Hisayoshi; Kaneko, Daisuke Identified by: Nozaki, Hisayoshi (2001-10-** States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 23 °C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Dioecious; Isogamy; Mating type( ); Crosses with NIES-1710 Gene data: rbcL (AB246190) Other strain no.: Kaneko4 References: 136, 566, 1210

1712 History: < Nozaki, Hisayoshi Locality: Kitahiroshima/Hokkaido/Japan (2004-03-** Isolator: Yamada, Toshihiro Identified by: Yamada, Toshihiro (2004-05-**) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 23 °C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Dioecious; Isogamy; Mating type( ); Crosses with NIES-1713 Other strain no.: Kita.Goni.1

1713 History: < Nozaki, Hisayoshi Locality: Kitahiroshima/Hokkaido/Japan (2004-03-** Isolator: Yamada, Toshihiro Identified by: Yamada, Toshihiro (2004-05-**) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 23 °C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Dioecious; Isogamy; Mating type(−); Crosses with NIES-1712 Gene data: ITS1-5.8S-ITS2 (AB520751); rbcL (AB246189) Other strain no.: Kita.Goni.3 Reference: 1210
**Gonium pectorale** O.F. Müller var. *pectoral*  

**468** History: < Nozaki, Hisayoshi 
Locality: Yokohama, Kohoku-ku/Kanagawa/Japan (1979-04-06)  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Axenic[2013 Jan]  
Culture conditions: VT; 20°C; 15-22μmol/m²/s; 1 M Habitat: Freshwater (Pond water) 
Characteristics: Heterothallic; Mating type(−); Crosses with NIES-469  
Other strain no.: 9406-10 References: 396, 567, 662, 693, 702, 723

**469** History: < Nozaki, Hisayoshi 
Locality: Yokohama, Kohoku-ku/Kanagawa/Japan (1979-04-06)  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Axenic  
Culture conditions: VT; 20°C; 15-22μmol/m²/s; 1 M Habitat: Freshwater (Pond water) 
Characteristics: Heterothallic; Mating type(+); Crosses with NIES-468  
Other strain no.: 9406-12 References: 567, 693

**569** History: < Nozaki, Hisayoshi 
Locality: Kourakuen/Ookayama/Japan (1988-10-12)  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: VTAC; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) 
Characteristics: Heterothallic; Isogamy; Mating type(+); Crosses with NIES-570 Gene data: atpB (AB014016); atpB (AB014017); psaA (AB044242); psaB (AB044463); psbC (AB044521); rbcL (D63437)  
Other strain no.: 88-1113-G-1 References: 374, 567, 715, 733, 738, 740

**570** History: < Nozaki, Hisayoshi 
Locality: Kourakuen/Ookayama/Japan (1988-10-12)  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: VTAC; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) 
Characteristics: Heterothallic; Isogamy; Mating type(−); Crosses with NIES-569  
Other strain no.: 88-1113-G-2 Reference: 567

**645** History: < Nozaki, Hisayoshi 
Locality: Near Goshokake Hot Spring/Akita/Japan (1985-07-10)  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Pond sediment) 
Characteristics: Heterothallic; Isogamy; Mating type(+)  
Other strain no.: 5912-6 (+) Reference: 567

**646** History: < Nozaki, Hisayoshi 
Locality: Near Goshokake Hot Spring/Akita/Japan (1985-07-10)  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Pond sediment) 
Characteristics: Heterothallic; Isogamy; Mating type(−)  
Other strain no.: 5912-6 (−) Reference: 567

**Gonium quadratum** Pringsheim ex Nozaki  

**647** History: < Nozaki, Hisayoshi 
Locality: Japan  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater 
Characteristics: Heterothallic; Isogamy; Mating type(−); F1 clone of NIES-652 x 653; Sister clone to NIES-648, 649 and 650 from one zygote  
Other strain no.: 90-809-FI-2-1 Reference: 567

**648** History: < Nozaki, Hisayoshi 
Locality: Japan  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: AF-6; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater 
Characteristics: Mixotrophic; Heterothallic; Isogamy; Mating type(+); F1 clone of NIES-652 x 653; Sister clone to NIES-647, 649 and 650 from one
zygote Other strain no.: 90-809-F1-2-2 Reference: 567

649 History: < Nozaki, Hisayoshi Locality: Japan Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 22-27μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Mixotrophic; Heterothallic; Isogamy; Mating type(+); F1 clone of NIES-652 x 653; Sister clone to NIES-647, 648 and 650 from one zygote Other strain no.: 90-809-F1-2-3 Reference: 567

650 History: < Nozaki, Hisayoshi Locality: Japan Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 22-27μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Mixotrophic; Heterothallic; Isogamy; Mating type(−); F1 clone of NIES-652 x 653; Sister clone to NIES-647, 648 and 649 from one zygote Other strain no.: 90-809-F1-2-4 Reference: 567

651 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 956 Locality: Klausen/I Italy Isolator: Pringsheim, E. G. Identified by: Pringsheim, E. G. States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Soil) Characteristics: Authentic strain References: 567, 702, 703

652 History: < Nozaki, Hisayoshi Locality: Itahari/Nepal (1989-10.**) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Mixotrophic; Heterothallic; Isogamy; Mating type(−); Crosses with NIES-653 Other strain no.: 90-423-3 References: 567, 703

653 History: < Nozaki, Hisayoshi Locality: Itahari/Nepal (1989-10.**) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Mixotrophic; Heterothallic; Isogamy; Mating type(+); Crosses with NIES-652 Gene data: atpB (AB014019); psaA (AB044243); psaB (AB044464); psbC (AB044522); rbcL (D63438) Other strain no.: 90-423-2 References: 567, 703, 715, 723, 733, 738, 740

Gonium virdistellatum M.Watanabe

288 History: < Watanabe, Masayuki Locality: Okinawa/Japan (1973-06.**) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Mating type(−); Crosses with NIES-289 and 290 Other strain no.: G4 References: 567, 700, 1136

289 History: < Watanabe, Masayuki Locality: Okinawa/Japan (1973-06.**) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Authentic strain; Heterothallic; Mating type(+); Crosses with NIES-288 Gene data: atpB (AB076118); atpB (AB076119); psaA (AB076140); psaA (AB076141); psaB (AB076156); psbC (AB076173); rbcL (AB076091); rbcL-462 intron (AB076091) Other strain no.: G3 References: 567, 700, 743, 1136

290 History: < Watanabe, Masayuki Locality: Okinawa/Japan (1973-06.**) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: CA; 20°C; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Authentic strain; Heterothallic; Mating type(+); Crosses with NIES-288 Other strain no.: G1 References: 567, 700, 1136

654 History: < Nozaki, Hisayoshi Other collection strain no.: UTEX 2519 Locality: Yokohama, Midori-ku/Kanagawa/Japan (1980-01.**) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: VT; 20°C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Isogamy; Mating type(+) Gene data: atpB (AB014021); psaA (AB044244); psaB (AB044465); psbC (AB044524); rbcL (D86831); rbcL-462 intron (AB076090) Other strain no.: KY-4 (+) References: 567, 700, 714, 716, 733, 738, 743

655 History: < Nozaki, Hisayoshi Other collection strain no.: UTEX 2520 Locality: Yokohama,
Contents

Midori-ku/Kanagawa/Japan (1980-01-**): **Isolator:** Nozaki, Hisayoshi **Identified by:** Nozaki, Hisayoshi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** VT; 20°C; 22-27μmol/m²/s; 1 M **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Isogamy; Mating type(−) **Other strain no.:** KY-7 (−) **References:** 567, 700

857 **History:** < Nozaki, Hisayoshi **Locality:** Kathmandu, Gausl/Nepal (1986-09-**): **Isolator:** Nozaki, Hisayoshi **Identified by:** Nozaki, Hisayoshi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-22μmol/m²/s; 2 M **Habitat:** Freshwater (Paddy soil) **Gene data:** atpB (AB076117); psaA (AB076139); psbA (AB076155); psbC (AB076172); rbcL (AB076092); rbcL-462 intron (AB076092) **Other strain no.:** 88-511-9 **Reference:** 743

**GONYOSTOMUM:** Raphidophyceae

**Gonyostomum latum** Iwanoff

1808 **History:** < TKB **Locality:** Matsumi-ike Pond/Ibaraki/Japan (2005-08-30) **Isolator:** Yamaguchi, Haruyo **Identified by:** Yamaguchi, Haruyo (2005-**): **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 20-30μmol/m²/s; 1 M **Habitat:** Freshwater (Pond water) **Other strain no.:** TKB-254 **Reference:** 1215 **Remarks:** Fragile species to transportation stresses

**Gonyostomum semen** (Ehrenberg) Diesing

1009 **History:** < Moriya, Mayumi **Locality:** Lake Ozenuma/Fukushima/Japan (2002-08-28) **Isolator:** Moriya, Mayumi **Identified by:** Moriya, Mayumi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AAF-6; 15°C; 15-22μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Other strain no.:** M-87 **Remarks:** Fragile species to transportation stresses

1380 **History:** < TKB **Locality:** Mizunuma Dam/Ibaraki/Japan (2004-07-07) **Isolator:** Nakayama, Takeshi **Identified by:** Nakayama, Takeshi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 32-40μmol/m²/s; 2 M **Habitat:** Freshwater (Reservoir water) **Characteristics:** Red tide **Other strain no.:** TKB-132 (nak26) **References:** 137, 1215 **Remarks:** Fragile species to transportation stresses

**GRAESIELLA:** Chlorophyceae

**Graesiella emersonii** (Shihira et Krauss) Nozaki et al. Syn. Chlorella emersonii Shihira et Krauss; Chlorella fusca Shihira et Krauss var. vacuolata Shihira et Krauss; Graesiella vacuolata (Shihira et Krauss) Kalina et Puncchárová

226 **History:** < IAM (1983) **Other collection strain no.:** IAM C-28 **Locality:** Japan **Identified by:** Nozaki, Hisayoshi et al. (Reidentify) **Formerly identified as:** Chlorella pyrenoidosa Chick **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **References:** 202, 235, 496, 498, 499, 521, 567, 666, 721, 1022, 1125, 1187, 1266, 1267, 1268, 1269 **Remarks:** Cryopreserved

687 **History:** < Katagiri, Masayuki < CCAP **Other collection strain no.:** CCAP 211/8B; IAM C-104 **Locality:** Pennsylvania/U.S.A. (1923-***): **Isolator:** Emerson, R. **Identified by:** Nozaki, Hisayoshi et al. (Reidentify) **Formerly identified as:** Chlorella fusca Shihira et Krauss var. vacuolata Shihira et Krauss (in IAM) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Characteristics:** Authentic strain of Chlorella fusca Shihira et Krauss var. vacuolata Shihira et Krauss **Other strain no.:** C-104 **References:** 124, 176, 385, 437, 496, 498, 512, 548, 559, 560, 567, 721, 1101 **Remarks:** Cryopreserved

688 **History:** < Katagiri, Masayuki < CCAP **Other collection strain no.:** CCAP 211/8G **Locality:** Japan **Isolator:** Emerson, R. **Identified by:** Nozaki, Hisayoshi et al. (Reidentify) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater **Other strain no.:** 211/8G **References:** 567, 721 **Remarks:** Cryopreserved

689 **History:** < Katagiri, Masayuki < CCAP **Other collection strain no.:** CCAP 211/8H **Locality:**
Japan Isolator: Emerson, R. Identified by: Nozaki, Hisayoshi et al. (Reidentify) States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20 °C; 4-10μmol/m²/s; 3 M (25 °C; 70-80μmol/m²/s) Habitat: Freshwater Other strain no.: 211/8H References: 567, 721 Remarks: Cryopreserved

690 History: < Katagiri, Masayuki < CCAP Other collection strain no.: CCAP 211/11N Locality: Berlin/Germany Isolator: Emerson, R. pre Identified by: Nozaki, Hisayoshi et al. (Reidentify) Formerly identified as: Chlorella emersonii Shihira et Krauss (in CCAP) States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20 °C; 4-10μmol/m²/s; 3 M (25 °C; 70-80μmol/m²/s) Habitat: Freshwater Characteristics: Authentic strain of Chlorella emersonii Shihira et Krauss Gene data: 18S rRNA (AJ242761) Other strain no.: 211/11N References: 567, 721 Remarks: Cryopreserved

2151 History: < IAM (2007) < BIU (UTEX; 1961) Other collection strain no.: IAM C-105; CCAP 211/8C; SAG 211-8c; UTEX 252; UTCC 89; NIBB 4001; NIBB 4002; NIBB 4003; NIBB 4004; NIBB 4005. NIBB 4006 Locality: Berlin-Dahlem/Germany Isolator: Emerson, R. Identified by: Kessler, E.; Confirmed at NIES by DNA sequencing (1993) Formerly identified as: Chlorella pyrenoidosa Chick States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 °C; 8-15μmol/m²/s; 3 M Habitat: Freshwater (Tap water) Gene data: 18S rRNA (AB488562) References: 38, 385, 498, 499, 885 Remarks: Cryopreserved

GUNGNIR : Chlorophyceae

Gungnir kasakii (Nozaki) Nakada
Syn. Chlorogonium kasakii Nozaki

761 History: < Nozaki, Hisayoshi < CCAP Other collection strain no.: CCAP 12/8 Locality: Priest Pot/England, Cambria/U.K. Isolator: Jaworski Identified by: Nozaki, Hisayoshi; Nakada, Takashi (Reidentify) Formerly identified as: Chlorogonium sp. (in CCAP) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 15-27μmol/m²/s; 2 M Habitat: Freshwater (Water) Characteristics: Authentic strain; Type specimen (NIES-50005, Epitype) Gene data: rbcL (AB010244) References: 610, 737

1359 History: < Nakada, Takashi Locality: Sakatagaike Pond/Chiba/Japan (2003-07-23) Isolator: Nakada, Takashi Identified by: Nakada, Takashi States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20 °C ; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond sediment) Characteristics: Mixotrophic Gene data: psaB (AB451209); rbcL (AB206331) Other strain no.: SKCl-5 References: 606, 609, 610


Gungnir neglectum (Pascher) Nakada
Syn. Chlamydomonas neglecta Korshikov ex Pascher; Chlorogonium neglectum Pascher

439 History: < Suda, Shoichiro Locality: Tsukuba/Ibaraki/Japan (1984-05-08) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro; Nozaki, Hisayoshi; Nakada, Takashi (Reidentify) States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Paddy soil) Characteristics: Authentic strain; Type specimen (NIES-50006, Epitype) Gene data: atpB (AB084326); psaB (AB084366); rbcL (AB010243) Other strain no.: T-4-19 References: 275, 567, 610, 737, 740

1869 History: < Nakada, Takashi Locality: Kyoto, Sakyo-ku/Kyoto/Japan (2005-03-29) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2007-06-**) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Authentic strain; Type specimen (NIES-50008) Gene data: psaB (AB451210) Other strain no.: IkCl-701 Reference: 609
GYMNODINIUM : Dinophyceae

Gymnodinium catenatum Graham

1834 History: < TKB Locality: Mie/Japan (2005-04-***) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi (2005-**-***) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-264 Remarks: Fragile species to transportation stresses

Gymnodinium sp.


2003 History: < Noël, Mary-Hélène Locality: Seto Inland Sea/Japan (2005-05-12) Isolator: Noël, Mary-Hélène Identified by: Noël, Mary-Hélène (2005-12-***) States: Unialgal; Clonal; Non-axenic Culture conditions: MNK; 20°C; 10-15μmol/m²/s; 20 D Habitat: Marine (Sediment) Other strain no.: MHW20 Remarks: Fragile species to transportation stresses


2007 History: < Noël, Mary-Hélène Locality: Soma Harbor/Fukushima/Japan (2005-06-17) Isolator: Noël, Mary-Hélène Identified by: Noël, Mary-Hélène (2005-12-***) States: Unialgal; Clonal; Non-axenic Culture conditions: MNK; 20°C; 10-15μmol/m²/s; 20 D Habitat: Marine (Sediment) Other strain no.: MHW34 Remarks: Fragile species to transportation stresses

2326 History: < Sawaguchi, Tomohiro Locality: Tsushima Isl./Nagasaki/Japan (1986-03-13) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 15°C; 35-50μmol/m²/s; 2 M Habitat: Freshwater (Reservoir water) Other strain no.: TKDD-11 Remarks: Fragile species to transportation stresses

GYRODINIUM : Dinophyceae

Gyrodinium instriatum Freudenthal et Lee

2000 History: < Noël, Mary-Hélène Locality: Seto Inland Sea/Japan (2005-08-01) Isolator: Noël, Mary-Hélène Identified by: Noël, Mary-Hélène (2005-12-***) States: Unialgal; Clonal; Non-axenic Culture conditions: MNK; 20°C; 10-15μmol/m²/s; 20 D Habitat: Marine (Seawater) Other strain no.: MHW11 Remarks: Fragile species to transportation stresses

HAEMATOCOCUS : Chlorophyceae

Haematococcus lacustris (Giroud-Chantrans) Rostafinski Syn. Haematococcus pluvialis Flotow

144 History: < IAM (1983) Other collection strain no.: IAM C-392 Locality: Sapporo/Hokkaido/Japan (1964-07-16) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Lake water) Characteristics: Homothallic; Isogamy Gene data: 14-3-3 protein (AY973204); atpB (AB084325); lycopene β-cyclase (AY182008); psaB (AB084365); rbcL (AB084336); rbcL (AB084337); β-carotene ketolase (AY603347) Other strain no.: MKF-8 References: 235, 288, 333, 334, 375, 376, 377, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 459, 462, 463, 567, 740, 854, 855, 981, 1068, 1069, 1070, 1159, 1221, 1264

2263 History: < IAM (2007) < Nakayama, Ooki Other collection strain no.: IAM C-339 Locality: Kofu/Yamanashi/Japan Isolator: Nakayama, Ooki Identified by: Nakayama, Ooki States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Other strain
no.: Nakayama 5032 Remarks: Cryopreserved

2264 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-582 (=C-296/C-393); SAG 34-1b; UTEX 16; ATCC 30402; UTCC B 93; CCAP 34/1b Isolator: Pringsheim, E. G. States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20˚C; 8-15μmol/m²/s; 3 M Characteristics: Astaxantin production Reference: 471 Remarks: Cryopreserved

2265 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-583 (=C-394); UTEX 294; ATCC 30453; CCAP 34/1j Isolator: Lewin, Ralph A. Identified by: Lewin, Ralph A. States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20˚C; 8-15μmol/m²/s; 3 M Other strain no.: Lewin DD1/73 Remarks: Cryopreserved

HAFNIOMONAS : Chlorophyceae

Hafniomonas conica (Ettl) Nakada et Nozaki
Syn. Pyramimonas reticulata Korshikov var. conica Ettl; Hafniomonas reticulata Korshikov var. conica (Ettl) Ettl et Moestrup

1714 History: < Nozaki, Hisayoshi Locality: Mure/Nagano/Japan (2003-07-12) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2005-11-**) States: Unialgal; Clonal; Non-axenic Culture conditions: AFAC; 23˚C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Gene data: 18S rRNA (AB248251); psaB (AB248257) Other strain no.: NgCl-3 Reference: 615

Hafniomonas laevis Nakada, Suda et Nozaki

257 History: < Suda, Shoichiro Locality: Tsukuba/Ibaraki/Japan (1983-10-30) Isolator: Suda, Shoichiro Identified by: Inouye, Isao; Nakada, et al. (Reidentify) Formerly identified as: Hafniomonas montana (Geitler) Ettl et Moestrup States: Unialgal; Clonal; Axenic Culture conditions: C; 20˚C; 15-22μmol/m²/s; 1 M Habitat: Freshwater (Pool water) Gene data: atpB (AB101504); psaB (AB101515); rbcL (AB101509); rbcL (AB101510) Other strain no.: OUT-5 References: 567, 615, 664, 734, 987, 1159

Hafniomonas montana (Geitler) Ettl et Moestrup

656 History: < Suda, Shoichiro Locality: Tsukuba/Ibaraki/Japan (1986-04-30) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: C; 20˚C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Gene data: atpB (AB101505); psaB (AB101516); rbcL (AB101511); rbcL (AB101512) Other strain no.: 430M3-3 References: 567, 615, 664, 734, 1014

Hafniomonas reticulata (Korshikov) Ettl et Moestrup
Syn. Pyramimonas reticulata Korshikov

1715 History: < Nozaki, Hisayoshi Locality: Mitsukaido/Ibaraki/Japan (2003-08-11) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2005-11-**) States: Unialgal; Clonal; Non-axenic Culture conditions: AFAC; 23˚C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Resting spore forming Gene data: 18S rRNA (AB248247); psaB (AB248253) Other strain no.: MCI-10 Reference: 615

1716 History: < Nozaki, Hisayoshi Locality: Ebina/Kanagawa/Japan (2004-02-26) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2005-11-**) States: Unialgal; Clonal; Non-axenic Culture conditions: AFAC; 23˚C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Resting spore forming Gene data: 18S rRNA (AB248250); psaB (AB248256) Other strain no.: EbCl-11 Reference: 615

1717 History: < Nozaki, Hisayoshi Locality: Kitahiroshima/Hokkaido/Japan (2004-03-27) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2005-11-**) States: Unialgal; Clonal; Non-axenic Culture conditions: AFAC; 23˚C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Resting spore forming Gene data: 18S rRNA (AB248248); psaB (AB248254) Other strain no.: KhCl-1 Reference: 615

CONTENTS

Culture conditions: AFAC; 23°C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil)
Characteristics: Resting spore forming Gene data: 18S rRNA (AB248249); psaB (AB248255)
Other strain no.: KgCl-4-5 Reference: 615

Hafniomonas sp.
1841 History: < TKB Locality: Ryugasaki/Ibaraki/Japan (2005-09-29) Isolator: Chikuni, Tomoko
Identified by: Nakayama, Takeshi (2005-**.*.**) States: Unialgal; Non-clonal; Non-axenic
Culture conditions: 32°C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil)
Other strain no.: TKB-275

Hafniomonas turbinia Nakada et Nozaki
1719 History: < Nozaki, Hisayoshi Locality: Naruto/Chiba/Japan (2003-08-15) Isolator: Nakada, Takashi
Identified by: Nakada, Takashi (2005-11-**.) States: Unialgal; Clonal; Non-axenic
Culture conditions: AFAC; 23°C; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil)
Characteristics: Mixotrophic Other strain no.: NrCl-4

HALOCHLOROCOCCUM : Ulvophyceae
Halochlorococcus sp.
1838 History: < TKB Locality: Tokyo/Japan (2005-01-**.) Isolator: Nakayama, Takeshi
Identified by: Nakayama, Takeshi (2006-**.*.**) States: Unialgal; Clonal; Non-axenic
Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 2 M Habitat: (Seawater) Other strain no.: TKB-269

HAMAKKO : Chlorophyceae
Hamakko caudatus Nakada
2293 History: < Nakada, Takashi Locality: Kanagawa/Japan (2003-05-12) Isolator: Nakada, Takashi
Identified by: Nakada, Takashi (2007-12-**.) States: Unialgal; Clonal; Non-axenic
Culture conditions: AF-6; MG; 20°C; 32-40μmol/m²/s; 1 M Habitat: Freshwater (Soil) Characteristics: Authentic strain Gene data: 18S rRNA (AB451188); psaB (AB451212); rbcL (AB451193) Other strain no.: KgCl-8

HANTZSCHIA : Bacillariophyceae
Hantzschia amphioxys (Ehrenberg) Grunow var. compacta Hustedt
587 History: < Hagiwara, Tomiji Locality: Tsukuba/Ibaraki/Japan (1990-04-19) Isolator: Hagiwara, Tomiji
Identified by: Hagiwara, Tomiji States: Unialgal; Clonal; Non-axenic
Culture conditions: CSI; 15°C; 35-50μmol/m²/s; 1 M Habitat: Terrestrial (Concrete wall) Other strain no.: Wn-24

HARAMONAS : Raphidophyceae
Haramonas dimorpha Horiguchi
716 History: < Horiguchi, Takeo Locality: Daintree River/Australia (1991-09-21) Isolator: Horiguchi,
Yamaguchi, Hoppenrath, Takishita et Horiguchi

**Haramonas**

**Haramonas pauciplastida** Yamaguchi, Hoppenrath, Takishita et Horiguchi

1870 History: < Yamaguchi, Haruyo Locality: Vancouver Isl., Pacher Beach/Canada (2005-05-**) Isolator: Hoppenrath, Mona Identified by: Yamaguchi, Haruyo (2007-08-**) States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Brackish water (Sediment) Characteristics: Benthic; Authen tic strain Gene data: 18S rRNA (AB365025); CO1 (AB334516); GapC1 (AB459523); GapC2 (AB459524); ITS1-5.8S-ITS2 (AB334370); petD (AB280618); psaA (AB367952); psbB (AB280591); psbC (AB280597); psbD (AB280602); rbcL (AB280608); rbcL (AB334443); tufA (AB367953) References: 65, 217, 245, 1036, 1214 Remarks: Fragile species to transportation stresses

**Haramonas sp.**

1701 History: < Honda, Daiske Locality: Yashima Isl./Kagawa/Japan (2001-04-17) Isolator: Fukaya, Sachiko Identified by: Fukaya, Sachiko States: Unialgal; Clonal; Non-axenic Culture conditions: MNK; 20°C; 32-40μmol/m²/s; 14 D Habitat: Marine (Sand) Characteristics: Red tide; Benthic Other strain no.: SEK-115 Remarks: Fragile species to transportation stresses

**HEMIDINNIUM** : Dinophyceae

**Hemidinium nasutum** Stein

471 History: < Sawaguchi, Tomohiro Locality: Tsuchiura/Ibaraki/Japan (1987-08-27) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6/2; 20°C; 40-50μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: 87SPD-1 Remarks: Fragile species to transportation stresses

**HEMIFLAGELLOCHLORIS** : Chlorophyceae

**Hemiflagellochloris kazakhstanica** S.Watanabe, Tsujimura, Misono, Nakamura et Inoue

1722 History: < Watanabe, Shin Locality: Lower Ili River Basin/Kazakhstan (1993-09-19) Identified by: Watanabe, Shin (2002-07-**) States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial Characteristics: Authentic strain Other strain no.: BAKg15

**HETEROCAPSA** : Dinophyceae

**Heterocapsa horiguchii** Iwataki, Takayama et Matsuoka

614 History: < Sawaguchi, Tomohiro Locality: Kashiwazaki/Niigata/Japan (1986-08-04) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro Formerly identified as: Cachonina Loebl ich III States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: KSTH-29 Reference: 321 Remarks: Fragile species to transportation stresses

**Heterocapsa niei** (Loeblich III) Morrill et Loebl ich III Syn. Cachonina niei Loebl ich III

420 History: < Sawaguchi, Tomohiro Locality: Iriomote Isl./Okinawa/Japan (1986-01-23) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: IID-1 Reference: 321 Remarks: Fragile species to transportation stresses

**Heterocapsa ovata** Iwataki et Fukuyo

472 History: < Sawaguchi, Tomohiro Locality: Kashiwazaki/Niigata/Japan (1986-08-04) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro Formerly identified as: Heterocapsa pygmaea Loebl ich III, Schmidt et Sherley States: Unialgal; Clonal; Non-axenic Culture
Heterocapsa pseudotriquetra

Iwataki, Hansen et Fukuyo

473 History: < Sawaguchi, Tomohiro
Locality: Tsushima Isl./Nagasaki/Japan (1986-03-13)
Isolator: Sawaguchi, Tomohiro
Identified by: Sawaguchi, Tomohiro
Formerly identified as: Heterocapsa pygmaea
Lobelich III, Schmidt et Sherley
States: Unialgal; Clonal; Non-axenic
Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater)
Other strain no.: KSTH-2
References: 197, 320, 321
Remarks: Fragile species to transportation stresses

Heterocapsa rotundata (Lohmann) Hansen

Syn. Katodinium rotundatum (Lohmann) Loeblich III

356 History: < Sawaguchi, Tomohiro
Locality: Hachinohe Harbor/Aomori/Japan (1985-01-06)
Isolator: Sawaguchi, Tomohiro
Identified by: Sawaguchi, Tomohiro
States: Unialgal; Clonal; Axenic
Culture conditions: f/2; ESM; 10°C; 6-12μmol/m²/s; 1 M (10°C; 10-15μmol/m²/s)
Habitat: Marine (Seawater)
Other strain no.: HHD-1
Remarks: Unstable; Fragile species to transportation stresses

Heterocapsa sp.

1403 History: < TKB
Locality: Tsukuba Univ. Marine Research Center/Shizuoka/Japan (2003-04-03)
Isolator: Kai, Atsushi
Identified by: Kai, Atsushi
States: Unialgal; Clonal; Non-axenic
Culture conditions: f/2; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater)
Remarks: Red tide
Other strain no.: TKB-060 (AK-04)
Remarks: Fragile species to transportation stresses

2343 History: < KAGAWA < Yoshimatsu, Sadaaki
Locality: Ago Bay/Mie/Japan (1992-12-**)
Isolator: Yoshimatsu, Sadaaki
Identified by: Yoshimatsu, Sadaaki
States: Clonal
Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater)
Characteristics: Red tide
Other strain no.: Mie-92
Remarks: Fragile species to transportation stresses

2344 History: < KAGAWA < Yoshimatsu, Sadaaki
Locality: Uranouchi Bay/Kochi/Japan (1988-09-**)
Isolator: Yoshimatsu, Sadaaki
Identified by: Yoshimatsu, Sadaaki
States: Clonal
Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater)
Characteristics: Red tide
Other strain no.: Uranouchi
Remarks: Fragile species to transportation stresses

Heterocapsa triquetra Stein

7 History: < Watanabe, Makoto M.
Locality: Osaka Bay/Osaka/Japan (1981-04-**)
Isolator: Yamochi, Susumu
Identified by: Yamochi, Susumu
States: Unialgal; Clonal; Axenic[2013 Jan]
Culture conditions: f/2; ESM; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine
Characteristics: Red tide
Other strain no.: OHet
References: 197, 335, 434, 465, 466, 676, 677
Remarks: Fragile species to transportation stresses

235 History: < KAGAWA
Locality: Harima-Nada/Japan (1982-03-10)
Isolator: Yoshimatsu, Sadaaki
Identified by: Yoshimatsu, Sadaaki
States: Unialgal; Clonal; Axenic[2012 Feb]
Culture conditions: f/2; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine
Characteristics: Red tide
Other strain no.: KGW-57
References: 197, 1115
Remarks: Fragile species to transportation stresses

HETEROCHLAMYDOMONAS: Chlorophyceae

Heterochlamydomonas lobata Langford et Cox

2581 History: < IAM (2007) < BIU (UTEX; 1967)
Other collection strain no.: IAM C-268; SAG 38.72; UTEX 728
Locality: Canada
Isolator: Lewin, Ralph A.
Identified by: Ettl, H.; Schlösser, U.G.
States: Unialgal; Clonal; Axenic[2013 Jan]
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Other strain no.: Lewin ZZ.1,D/4

Heterochlamydomonas sp.

157 History: < Watanabe, Shin
Locality: Mt. Shiroumadake/Nagano/Japan (1980-08-**)
Isolator: Watanabe, Shin
Identified by: Watanabe, Shin
Formerly identified as: Chlamydomonas monticola
States: Unialgal; Clonal; Non-axenic
Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s)
Habitat: Terrestrial (Soil)
Other strain no.: 
**CONTENTS**

KUC80-4 References: 567, 838, 1186

**HETERSOSIGMA** : Raphidophyceae

*Heterosigma akashiwo* (Hada) Hada ex Y.Hara et Chihara

5 **History:** < Iwasaki, Hideo **Locality:** Gokasho Bay/Mie/Japan (1966-**,** **) **Isolator:** Iwasaki, Hideo **Identified by:** Hara, Yoshiaki **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M **Habitat:** Marine **Characteristics:** Red tide **Gene data:** 16S rRNA (AB181953); 16S-rRNA-Ile-rRNA-Ala-23S (AB181957); 28S rRNA (AB217644); CO1 (AB334506); rbcL (AB334433); rbcL, rbcS, cfxQ, psbA (AB176660) **Other strain no.:** HGE References: 65, 318, 878 **Remarks:** Fragile species to transportation stresses

6 **History:** < Watanabe, Makoto M. **Locality:** Osaka Bay/Osaka/Japan (1979-08-**) **Isolator:** Watanabe, Makoto M. **Identified by:** Watanabe, Makoto M. **States:** Unialgal; Clonal; Axenic **Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M **Habitat:** Marine **Characteristics:** Red tide **Gene data:** 16S rRNA (AB181954); 16S-rRNA-Ile-rRNA-Ala-23S (AB181958); 18S-ITS1-5.8S-ITS2-28S (AF157381); CO1 (AB334507); rbcL (AB334434) **Other strain no.:** OHE-1 **References:** 65, 115, 152, 173, 389, 391, 426, 427, 428, 430, 433, 434, 441, 562, 563, 568, 592, 629, 676, 679, 750, 800, 907, 969, 970, 993, 1118, 1119, 1120, 1129, 1162, 1164, 1165, 1166, 1167, 1168, 1175, 1176, 1177, 1178, 1179, 1180, 1183, 1184, 1213, 1235, 1243 **Remarks:** Fragile species to transportation stresses

9 **History:** < Watanabe, Makoto M. **Locality:** Harima-Nada/Japan (1983-02-**) **Isolator:** Watanabe, Makoto M. **Identified by:** Watanabe, Makoto M. **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M **Habitat:** Marine **Characteristics:** Red tide **Gene data:** 18S-ITS1-5.8S-ITS2-28S (AF163817); CO1 (AB334508); rbcL (AB334435) **Other strain no.:** H-28 **References:** 65, 137 **Remarks:** Fragile species to transportation stresses

10 **History:** < Watanabe, Makoto M. **Locality:** Harima-Nada/Japan (1983-02-**) **Isolator:** Watanabe, Makoto M. **Identified by:** Watanabe, Makoto M. **States:** Unialgal; Clonal; Axenic[2012 Feb] **Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M **Habitat:** Marine **Characteristics:** Red tide **Gene data:** CO1 (AB334436) **Other strain no.:** H-40 **Reference:** 65 **Remarks:** Fragile species to transportation stresses

145 **History:** < KAGAWA **Locality:** Kagoshima/Japan (1978-05-21) **Isolator:** Yoshimatsu, Sadaaki **Identified by:** Yoshimatsu, Sadaaki **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M **Habitat:** Marine **Characteristics:** Red tide **Gene data:** 28S rRNA (AB217645); CO1 (AB334510); rbcL (AB334437) **Other strain no.:** KGW-11-5 **References:** 65, 335, 1115 **Remarks:** Fragile species to transportation stresses

146 **History:** < KAGAWA **Locality:** Shido Bay/Kagawa/Japan (1978-06-20) **Isolator:** Yuki, Katsuhisa **Identified by:** Yuki, Katsuhisa **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M **Habitat:** Marine **Characteristics:** Red tide **Gene data:** CO1 (AB334511); rbcL (AB334438) **Other strain no.:** KGW-21-2 **Reference:** 65 **Remarks:** Fragile species to transportation stresses

293 **History:** < Suda, Shoichiro **Locality:** Onagawa Bay/Miyagi/Japan (1984-08-28) **Isolator:** Suda, Shoichiro **Identified by:** Suda, Shoichiro **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M **Habitat:** Marine (Seawater) **Characteristics:** Red tide **Gene data:** 18S-ITS1-5.8S-ITS2-28S (DQ470658); chloroplast genome (NC_010772); chloroplast genome (EU168190); CO1 (AB334512); rbcL (AB334439) **Other strain no.:** 8280G21-1 **References:** 48, 58, 58, 386, 1021 **Remarks:** Fragile species to transportation stresses

561 **History:** < Honjo, Tsuneo **Locality:** Mikawa Bay/Aichi/Japan **Isolator:** Toriumi, Saburo **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** f/2; 20°C; 32-40μmol/m²/s; 1 M **Habitat:** Marine (Seawater) **Characteristics:** Red tide **Gene data:** CO1 (AB334513); ITS1-5.8S-ITS2 (AB334369); rbcL (AB334440) **References:** 65, 867, 868, 1074 **Remarks:** Fragile species to transportation stresses

1830 **History:** < TKB **Locality:** Miyajima Isl./Hiroshima/Japan (2004-12-10) **Isolator:** Nakayama,
Contents

Takeshi Identified by: Nakayama, Takeshi (2005.**,***) States: Unialgal; Clonal; Non-axenic
Culture conditions: 0/2; 20 °C ; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater)
Characteristics: Red tide Other strain no.: TKB-302 Remarks: Fragile species to transportation stresses

Hexamita sp.

Identified by: Yubuki, Naoki States: Unialgal; Clonal; Non-axenic Culture conditions: UYTS + Rice; 15°C; 0μmol/m²/s; 20 D Habitat: Freshwater (Pond water) Characteristics: Offensive taste and odor; Heterotrophic Other strain no.: TKB-057 (NY0140) Reference: 137

HYALOLITHUS: Prymnesiophyceae

Hyalolithus neolepis Yoshida, Noël, Nakayama, Naganuma et Inouye

Identified by: Yoshida, Masaki (2001-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: MNK: 18 °C ; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Authentic strain Other strain no.: TKB-005 (ym-05) Reference: 1250

HYALOTHECA: Charophyceae

Hyalotheca dissiliens Brébisson ex Ralfs


Hyalotheca dissiliens Brébisson ex Ralfs f. tridentula (Nordstedt) Boldt


HYDROCOCCUS: Cyanophyceae

Hydrococcus rivularis Kützing

593 History: < Hagiwara, Tomiji Locality: Yukawa Hot Spring/Iwate/Japan (1990-09-09) Isolator: Hagiwara, Tomiji Identified by: Hagiwara, Tomiji States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Hot spring (Water) Characteristics: Benthic Other strain no.: Yu-52 References: 221, 567

115
HYDRODICTYON: Chlorophyceae

Hydrodictyon reticulatum (Lagerheim) Lagerheim

295 History: < IAM (1983) Other collection strain no.: IAM C-335 Locality: Osaka/Japan (1968-11-10) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20 °C; 4-10μmol/m²/s; 3 M (25 °C; 70-80μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Homothallic Other strain no.: O-2 References: 235, 567

HYMENOMONAS: Prymnesiophyceae

Hymenomonas coronata Mills

1016 History: < Moriya, Mayumi Locality: Hirara, Shimajiri/Okinawa/Japan (2002-03-17) Isolator: Moriya, Mayumi Identified by: Noël, Mary-Hélène States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15 °C; 15-22μmol/m²/s; 1 M Habitat: Brackish water (Water) Other strain no.: M-27 Reference: 142

IMANTONIA: Prymnesiophyceae

Imantonia rotunda Reynolds emend. J.C. Green et Pienaar

1001 History: < Kawachi, Masanobu Locality: Chiba Harbor/Chiba/Japan (1990-10-***) Isolator: Kawachi, Masanobu Identified by: Kawachi, Masanobu States: Unialgal; Clonal; Non-axenic Culture conditions: MNK; 20 °C; 20-30μmol/m²/s; 14 D Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: Iman2

1394 History: < TKB Locality: Onahama Harbor/Fukushima/Japan (2004-07-07) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Non-clonal; Non-axenic Culture conditions: f/2; 20 °C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-128 (nak22)

INTERFILUM: Charophyceae

Interfilum paradoxum Chodat et Topali

2180 History: < IAM (2007) < BIU (UTEX) Other collection strain no.: IAM C-161; CCAP 338/1; SAG 338-1; ATCC 30445; UTEX 177 Locality: U.K. Isolator: Pringsheim, E. G. States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: Pro (agar); 20 °C; 8-15μmol/m²/s; 3 M Habitat: (Soil)

ISOCHRYSIS: Prymnesiophyceae

Isochrysis galbana Parke

2590 History: < RCC (2009) Other collection strain no.: RCC 178 Locality: English Channel/Britanny Coast/France States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20 °C; 22-32μmol/m²/s; 14 D Habitat: Marine (Seawater) Other strain no.: Caen

KARENIA: Dinophyceae

Karenia mikimotoi (Miyake et Kominami ex Oda) Hansen et Moestrup Syn. Gymnodinium mikimotoi Miyake et Kominami ex Oda; Gymnodinium nagasakiense Takayama et Adachi


KARLODINIUM: Dinophyceae
**Karlodinium veneficum** (Ballantine) Larsen

1966 History: < TKB Locality: Kobe, Suma-ku/Hyogo/Japan (2005-12-10) Isolator: Nakayama, Takeshi Identified by: Yamaguchi, Haruyo (2006-**.** States: Unialgal; Clonal; Non-axenic Culture conditions: IMK; 20°C; 10-15μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-327 Remarks: Fragile species to transportation stresses

**KATHABLEPHARIS** : Kathablepharidea

**Kathablepharis japonica** Okamoto et Inouye

1334 History: < TKB Locality: Tokyo Bay/Japan (2004-01-20) Isolator: Okamoto, Noriko Identified by: Okamoto, Noriko States: Mixed; Clonal; Non-axenic Culture conditions: mlMR (NIES-1333 should be cultured in advance as a prey); 20°C; 15-22μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Predator; Phagotrophic; Feeds on Chrysochromulina sp. (NIES-1333) Gene data: 18S rRNA (AB193602) Other strain no.: TKB-090 (nrc066) Reference: 799

**KATODINIUM** : Dinophyceae

**Katodinium** sp.


**KENTROSPHAERA** : Ulvophyceae

**Kentrosphaera** sp.

154 History: < Watanabe, Shin Locality: Sasebo/Nagasaki/Japan (1975-08-12) Isolator: Watanabe, Shin Identified by: Watanabe, Shin Formerly identified as: Characiium maximum S.Watanabe States: Unialgal; Non-clonal; Non-axenic Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (Soil) Other strain no.: 6-EBO-2 References: 567, 1186 Remarks: Cryopreserved

**KLEBSORMIDIUM** : Charophyceae

**Klebsormidium flaccidum** (Kützing) Silva, Mattox et Blackwell

2285 History: < IAM (2007) < BIU (UTEX; 1965) Other collection strain no.: IAM C-117; UTEX 321; SAG 335-1a; CCAP 335/1a Isolator: Pringsheim, E. G. Formerly identified as: Hormidium barlowi States: Unialgal; Clonal; Axenic[2012 Feb] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Reference: 88

2286 History: < IAM (2007) Other collection strain no.: IAM C-164 Locality: U.S.A. Isolator: Pringsheim, E. G. Formerly identified as: Hormidium flaccidum (Kützing) A.Braun States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M


**LAGERHEMIA** : Trebouxiophyceae

**Lagerheimia ciliata** (Lagerheim) Chodat
LAGYNNION: Chrysophyceae

Lagynion subglobosum Starmach


LAMPROTHAMNIIUM: Charophyceae

Lamprothamnium succinctum (A.Braun) R.D. Wood

1606 History: < Sakayama, Hidetoshi Locality: Jaga-ike Pond/Tokushima/Japan (2004-06-14) Identified by: Sakayama, Hidetoshi (2004-06-14) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 1/3HerbstASW; 20°C; 16-20μmol/m²/s; 6 M Habitat: Brackish water Characteristics: Monoecious; CR+EN Other strain no.: CH-100

LEPIDODINIUM: Dinophyceae

Lepidodinium chlorophorum (Elbrachter et Schnepf) Hansen, Botes et de Salas Syn. Gymnodinium chlorophorum Elbrachter et Schnepf


LEPTOLYNGBYA: Cyanophyceae

Leptolyngbya sp.

30 History: < IAM (1983) Other collection strain no.: IAM M-40 Locality: Akita/Japan Isolator: Ishikawa, Masako Identified by: Fukushima, Hiroshi; Watanabe, Makoto M. (Reidentify); Homma, Takamitsu (Re-identify) Formerly identified as: Phormidium tenue (C.Agardh ex Gomont) Anagnostidis et Komárek States: Unialgal; Axenic Characteristics: Drought tolerance Other strain no.: HK-03

LEUCOCRYPTOS: Kathablepharidea

Leucocryptos marina (Braarud) Butcher

1335 History: < TKB Locality: Tokyo Bay/Japan (2003-10-16) Isolator: Okamoto, Noriko Identified by: Okamoto, Noriko States: Mixed; Non-clonal; Non-axenic Culture conditions: f/2

CONTENTS

382 History: < Kasai, Fumie Locality: Lake Kasumigaura/Ibaraki/Japan (1983-08-23) Isolator: Kasai, Fumie Identified by: Niwama, Yuko States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Lake water) Other strain no.: F37-1 Reference: 567 Remarks: Cryopreserved

References

118
LIMNOTHRIX: Cyanophyceae
Limnothrix redekei (Van Goor) Meffert
Syn. Oscillatoria redekei
History: < Suda, Shoichiro < NIVA Other collection strain no.: NIVA CYA 277/1 Locality: Lake Mälaren/Sweden (1990.**.**) Isolator: Skulberg, R. Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Characteristics: Cyanobacterial water bloom (aoko) Gene data: 16S rRNA (AB045929) References: 221, 991 Remarks: Cryopreserved

LITHODESMIUM: Bacillariophyceae
Lithodesmium variabile Takano
History: < Ono, Sachiko Locality: Hitachi/Ibaraki/Japan (1990-09-26) Isolator: Ono, Sachiko Identified by: Ono, Sachiko States: Unialgal; Non-clonal; Non-axenic Characteristics: CT; 22°C; 70-90μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: St-12

LOBOCHLAMYS: Chlorophyceae
Lobochlamys culleus (Ettl) Pröschold, Marin, Schlösser et Melkonian
History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-552 (=C-231); SAG 18.72; UTEX 1057; CGC CC-1743 Locality: near Maxville/Florida/U.S.A. Isolator: Smith, G. M. Formerly identified as: Chlamydomonas culleus Ettl; Chlamydomonas frankii Pascher States: Unialgal; Clonal; Axenic[2013 Jan] Characteristics: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: Marine (Seawater) Characteristics: Heterothallic; Mating type(−); Crosses with NIES-2210 (IAM C-553) Other strain no.: Chlamydomonas culleus

Lobochlamys segnis (Ettl) Pröschold, Marin, Schlösser et Melkonian
History: < IAM (2007) < BU (1967) Other collection strain no.: IAM C-230; CCAP 11/69; SAG 17.72; UTEX 1349 Isolator: Ettl, H. Formerly identified as: Chlamydomonas fimbriata Ettl States: Unialgal; Clonal; Axenic[2013 Jan] Characteristics: C (agar); 20°C; 8-15μmol/m²/s; 3 M Reference: 735

Lobomonas: Chlorophyceae
Lobomonas monstroosa Korshikov
History: < Suda, Shoichiro Locality: Iwaki/Fukushima/Japan (1984-08-26) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Characteristics: C; 20°C; 22-32μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Gene data: atpB (AB044533);
psaA (AB044421); psaB (AB044472); psbC (AB044530); rbcL (AB044171) Other strain no.: FL
References: 567, 733, 740

Lobomonas piriformis Pringsheim

2266 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-584 (=C-297); ATCC 30403; SAG 45-1; UTEX 17; CCAP 45/1 Locality: shore of River Elbe/Czechoslovakia

Isolator: Pringsheim, E. G. States: Unialgal; Clonal; Axenic [2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

LOTHARELLA : Chlorarachniophyceae
Lotharella reticulosa Ohta

2584 History: < RCC (2009) Other collection strain no.: RCC 375 Locality: Mediterranean Sea

Isolator: Partensky, F.; Le Gall, F. (Re-isolation) Identified by: Confirmed at RCC by DNA sequencing States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 22-32μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: PROSOPE 97-1 Reference: 832

LUTEOCERASUS : Dictyochophyceae
Luteocerasus tetrapla

1871 History: < TKB Locality: Sesoko/Okinawa/Japan Identified by: Nakayama, Takeshi (2007-**-***) States: Unialgal; Clonal; Non-axenic Culture conditions: IMK; 20 °C ; 15-22μmol/m²/s; 1-2 M Habitat: Marine (Seawater) Characteristics: Authentic strain Other strain no.: TKB-258

MALLOMONAS : Chrysophyceae
Mallomonas sp.

1376 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2004-01-25) Isolator: Okamoto, Noriko Identified by: Okamoto, Noriko States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 18°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Sand and seawater) Other strain no.: TKB-089 (nrc065)

MAMIELLA : Prasinophyceae
Mamiella sp.

2310 History: < Suda, Shoichiro Locality: Toi Bay/Shizuoka/Japan (1988-07-23) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 8-15μmol/m²/s; 20 D Habitat: Marine (Seawater) Other strain no.: 814To-3

2329 History: < Sawaguchi, Tomohiro Locality: Hachinohe Harbor/Aomori/Japan (1986-08-***) Identified by: Sawaguchi, Tomohiro States: Unialgal Culture conditions: ESM; 15 °C ; 15-22μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: Hamam

MANTONIELLA : Prasinophyceae
Mantoniella squamata (Manton et Parke) Desikachary

1409 History: < TKB Locality: Tokyo/Japan (2004-10-28) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20 °C ; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-190 (nak79)

MARSUPIOMONAS : Pedinophyceae
Marsupiomonas sp.
1410 History: < TKB Locality: Wakayama/Japan (2002-07-**) Isolator: Okamoto, Noriko Identified by: Okamoto, Noriko States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20℃; 20-30μmol/m²/s; 14 D Habitat: Marine (Seawater) Characteristics: Benthic Gene data: 16S rRNA (AB234295) Other strain no.: TKB-040 (nrc001-014)

1824 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2005-03-30) Isolator: Okamoto, Noriko Identified by: Okamoto, Noriko (2005-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20℃; 20-30μmol/m²/s; 1 M Habitat: Marine (Sand) Other strain no.: TKB-243

MERISMOPEDIA : Cyanophyceae

Merismopedia tenuissima Lemmermann


MEROTRICHIA : Raphidophyceae

Merotricha bacillata Mereschkowsky


MESOPEDINELLA : Dictyochophyceae

Mesopedinella arctica Daugbjerg

2687 History: < RCC (2010) Other collection strain no.: RCC 382 Locality: Atlantic (Maroccan Upwelling) (1999-09-12) Isolator: Garczarek, L.; Le Gall, F. (Re-isolation) Identified by: Eikrem, W. States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20℃; 22-32μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: PROSOPE_2

MESOSTIGMA : Mesostigmatophyceae

Mesostigma viride Lauterborn

296 History: < Suda, Shoichiro Locality: Mitsukaido/Ibaraki/Japan (1985-07-03) Isolator: Suda, Shoichiro Identified by: Inouye, Isao States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C; 20℃; 40-50μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Gene data: chloroplast genome (NC_002186); Mitochondrial DNA (AF353999); Plastid DNA (AF166114); Root cap protein 1-8 mRNAs (DQ287936-DQ287943) Other strain no.: KY-14 References: 138, 295, 473, 668, 1104, 1107, 1261


477 History: < Suda, Shoichiro Locality: Mitsukaido/Ibaraki/Japan (1986-01-17) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20℃; 22-32μmol/m²/s; 20 D Habitat: Freshwater (Pond sediment) Characteristics:
Heterothallic; Mating type(−) Other strain no.: KY-Mes-3 References: 508, 1261


MESOTAENIUM : Charophyceae

Mesotaenium caldarium (Lagerheim) Hansgirg

2287 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM C-585 (=C-309); ATCC 30595; CCAP 648/1; SAG 648-1; UTEX 41; CAUP K101 Locality: Brunn/Czechoslovakia Isolator: Czurda States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20 ℃; 8-15μmol/m²/s; 3 M Habitat: (Wet brick) Characteristics: Antibacterial activity Reference: 44

Mesotaenium kramstae Lemmermann

657 History: < IAM (1983) < BIU (UTEX) Other collection strain no.: IAM C-330; UTEX LB 1024 Locality: Austin/Texas/U.S.A. Isolator: Starr, R. C. Identified by: Grönblad, R. States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20 ℃; 4-10μmol/m²/s; 3 M (25 ℃; 70-80μmol/m²/s) Habitat: Terrestrial (Air) Characteristics: Heterothallic; Mating type(−); Crosses with NIES-658 Reference: 567

658 History: < IAM (1983) < BIU (UTEX) Other collection strain no.: IAM C-331; UTEX LB 1025 Locality: Austin/Texas/U.S.A. Isolator: Starr, R. C. Identified by: Grönblad, R. States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20 ℃; 4-10μmol/m²/s; 3 M (25 ℃; 70-80μmol/m²/s) Habitat: Terrestrial (Air) Characteristics: Heterothallic; Mating type(−); Crosses with NIES-657 Reference: 567

MICRACTINIUM : Trebouxiophyceae

Micractinium bornhemiensis (Conrad) Korshikov

Syn. Errerella bornhemiensis Conrad

455 History: < IAM (1983) Other collection strain no.: IAM C-341 (=C-581) Locality: Between Ghorepani and Billethadi/Nepal (1965-12-02) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 ℃; 4-10μmol/m²/s; 3 M (25 ℃; 70-80μmol/m²/s) Habitat: Freshwater (Pond sediment) Other strain no.: N-76-1 References: 235, 567 Remarks: Cryopreserved

Micractinium pusillum Fresenius

151 History: < Kasai, Fumie Locality: Lake Kasumigaura/Ibaraki/Japan (1983-07-22) Isolator: Kasai, Fumie Identified by: Kasai, Fumie States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 ℃; 4-10μmol/m²/s; 3 M (25 ℃; 70-80μmol/m²/s) Habitat: Freshwater (Lake water) Gene data: 18S-ITS1-5.8S-ITS2-28S (JX889642) Other strain no.: F-19-4 References: 360, 567, 1159 Remarks: Cryopreserved

MICRATERIAS : Charophyceae

Micrasterias anomala Turner

774 History: < Kasai, Fumie Locality: near Cairns/Queensland/Australia (1988-09-01) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22 ℃; 55-70μmol/m²/s; 3 M (25 ℃; 70-80μmol/m²/s) Habitat: Freshwater (Lake water) Characteristics: Homothallic Other strain no.: 88-95-12

776 History: < Kasai, Fumie Locality: near Melaka/Malaysia (1985-08-20) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22 ℃; 55-70μmol/m²/s; 3 M (25 ℃; 70-80μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic Other strain no.: 85-30-38

Micrasterias crux-meliensis Ralfs
Micrasterias foliacea Bailey ex Ralfs

777 History: < Kasai, Fumie Locality: 2 km southwest of Melaka/Malaysia (1985-08-19) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Crosses with NIES-778 Other strain no.: M2-1

Micrasterias foliacea Bailey ex Ralfs var. foliacea


Micrasterias mahabuleshwarensis Hobson

779 History: < Kasai, Fumie Locality: 2 km southwest of Melaka/Malaysia (1985-08-19) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Crosses with NIES-780 Other strain no.: M2-6

780 History: < Kasai, Fumie Locality: 2 km southwest of Melaka/Malaysia (1985-08-19) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Crosses with NIES-779 Other strain no.: M2-7

Micrasterias thomasiana Archer var. notata (Nordstedt) Grönbäck

781 History: < Kasai, Fumie Locality: 2 km east of Melaka/Malaysia (1985-08-19) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Crosses with NIES-782 Other strain no.: 85-28-14

782 History: < Kasai, Fumie Locality: 2 km east of Melaka/Malaysia (1985-08-19) Isolator: Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Crosses with NIES-781 Other strain no.: 85-28-57

Micrasterias truncata (Corda) Brébisson ex Ralfs var. pusilla G.S. West

783 History: < Kasai, Fumie Locality: Sydney, Centennial Park/Australia (1988-09-03) Isolator: Kasai, Fumie Identified by: Kasai, Fumie States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Pond water) Characteristics: Heterothallic; Crosses with NIES-784 Other strain no.: 88-7-2

784 History: < Kasai, Fumie Locality: near Cairns/Queensland/Australia (1988-09-01) Isolator: Kasai, Fumie Identified by: Kasai, Fumie States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Pond
**MICROCYSTIS** : Cyanophyceae

*Microcystis aeruginosa* (Kützing) Lemmermann

Syn. *Microcystis ichthyoblabe* Kützing; *Microcystis novacekii* (Komárek) Compère; *Microcystis viridis* (A.Brown) Lemmermann; *Microcystis wesenbergii* Komárek

### 44 History:

- **< IAM (1983) Other collection strain no.: IAM M-176 (=M-228)**  
  - **Locality:** Lake Kasumigaura/Ibaraki/Japan (1974-08-**)**  
  - **Isolator:** Watanabe, Makoto M.  
  - **Identified by:** Watanabe, Makoto M.  
  - **Formerly identified as:** Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa  
  - **States:** Unialgal; Clonal; Axenic  
  - **Culture conditions:** CB; 25°C; 20-30μmol/m²/s; 20 D  
  - **Habitat:** Freshwater  
  - **Characteristics:** Cyanobacterial water bloom (aoko); ST 1 (Tanabe et al. 2007)  
  - **Gene data:** 16S rRNA (AB015361); 16S-23S-ITS (AB015361); ftsZ (AB324850); glnA (AB324929); gltX (AB325008); gyrB (AB325087); pgi (AB325166); recA (AB325245); tpi (AB325324)  
  - **References:** 21, 50, 73, 145, 204, 235, 242, 322, 327, 350, 351, 360, 383, 477, 567, 593, 594, 595, 602, 671, 836, 973, 1009, 1010, 1053, 1056, 1059, 1060, 1066, 1121, 1159, 1171, 1231, 1257, 1258, 1272  
  - **Remarks:** Cryopreserved

### 87 History:

- **< Watanabe, Makoto M. Locality:** Lake Kasumigaura/Ibaraki/Japan (1982-09-**)**  
  - **Isolator:** Watanabe, Michiko H.  
  - **Identified by:** Watanabe, Michiko H.  
  - **Formerly identified as:** Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa  
  - **States:** Unialgal; Clonal; Axenic  
  - **Culture conditions:** MA; 25°C; 20-30μmol/m²/s; 20 D  
  - **Habitat:** Freshwater (Lake water)  
  - **Characteristics:** Cyanobacterial water bloom (aoko); ST 2 (Tanabe et al. 2007)  
  - **Gene data:** 16S rRNA (D89031); ftsZ (AB324851); glnA (AB324930); gltX (AB325009); gyrB (AB325088); pgi (AB325167); recA (AB325246); tpi (AB325325)  
  - **Other strain no.:** K-MA-11  
  - **References:** 275, 327, 439, 440, 441, 442, 444, 458, 477, 567, 621, 622, 623, 624, 625, 626, 627, 671, 811, 1056, 1059, 1060, 1076, 1159, 1257, 1258, 1272  
  - **Remarks:** Cryopreserved

### 88 History:

- **< Watanabe, Makoto M. Locality:** Lake Kawaguchi/Yamanashi/Japan (1981-06-**)**  
  - **Isolator:** Watanabe, Michiko H.  
  - **Identified by:** Watanabe, Michiko H.  
  - **Formerly identified as:** Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa  
  - **States:** Unialgal; Clonal; Non-axenic  
  - **Culture conditions:** MA; 25°C; 20-30μmol/m²/s; 20 D  
  - **Habitat:** Freshwater (Lake water)  
  - **Characteristics:** Cyanobacterial water bloom (aoko); Toxic; ST 3 (Tanabe et al. 2007)  
  - **Gene data:** 16S rRNA (AB023255); ftsZ (AB324852); glnA (AB324931); gltX (AB325010); gyrB (AB325089); mcyA (AB110103); mcyD (AB110114); mcyG (AB110125); mcyJ (AB110136); pgi (AB325168); recA (AB325247); tpi (AB325326)  
  - **Other strain no.:** KW-MA1-3  
  - **References:** 269, 270, 272, 322, 323, 325, 326, 327, 382, 401, 439, 440, 441, 442, 973, 1056, 1058, 1059, 1060, 1086, 1087, 1159, 1220, 1258, 1272  
  - **Remarks:** Toxic; Cryopreserved

### 89 History:

- **< Watanabe, Makoto M. Locality:** Lake Kawaguchi/Yamanashi/Japan (1981-06-**)**  
  - **Isolator:** Watanabe, Michiko H.  
  - **Identified by:** Watanabe, Michiko H.  
  - **Formerly identified as:** Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa  
  - **States:** Unialgal; Clonal; Non-axenic  
  - **Culture conditions:** MA; 25°C; 20-30μmol/m²/s; 1 M  
  - **Habitat:** Freshwater (Lake water)  
  - **Characteristics:** Cyanobacterial water bloom (aoko); Toxic; ST 4 (Tanabe et al. 2007)  
  - **Gene data:** 16S rRNA (U03403); ftsZ (AB324853); glnA (AB324932); gltX (AB325011); gyrB (AB325090); mcyA (AB110104); mcyD (AB110115); mcyG (AB110126); mcyJ (AB110137); pgi (AB325169); recA (AB325248); tpi (AB325327)  
  - **Other strain no.:** KW-MA2-5  
  - **References:** 42, 134, 278, 439, 440, 441, 442, 444, 477, 567, 670, 671, 1056, 1058, 1059, 1060, 1159, 1172, 1258, 1272  
  - **Remarks:** Toxic; Cryopreserved

### 90 History:

- **< Watanabe, Makoto M. Locality:** Lake Kawaguchi/Yamanashi/Japan (1981-06-**)**  
  - **Isolator:** Watanabe, Michiko H.  
  - **Identified by:** Watanabe, Michiko H.  
  - **Formerly identified as:** Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa  
  - **States:** Unialgal; Clonal; Axenic  
  - **Culture conditions:** MA; 25°C; 20-30μmol/m²/s; 20 D  
  - **Habitat:** Freshwater (Lake water)  
  - **Characteristics:** Cyanobacterial water bloom (aoko); Toxic; ST 5 (Tanabe et al. 2007)  
  - **Gene data:** 16S rRNA (AB023256); ftsZ (AB324854); glnA (AB324933); gltX (AB325012); gyrB (AB325091); mcyA (AB110105); mcyD (AB110116); mcyG (AB110127); mcyJ (AB110138); pgi (AB325170); recA (AB325249); tpi (AB325328)  
  - **Other strain no.:** KW-MB-2  
  - **References:** 271, 276, 439, 440, 441, 442, 457, 567, 1056, 1058, 1059, 1060, 1159, 1171, 1257, 1258, 1272
Remarks: Toxie; Cryopreserved

91 History: < Watanabe, Makoto M. Locality: Lake Kasumigaura/Ibaraki/Japan (1982-09-**)
Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 25°C; 20-30μmol/m²/s; 20 D Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 7 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023257); ftsZ (AB324926); glnA (AB325005); ghtX (AB325084); gryB (AB325163); pgi (AB325242); recA (AB325321); tpi (AB325400) Other strain no.: K-MB-13 References: 439, 440, 441, 442, 457, 567, 1056, 1059, 1060, 1159, 1272 Remarks: Cryopreserved

98 History: < Watanabe, Makoto M. Locality: Lake Kasumigaura/Ibaraki/Japan (1982-09-**)
Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa States: Unialgal; Clonal; Axenic Culture conditions: MA; 25°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 6 (Tanabe et al. 2007) Gene data: 16S rRNA (D89032); 16S rRNA (U40337); aerA-aerB (AM773660); cpcB, cpcA (AF385384); cpcB, cpcA (AY568685); ftsZ (AB324855); glnA (AB324934); ghtX (AB325015); gryB (AB325092); hypX, umal (AB254435); pgi (AB325251); recA (AB325250); tpi (AB32529) Other strain no.: K-MF-K-3 References: 17, 42, 249, 250, 278, 279, 325, 326, 402, 439, 440, 441, 442, 444, 457, 477, 567, 577, 671, 866, 1056, 1059, 1060, 1077, 1144, 1159, 1192, 1257, 1272 Remarks: Cryopreserved

99 History: < Watanabe, Makoto M. Locality: Lake Suwa/Nagano/Japan (1982-08-**)
Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 25°C; 20-30μmol/m²/s; 20 D Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 7 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023258); cpcB, cpcA (AF385385); ftsZ (AB324856); glnA (AB324935); ghtX (AB325014); gryB (AB325093); mhdN (FN668543); pgi (AB325172); recA (AB325251); tpi (AB325330) Other strain no.: S-MA-S5 References: 268, 322, 327, 439, 440, 441, 442, 444, 457, 567, 669, 1056, 1059, 1060, 1077, 1159, 1231, 1272 Remarks: Cryopreserved

100 History: < Watanabe, Makoto M. Locality: Lake Suwa/Nagano/Japan (1982-08-**)
Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 25°C; 20-30μmol/m²/s; 20 D Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 8 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023259); ftsZ (AB324857); glnA (AB324936); ghtX (AB325015); gryB (AB325094); pgi (AB325173); recA (AB325252); tpi (AB325331) Other strain no.: S-MB-S7 References: 403, 439, 440, 441, 442, 567, 805, 807, 870, 1056, 1059, 1060, 1144, 1159, 1217, 1272 Remarks: Cryopreserved

101 History: < TAC Locality: Lake Suwa/Nagano/Japan (1982-10-**)
Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 25°C; 20-30μmol/m²/s; 20 D Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 9 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023260); ftsZ (AB324858); glnA (AB324937); ghtX (AB325016); gryB (AB325095); pgi (AB325174); recA (AB325253); tpi (AB325332) Other strain no.: TAC 48 (S-TAN-48) References: 42, 91, 439, 440, 441, 442, 457, 567, 630, 1056, 1059, 1060, 1144, 1159, 1251, 1272 Remarks: Cryopreserved

102 History: < Watanabe, Makoto M. Locality: Lake Kasumigaura/Ibaraki/Japan (1982-09-**)
Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis viridis (A.Brown) Lemmermann States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: MA; 25°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 10 (Tanabe et al. 2007) Gene data: 16S rRNA (D89033); ftsZ (AB324859); glnA (AB324938); ghtX (AB325017); gryB (AB325096); mcyA (AB110106); mcyD (AB110117); mcyG (AB110128); mcyJ (AB110139); pgi (AB325175); recA
103 **History:** < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-12-***) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis viridis (A.Brown) Lemmermann States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 25℃; 55-70μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; copper concentrations; 70μmol/m²/s; 1 M islands; ST 10 (Tanabe et al. 2007) Gene data: 16S rRNA (AB038530); 16S-23S ITS (AB015399); gyrB (AB014974); mcyA (AB110107); mcyD (AB110118); mcyG (AB110129); mcyJ (AB110140) **Other strain no.:** TAC 44 (K-TAN-44) References: 134, 151, 324, 326, 421, 567, 579, 1056, 1058, 1059, 1060, 1144, 1217, 1218, 1219, 1231, 1257, 1258, 1272 Remarks: Toxic; Cryopreserved

104 **History:** < Watanabe, Makoto M. Locality: Imperial Palace/Tokyo/Japan (1982-11-***) Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Axenic Culture conditions: CB; MA; 25℃; 55-70μmol/m²/s; 1 M Habitat: Freshwater (Moat water) Characteristics: Cyanobacterial water bloom (aoko); ST 11 (Tanabe et al. 2007) Gene data: 16S rRNA (AB015387); 16S rRNA (AB023266); 16S rRNA (AJ133174); 16S-23S ITS (AB015387); ftsZ (AB324860); glnA (AB324939); gltX (AB325018); gyrB (AB325097); pgi (AB325176); recA (AB325255); tpi (AB325335) **Other strain no.:** MW-H1 References: 439, 440, 441, 442, 444, 477, 567, 836, 937, 973, 1056, 1059, 1060, 1217, 1257, 1258, 1272 Remarks: Cryopreserved

105 **History:** < Watanabe, Makoto M. Locality: Lake Kasumigaura/Ibaraki/Japan (1982-09-***) Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 25℃; 55-70μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 12 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023267); ftsZ (AB324861); glnA (AB324940); gltX (AB325019); gyrB (AB325098); pgi (AB325177); recA (AB325256); tpi (AB325335) **Other strain no.:** K-MW-K4 References: 439, 440, 441, 442, 567, 1056, 1059, 1060, 1258, 1272 Remarks: Cryopreserved

106 **History:** < Watanabe, Makoto M. Locality: Lake Kasumigaura/Ibaraki/Japan (1982-09-***) Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 25℃; 55-70μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Large cell size; ST 1 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023268) **Other strain no.:** K-MW-19 References: 439, 440, 441, 442, 567, 870, 1056, 1059, 1060, 1258, 1272 Remarks: Cryopreserved

107 **History:** < Watanabe, Makoto M. Locality: Lake Kawaguchi/Yamanashi/Japan (1981-06-***) Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 25℃; 55-70μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; copper concentrations; 70μmol/m²/s; 1 M islands; ST 13 (Tanabe et al. 2007) Gene data: 16S rRNA (U40333); ftsZ (AB324862); glnA (AB324941); gltX (AB325020); gyrB (AB325099); mcyA (AB110108); mcyD (AB110119); mcyG (AB110129); mcyJ (AB110140) **Other strain no.:** KW-MW-7 References: 134, 324, 325, 326, 352, 442, 443, 514, 515, 567, 669, 670, 671, 975, 1056, 1058, 1059, 1060, 1172 Remarks: Toxic; Cryopreserved

108 **History:** < Watanabe, Makoto M. Locality: Lake Suwa/Nagano/Japan (1982-08-***) Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 25℃; 55-70μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 14 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023269); ftsZ (AB324863); glnA (AB324942); gltX (AB325021); gyrB (AB325100); pgi (AB325179); recA (AB325258); tpi (AB325337) **Other strain no.:** S-MW-52 References: 439, 440, 441, 442, 567, 1056, 1059, 1060,
1258, 1272 Remarks: Cryopreserved

109 History: < Watanabe, Makoto M. Locality: Lake Yogo/Shiga/Japan (1982-07-**). Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 25°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 15 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023270); ftsZ (AB324864); glmA (AB324943); gltX (AB325022); gyrB (AB325101); pgi (AB325180); recA (AB325259); tpi (AB325338) Other strain no.: Y MW-24 References: 13, 14, 439, 440, 441, 442, 567, 760, 1056, 1059, 1060, 1203, 1204, 1258, 1272 Remarks: Cryopreserved


111 History: < TAC Locality: Lake Suwa/Nagano/Japan (1982-10-**). Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Axenic Culture conditions: MA; 25°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 14 (Tanabe et al. 2007) Gene data: 16S rRNA (D89034); 16S rRNA (AB015388); 6S-ITS (AB015388) Other strain no.: TAC 37 (K-TAN-37) References: 151, 439, 440, 441, 442, 443, 444, 445, 477, 567, 671, 1056, 1059, 1060, 1144, 1231, 1251, 1257, 1258, 1272 Remarks: Cryopreserved

112 History: < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1982-09-16). Isolator: Watanabe, Masayuki Formerly identified as: Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa States: Unialgal; Clonal; Axenic Culture conditions: CB: 25°C; 20-30μmol/m²/s; 20 D Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 60 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023261); ftsZ (AB324909); glmA (AB324988); gltX (AB325067); gyrB (AB325146); mcyA (AB092804); pgi (AB325225); recA (AB325304); tpi (AB325338) Other strain no.: TAC 52 (S-TAN-52) References: 151, 439, 440, 441, 442, 443, 444, 445, 477, 567, 671, 1056, 1059, 1060, 1144, 1231, 1251, 1257, 1258, 1272 Remarks: Cryopreserved

298 History: < TAC Other collection strain no.: TAC 47 Locality: Lake Kasumigaura/Ibaraki/Japan (1982-09-16). Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa States: Unialgal; Clonal; Axenic Culture conditions: CB: 25°C; 20-30μmol/m²/s; 20 D Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 61 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023262); ftsZ (AB324910); glmA (AB324989); gltX (AB325068); gyrB (AB325147); pgi (AB325226); recA (AB325305); tpi (AB325384) Other strain no.: KN1133 References: 145, 268, 273, 439, 440, 441, 442, 567, 1056, 1059, 1060, 1203, 1204, 1258, 1272 Remarks: Toxic; Unstable; Cryopreserved

299 History: < Takamura, Noriko Locality: Lake Kasumigaura/Ibaraki/Japan (1979-08-**). Isolator: Takamura, Noriko Identified by: Takamura, Noriko Formerly identified as: Microcystis aeruginosa (Kützing) Lemmermann f. aeruginosa States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 25°C; 20-30μmol/m²/s; 20 D Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 61 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023262); ftsZ (AB324910); glmA (AB324989); gltX (AB325068); gyrB (AB325147); pgi (AB325226); recA (AB325305); tpi (AB325384) Other strain no.: KN1133 References: 145, 268, 273, 439, 440, 441, 442, 567, 1056, 1059, 1060, 1203, 1204, 1258, 1272 Remarks: Toxic; Unstable; Cryopreserved

478 History: < Yagi, Osami Locality: Lake Kasumigaura/Ibaraki/Japan (1977-09-**). Isolator: Yagi, Osami Identified by: Yagi, Osami Formerly identified as: Microcystis aeruginosa (Kützing) Lemmermann f. flos-aquae (Wittrock) Elenkin States: Unialgal; Non-clonal; Non-axenic Culture conditions: MA; 20°C; 4-10μmol/m²/s; 3 M (25°C; 60-70μmol/m²/s) Habitat: Freshwater (Lake water) Characteristics: Toxic; ST 62 (Tanabe et al. 2007) Gene data: ftsZ (AB324911); glmA
(AB324990); gltX (AB325069); gyrB (AB325148); pgi (AB325227); recA (AB325306); tpi (AB325385) **Other strain no.: K-5 References:** 274, 567, 1056, 1059, 1060, 1198, 1199, 1200 **Remarks:** Toxic; Cryopreserved

604 **History:** < Yagi, Osami **Locality:** Lake Kasumigaura/Ibaraki/Japan (1977-09.**) **Isolator:** Yagi, Osami **Identified by:** Yagi, Osami **Formerly identified as:** Microcystis wesenbergii Komárek **States:** Unialgal; Clonal; Axenic **Culture conditions:** MA; 20°C; 4-10μmol/m²/s; 3 M (25°C; 60-70μmol/m²/s) **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); ST 7 (Tanabe et al. 2007) **Gene data:** 16S rRNA (AB023273); ftsZ (AB324866); glnA (AB324945); gltX (AB325024); gyrB (AB325103); pgi (AB325182); recA (AB325261); tpi (AB325340) **Other strain no.:** K-3 References: 135, 439, 440, 441, 442, 444, 454, 457, 477, 567, 618, 944, 1056, 1059, 1060, 1077, 1198, 1251, 1257, 1258, 1272 **Remarks:** Cryopreserved

843 **History:** < Otsuka, Shigeto **Other collection strain no.:** IAM M-247 **Locality:** Lake Kasumigaura/Ibaraki/Japan (1997-08-28) **Isolator:** Otsuka, Shigeto **Identified by:** Otsuka, Shigeto **States:** Unialgal; Clonal; Axenic **Culture conditions:** MA; 25°C; 20-30μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Toxic; Type strain; ST 17 (Tanabe et al. 2007) **Gene data:** 16S rRNA (AB035549); chromosome (NC_010296); ftsZ (AB324908); glnA (AB324946); gltX (AB325025); gyrB (AB325104); pgi (AB325183); recA (AB325262); Total genome sequence (AP009552); tpi (AB325341) **Other strain no.:** NC7 References: 51, 279, 349, 457, 833, 837, 939, 940, 983, 1056, 1059, 1060, 1077 **Remarks:** Toxic; Cryopreserved

901 **History:** < Otsuka, Shigeto **Locality:** Dundee/Scotland/U.K. (1997-08-**) **Isolator:** Otsuka, Shigeto **Identified by:** Otsuka, Shigeto **Formerly identified as:** Microcystis novacekii (Komárek) Compère **States:** Unialgal; Clonal; Axenic **Culture conditions:** MA; 25°C; 20-30μmol/m²/s; 1 M **Habitat:** (Freshwater) **Characteristics:** Cyanobacterial water bloom (aoko); Offensive taste and odor; ST 59 (Tanabe et al. 2007) **Gene data:** ftsZ (AB324908); glnA (AB324946); gltX (AB325066); gyrB (AB325145); pgi (AB325224); recA (AB325303); tpi (AB325382) **Other strain no.:** BC18 References: 833, 1056, 1059, 1060 **Remarks:** Cryopreserved

933 **History:** < PCC **Other collection strain no.:** PCC 7941 **Locality:** Little Rideau Lake/Ontario/Canada **Isolator:** Gorham, P. R.; Carmichael, W. W. **States:** Unialgal; Clonal; Axenic **Culture conditions:** CT; MA; 25°C; 20-30μmol/m²/s; 1 M **Characteristics:** Cyanobacterial water bloom (aoko); Toxic; ST 21 (Tanabe et al. 2007) **Other strain no.:** NRC-1 (SS-17) **Reference:** 1056 **Remarks:** Toxic; Cryopreserved

1025 **History:** < Sano, Tomoharu **Locality:** Sapporo, Chuo-ku/Hokkaido/Japan (2000-06-22) **Isolator:** Sano, Tomoharu **Identified by:** Otsuka, Shigeto **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 20-30μmol/m²/s; 1 M **Habitat:** Freshwater (Pond water) **Characteristics:** Cyanobacterial water bloom (aoko); Toxic **Other strain no.:** Doutyou-1-3 **Remarks:** Toxic; Cryopreserved

1026 **History:** < Sano, Tomoharu **Locality:** Sapporo, Chuo-ku/Hokkaido/Japan (2000-06-22) **Isolator:** Sano, Tomoharu **Identified by:** Otsuka, Shigeto **Formerly identified as:** Microcystis ichthyoblabe Kützing **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 20-30μmol/m²/s; 1 M **Habitat:** Freshwater (Pond water) **Characteristics:** Cyanobacterial water bloom (aoko); Toxic **Other strain no.:** Doutyou-1-4 **Remarks:** Toxic; Cryopreserved

1027 **History:** < Sano, Tomoharu **Locality:** Lake Kasumigaura, Takahama-iri/Ibaraki/Japan (2000-08-19) **Isolator:** Sano, Tomoharu **Identified by:** Sano, Tomoharu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 20-30μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Toxic **Other strain no.:** Takahama-Ma-2 **Remarks:** Toxic; Cryopreserved

1028 **History:** < Sano, Tomoharu **Locality:** Lake Teganuma/Chiba/Japan (2000-09-10) **Isolator:** Sano, Tomoharu **Identified by:** Sano, Tomoharu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 20-30μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Toxic **Other strain no.:** TEGA-Mv-1 **Remarks:** Toxic; Cryopreserved

1029 **History:** < Sano, Tomoharu **Locality:** Neuglobsow/Brandenburg/Germany (2000-08-15) **Isolator:**
| History: | Sano, Tomoharu Locality: Neuglobsow/Brandenburg/Germany (2000-08-19) **Isolator:** Watanabe, Masayuki **Identified by:** Sano, Tomoharu **States:** Unialgal; Clonal; **Culture conditions:** MA; 20°C; 20-30μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Toxic **Other strain no.:** DU-MA-6-1 **Remarks:** Toxic; Cryopreserved |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| History: | < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-01-24) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; **Culture conditions:** MA; 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); ST 34 (Tanabe et al. 2007) **Gene data:** ftsZ (AB324883); glnA (AB324962); gltX (AB325041); gyrB (AB325120); pgi (AB325199); recA (AB325278); tpi (AB325537) **Other strain no.:** TAC 4 **References:** 1056, 1059, 1060, 1140 **Remarks:** Cryopreserved |
| History: | < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-01-24) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; **Culture conditions:** MA; 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); ST 34 (Tanabe et al. 2007) **Other strain no.:** MA; 18 **Remarks:** Toxic; Recisolated from TAC 38; ST 26 (Tanabe et al. 2007) |
| History: | < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-01-24) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **Formerly identified as:** Microcystis novacekii **States:** Unialgal; Clonal; **Culture conditions:** MA; 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Microcystin not detected; ST 25 (Tanabe et al. 2007) **Gene data:** ftsZ (AB324873); glnA (AB324953); gltX (AB325032); gyrB (AB325111); pgi (AB325190); recA (AB325268); tpi (AB325347) **Other strain no.:** TAC 15 **References:** 1056, 1059, 1060, 1140 **Remarks:** Cryopreserved |
| History: | < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-02-21) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **Formerly identified as:** Microcystis novacekii (Komárek) **Compère **States:** Unialgal; Clonal; **Culture conditions:** MA; 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Microcystin not detected; ST 25 (Tanabe et al. 2007) **Gene data:** ftsZ (AB324874); glnA (AB324953); gltX (AB325032); gyrB (AB325111); pgi (AB325190); recA (AB325269); tpi (AB325348) **Other strain no.:** TAC 19 **References:** 840, 1056, 1059, 1060, 1140, 1143, 1144, 1146 **Remarks:** Cryopreserved |
| History: | < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-02-21) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; **Culture conditions:** MA; 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Microcystin not detected; ST 24 (Tanabe et al. 2007) **Gene data:** 16S rRNA (AB012336); 16S rRNA (AB015374) **Other strain no.:** TAC 20 **References:** 835, 836, 840, 1056, 1059, 1060, 1140, 1143, 1144, 1146 **Remarks:** Cryopreserved |
| History: | < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-08-**.) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **Formerly identified as:** Microcystis wesenbergii **States:** Unialgal; Clonal; **Culture conditions:** MA; 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 38; ST 26 (Tanabe et al. 2007) **Gene data:** 16S rRNA (AB012334); 16S rRNA (AB015389); 16S rRNA (AB023274); ftsZ (AB324875); glnA (AB324954); gltX (AB325033); gyrB (AB325112); pgi (AB325191); recA (AB325270); tpi (AB325349) **Other strain no.:** TAC 38-1 **References:** 370, 439, 440, 441, 835, 836, 840, 1056, 1059, 1060, 1144, 1251 **Remarks:** Toxic; Cryopreserved |
| History: | < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-08-**.) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **Formerly identified as:** Microcystis wesenbergii **States:** Unialgal; Clonal; **Culture conditions:** MA; 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 38; ST 26 (Tanabe et al. 2007) **Gene data:** 16S rRNA (AB012334); 16S rRNA (AB015389); 16S rRNA (AB023274); ftsZ (AB324875); glnA (AB324954); gltX (AB325033); gyrB (AB325112); pgi (AB325191); recA (AB325270); tpi (AB325349) **Other strain no.:** TAC 38-1 **References:** 370, 439, 440, 441, 835, 836, 840, 1056, 1059, 1060, 1144, 1251 **Remarks:** Toxic; Cryopreserved |
Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 1 (Tanabe et al. 2007) Other strain no.: TAC 39 References: 1056, 1059, 1060 Remarks: Cryopreserved

1057 History: < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-08-***) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 45; ST 26 (Tanabe et al. 2007) Gene data: 16S rRNA (AB015400); mcyA (HM064479) Other strain no.: TAC 45-1 References: 370, 457, 836, 1056, 1059, 1060, 1144, 1251 Remarks: Toxic; Cryopreserved

1058 History: < TAC Locality: Lake Kasumigaura/Ibaraki/Japan (1978-12-***) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis viridis (A.Brown) Lemmermann States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 26 (Tanabe et al. 2007) Other strain no.: TAC 46 References: 840, 1056, 1059, 1060, 1142, 1143, 1144 Remarks: Toxic; Cryopreserved


1060 History: < TAC Locality: Lake Suwa/Nagano/Japan (1982-10-04) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Microcystin not detected; ST 9 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023281) Other strain no.: TAC 51 References: 370, 439, 440, 441, 681, 840, 870, 1056, 1059, 1060, 1086, 1140, 1143, 1146 Remarks: Cryopreserved

1061 History: < TAC Locality: Lake Suwa/Nagano/Japan (1982-10-04) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Microcystin not detected; ST 9 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023281) Other strain no.: TAC 51 References: 370, 439, 440, 441, 681, 840, 870, 1056, 1059, 1060, 1086, 1140, 1143, 1146 Remarks: Cryopreserved

1062 History: < TAC Locality: Lake Suwa/Nagano/Japan (1982-10-04) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Reisolated from TAC 57; ST 14 (Tanabe et al. 2007) Gene data: 16S rRNA (AB015391); 16S rRNA (AB023276) Other strain no.: TAC 57-1 References: 1056, 1059, 1060, 1251 Remarks: Cryopreserved

1063 History: < TAC Locality: Lake Shirakaba/Nagano/Japan (1982-09-13) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 29 (Tanabe et al. 2007) Other strain no.: TAC 60 References: 370, 815, 840, 841, 842, 1056, 1059, 1060, 1140, 1143, 1146 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Lake Kutsuzawa/Nagano/Japan (1982-09-12) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 4 (Tanabe et al. 2007) Other strain no.: TAC 62 References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Lake Kutsuzawa/Nagano/Japan (1982-09-12) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 4 (Tanabe et al. 2007) Other strain no.: TAC 63 References: 840, 870, 1056, 1059, 1060, 1140, 1143, 1145, 1146 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Chikatou-ike Pond/Nagano/Japan (1982-09-12) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Microcystin not detected; Reisolated from TAC 65; ST 27 (Tanabe et al. 2007) Gene data: 16S rRNA (AB012337); 16S rRNA (AB015375); 16S rRNA (AB023285); ftsZ (AB324876); glnA (AB324955); gltX (AB325034); gyrB (AB325113); pgi (AB325217) Other strain no.: TAC 65-2 References: 370, 457, 681, 835, 836, 840, 1056, 1059, 1060, 1140, 1143, 1144, 1146 Remarks: Cryopreserved

History: < TAC Locality: Ryokusuke-ike Pond/Nagano/Japan (1982-09-12) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Microcystin not detected; Reisolated from TAC 66; ST 27 (Tanabe et al. 2007) Gene data: 16S rRNA (AB015376); 16S rRNA (AB023286) Other strain no.: TAC 66-1 References: 370, 439, 440, 441, 681, 815, 836, 840, 1056, 1059, 1060, 1140, 1143, 1146

History: < TAC Locality: Ryokusuke-ike Pond/Nagano/Japan (1982-09-12) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Microcystin not detected; Reisolated from TAC 66; ST 27 (Tanabe et al. 2007) Gene data: ftsZ (AB324884); glnA (AB324963); gltX (AB325042); gyrB (AB325121); pgi (AB325200); recA (AB325279); tpi (AB325358) Other strain no.: TAC 67 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Ryokusuke-ike Pond/Nagano/Japan (1982-09-12) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 35 (Tanabe et al. 2007) Gene data: ftsZ (AB324885); glnA (AB324964); gltX (AB325043); gyrB (AB325122); pgi (AB325201); recA (AB325280); tpi (AB325359) Other strain no.: TAC 69-1 References: 370, 457, 840, 1056, 1059, 1060, 1140, 1143, 1145, 1146, 1238, 1251 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Hakui, Ichinomiya-machi/Ishikawa/Japan (1982-09-10) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; fresh water Watanabe, Masayuki Formerly identified as: Microcystis ichthyoblabae Kützing States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 69; ST 36 (Tanabe et al. 2007) Gene data: ftsZ (AB324885); glnA (AB324964); gltX (AB325043); gyrB (AB325122); pgi (AB325201); recA (AB325280); tpi (AB325359) Other strain no.: TAC 70-1 References: 370, 840, 1140, 1143, 1145, 1146 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Hakui, Ichinomiya-machi/Ishikawa/Japan (1982-09-10) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 71; ST 4 (Tanabe et al. 2007) Gene data: 16S rRNA (AB012332); 16S rRNA (AB015362) Other strain no.: TAC 71-1 References: 835, 836, 840, 1056, 1059, 1060, 1140, 1143, 1146 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Hakui, Ichinomiya-machi/Ishikawa/Japan (1982-09-10) Isolator:
Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA: 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater **Characteristics:** Cyanobacterial water bloom (aoko) **Other strain no.:** TAC 72 **Remarks:** Cryopreserved

### History: < TAC Locality: Lake Yogo/Shiga/Japan (1984-09-09) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA: 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Microcystin not detected; Reisolated from TAC 73 **Other strain no.:** TAC 73-1 **References:** 370, 840, 841, 842, 1140, 1143, 1146 **Remarks:** Cryopreserved

### History: < TAC Locality: Lake Yogo/Shiga/Japan (1984-09-09) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA: 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); ST 63 (Tanabe et al. 2007) **Gene data:** ftsZ (AB324912); glnA (AB324991); gltX (AB325071); gyrB (AB325150); pgi (AB325229); recA (AB325308); tpi (AB325386) **Other strain no.:** TAC 74-1 **References:** 1056, 1059, 1060, 1140 **Remarks:** Cryopreserved

### History: < TAC Locality: Lake Yogo/Shiga/Japan (1984-09-09) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA: 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Microcystin not detected; Reisolated from TAC 75; ST 64 (Tanabe et al. 2007) **Gene data:** 16S rRNA (AB023287); ftsZ (AB324913); glnA (AB324992); gltX (AB325071); gyrB (AB325150); pgi (AB325229); recA (AB325308); tpi (AB325387) **Other strain no.:** TAC 75-1 **References:** 439, 440, 441, 681, 840, 1056, 1059, 1060, 1140, 1143, 1146 **Remarks:** Cryopreserved

### History: < TAC Locality: Lake Yogo/Shiga/Japan (1984-09-09) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA: 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); ST 37 (Tanabe et al. 2007) **Gene data:** ftsZ (AB324886); glnA (AB324965); gltX (AB325044); gyrB (AB325123); pgi (AB325202); recA (AB325281); tpi (AB325360) **Other strain no.:** TAC 76 **References:** 370, 681, 840, 1056, 1059, 1060, 1140, 1143, 1145, 1146 **Remarks:** Cryopreserved

### History: < TAC Locality: Lake Mikata/Fukui/Japan (1984-09-09) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA: 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko) **Other strain no.:** TAC 79 **Remarks:** Cryopreserved

### History: < TAC Locality: Lake Suigetsu/Fukui/Japan (1984-09-08) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **Formerly identified as:** Microcystis ichthyoblabe Kützing **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA: 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Microcystin not detected; Reisolated from TAC 80 **Other strain no.:** TAC 80-1 **References:** 370, 815, 840, 841, 842, 1140, 1143, 1146 **Remarks:** Cryopreserved

### History: < TAC Locality: Lake Suigetsu/Fukui/Japan (1984-09-08) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA: 18°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Cyanobacterial water bloom (aoko); Microcystin not detected; Reisolated from TAC 81 **Other strain no.:** TAC 81-1 **References:** 840, 870, 1086, 1140, 1146 **Remarks:** Cryopreserved

### History: < TAC Locality: Koyama-ike Pond/Tottori/Japan (1984-09-07) **Isolator:** Watanabe, Masayuki **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Axenic[2012 Nov]
Culture conditions: MA; 24°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Reisolated from TAC 83 Other strain no.: TAC 83-1 Reference: 1140

1083 History: < TAC Locality: Ukigini-ike Pond/Shimane/Japan (1984-09-06) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Microcystin not detected Other strain no.: TAC 84 References: 840, 1086, 1140, 1143, 1146 Remarks: Cryopreserved

1084 History: < TAC Locality: Ukigini-ike Pond/Shimane/Japan (1984-09-06) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Microcystin not detected Other strain no.: TAC 85 Remarks: 370, 815, 840

1085 History: < TAC Locality: Koshi-ike Pond/Shimane/Japan (1984-09-06) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 86 Gene data: 16S rRNA (AB012333); 16S rRNA (AB015363); ftsZ (AB324877); gltX (AB325035); gcyB (AB325114); pgi (AB325193); recA (AB325272); tpi (AB325351) Other strain no.: TAC 86-1 References: 835, 836, 840, 841, 842, 1056, 1059, 1060, 1140, 1143, 1146 Remarks: Toxic; Cryopreserved

1086 History: < TAC Locality: Koshi-ike Pond/Shimane/Japan (1984-09-06) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 87 Gene data: 16S rRNA (AB015364) Other strain no.: TAC 87-1 References: 370, 457, 836, 840, 841, 842, 1140, 1143, 1145, 1146 Remarks: Toxic; Cryopreserved

1087 History: < TAC Locality: Koshi-ike Pond/Shimane/Japan (1984-09-06) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 88 Reference: 1140 Remarks: Cryopreserved

1088 History: < TAC Locality: Koshi-ike Pond/Shimane/Japan (1984-09-06) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 89 Reference: 1140 Remarks: Cryopreserved

1089 History: < TAC Locality: Koshi-ike Pond/Shimane/Japan (1984-09-06) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 90 Reference: 1140 Remarks: Cryopreserved

1090 History: < TAC Locality: Lake Barato/Hokkaido/Japan (1984-08-24) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis ichthyoblabe Kützing States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Microcystin not detected; Reisolated from TAC 91; ST 2 (Tanabe et al. 2007) Gene data: 16S rRNA (AB012339); 16S rRNA (AB015367); 16S rRNA (AB023282) Other strain no.: TAC 91-1 References: 370, 439, 440, 441, 681, 815, 835, 836, 840, 841, 842, 1056, 1059, 1060, 1140, 1143, 1146 Remarks: Cryopreserved

1091 History: < TAC Locality: Lake Barato/Hokkaido/Japan (1984-08-24) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis viridis
Gene data: 16S rRNA (AB015403) Other strain no.: TAC 92-1 References: 370, 439, 440, 441, 681, 836, 840, 1056, 1059, 1060, 1142, 1143, 1144, 1238, 1251 Remarks: Toxic; Cryopreserved

1092 History: < TAC Locality: Lake Barato/Hokkaido/Japan (1984-08-24) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 92; ST 26 (Tanabe et al. 2007) Gene data: 16S rRNA (AB015402); 16S rRNA (AB023278) Other strain no.: TAC 92-1 References: 370, 439, 440, 441, 681, 836, 840, 1056, 1059, 1060, 1142, 1143, 1144, 1238, 1251 Remarks: Toxic; Cryopreserved

1093 History: < TAC Locality: Lake Barato/Hokkaido/Japan (1984-08-24) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 95; ST 65 (Tanabe et al. 2007) Gene data: ftsZ (AB324914); glnA (AB324993); gltX (AB325072); gyrB (AB325151); pgi (AB325230); recA (AB325309); tpi (AB325388) Other strain no.: TAC 95-1 References: 370, 815, 840, 1056, 1059, 1060, 1140, 1143, 1145, 1146 Remarks: Toxic; Cryopreserved

1094 History: < TAC Locality: Lake Shirakaba/Nagano/Japan (1984-09-13) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 39 (Tanabe et al. 2007) Gene data: ftsZ (AB324888); glnA (AB324967); gltX (AB325046); gyrB (AB325125); pgi (AB325204); recA (AB325283); tpi (AB325362) Other strain no.: TAC 96 References: 1056, 1059, 1060 Remarks: Cryopreserved

1095 History: < TAC Locality: Lake Shirakaba/Nagano/Japan (1984-09-13) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 39 (Tanabe et al. 2007) Gene data: ftsZ (AB324878); glnA (AB324957); gltX (AB325036); gyrB (AB325115); pgi (AB325194); recA (AB325273); tpi (AB325352) Other strain no.: TAC 97 References: 370, 840, 1056, 1059, 1060, 1140, 1143, 1145, 1146 Remarks: Toxic; Cryopreserved


1097 History: < TAC Locality: Shigure Dam/Tokyo/Japan (1984-11-***) Isolator: Watanabe, Yasunori Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 28 (Tanabe et al. 2007) Other strain no.: TAC 109 References: 370, 840, 1056, 1059, 1060, 1140, 1143, 1145, 1146 Remarks: Toxic; Cryopreserved

1098 History: < TAC Locality: Shigure Dam/Tokyo/Japan (1984-11-**) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Microcystin not detected; Reisolated from TAC 110; ST 38 (Tanabe et al. 2007) Gene data: ftsZ (AB324887); glnA (AB324966); gltX (AB325045); gyrB (AB325124); pgi (AB325203); recA (AB325282); tpi (AB325361) Other strain no.: TAC 110-1 References: 370, 457, 840, 1056, 1059, 1060, 1086, 1140, 1143, 1146 Remarks: Cryopreserved

1099 History: < TAC Locality: Noborio-ike Pond/Ehime/Japan (1988-10-21) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 113 Other strain no.: TAC
1100 History: < TAC Locality: Kathmandu/Nepal (1988-11-17) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Reisolated from TAC 114; ST 30 (Tanabe et al. 2007) Gene data: ftsZ (AB324879); glnA (AB324958); gltX (AB325037); gyrB (AB325116); pgi (AB325195); recA (AB325274); tpi (AB325353) Other strain no.: TAC 114-1 References: 1056, 1059, 1060 Remarks: Cryopreserved

1101 History: < TAC Locality: Kathmandu/Nepal (1988-11-17) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Reisolated from TAC 115; ST 40 (Tanabe et al. 2007) Gene data: ftsZ (AB324889); glnA (AB324968); gltX (AB325047); gyrB (AB325126); pgi (AB325205); recA (AB325284); tpi (AB325363) Other strain no.: TAC 115-1 References: 1056, 1059, 1060 Remarks: Cryopreserved

1102 History: < TAC Locality: Lake Barato/Hokkaido/Japan (1989-08-02) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki Formerly identified as: Microcystis viridis (A.Brown) Lemmermann States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 66 (Tanabe et al. 2007) Gene data: ftsZ (AB324915); glnA (AB324994); gltX (AB325073); gyrB (AB325152); pgi (AB325231); recA (AB325310); tpi (AB325389) Other strain no.: TAC 122 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1103 History: < TAC Locality: Lake Barato/Hokkaido/Japan (1989-08-02) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki Formerly identified as: Microcystis viridis (A.Brown) Lemmermann States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 66 (Tanabe et al. 2007) Other strain no.: TAC 123 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1104 History: < TAC Locality: Lake Barato/Hokkaido/Japan (1989-08-02) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki Formerly identified as: Microcystis viridis (A.Brown) Lemmermann States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 125; ST 67 (Tanabe et al. 2007) Gene data: 16S rRNA (AB015368); 16S rRNA (AB023283); ftsZ (AB324880); glnA (AB324959); gltX (AB325038); gyrB (AB325117); pgi (AB325196); recA (AB325311); tpi (AB325390) Other strain no.: TAC 124 References: 1056, 1059, 1060, 1086 Remarks: Cryopreserved

1105 History: < TAC Locality: Lake Barato/Hokkaido/Japan (1989-08-02) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki Formerly identified as: Microcystis ichthyoblabe Kützing States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 125; ST 31 (Tanabe et al. 2007) Gene data: 16S rRNA (AB015368); 16S rRNA (AB023283); ftsZ (AB324880); glnA (AB324959); gltX (AB325038); gyrB (AB325117); pgi (AB325196); recA (AB325311); tpi (AB325354) Other strain no.: TAC 125-1 References: 439, 440, 441, 457, 681, 836, 1056, 1059, 1060, 1140, 1251 Remarks: Toxic; Cryopreserved

1106 History: < TAC Locality: Shin-ike Pond/Nagano/Japan (1989-08-02) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); ST 41 (Tanabe et al. 2007) Gene data: ftsZ (AB324890); glnA (AB324969); gltX (AB325048); gyrB (AB325127); pgi (AB325206); recA (AB325285); tpi (AB325364) Other strain no.: TAC 126 References: 1056, 1059, 1060 Remarks: Cryopreserved

1107 History: < TAC Locality: Kamisawa-ike Pond/Nagano/Japan (1989-08-02) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics:
Cyanobacterial water bloom (aoko); Microcystin not detected; ST 42 (Tanabe et al. 2007) Gene data: ftsZ (AB324891); glnA (AB324970); gltX (AB325049); gyrB (AB325128); pgi (AB325207); recA (AB325286); tpi (AB325365) Other strain no.: TAC 128 References: 1056, 1059, 1060, 1140, 1238 Remarks: Cryopreserved

1108 History: < TAC Locality: Kamisawa-ike Pond/Nagano/Japan (1989-08-02) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 43 (Tanabe et al. 2007) Gene data: ftsZ (AB324892); glnA (AB324971); gltX (AB325050); gyrB (AB325129); pgi (AB325208); recA (AB325287); tpi (AB325366) Other strain no.: TAC 129 References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved


1111 History: < TAC Locality: Dazaifu C.C./Fukuoka/Japan (1989-07-10) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárék States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 132 Remarks: Cryopreserved

1112 History: < TAC Locality: Dazaifu C.C./Fukuoka/Japan (1989-07-10) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárék States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 133 Remarks: Cryopreserved

1113 History: < TAC Locality: Lake Suwa/Nagano/Japan (1989-07-24) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 51 (Tanabe et al. 2007) Gene data: ftsZ (AB324900); glnA (AB324979); gltX (AB325058); gyrB (AB325137); pgi (AB325216); recA (AB325295); tpi (AB325374) Other strain no.: TAC 134 References: 1056, 1059, 1060, 1140 Remarks: Cryopreserved

1114 History: < TAC Locality: Lake Suwa/Nagano/Japan (1989-07-24) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis viridis (A.Brown) Lemmermann States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 52 (Tanabe et al. 2007) Gene data: ftsZ (AB324901); glnA (AB324980); gltX (AB325059); gyrB (AB325138); pgi (AB325217); recA (AB325296); tpi (AB325375) Other strain no.: TAC 135 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1115 History: < TAC Locality: Showa-tameike Pond/Fukuoka/Japan (1989-08-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Reisolated from TAC 136; ST 44 (Tanabe et al. 2007) Gene data: 16S rRNA (AB015369); ftsZ (AB324893); glnA (AB324972); gltX (AB325051); gyrB (AB325130); pgi (AB325209); recA (AB325288); tpi (AB325367) Other strain no.: TAC 136-1 References: 836, 1056, 1059, 1060, 1140 Remarks: Cryopreserved

1116 History: < TAC Locality: Showa-tameike Pond/Fukuoka/Japan (1989-08-28) Isolator: Watanabe, Masayuki...
Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 24°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 137 Reference: 1140

1117 History: < TAC Locality: Showa-tameike Pond/Fukuoka/Japan (1989-08-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); Reisolated from TAC 138 Gene data: 16S rRNA (AB015370) Other strain no.: TAC 138-1 References: 836, 1140 Remarks: Cryopreserved

1118 History: < TAC Locality: Showa-tameike Pond/Fukuoka/Japan (1989-08-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Kützing States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 141 Remarks: Cryopreserved

1119 History: < TAC Locality: Showa-tameike Pond/Fukuoka/Japan (1989-08-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 143 Remarks: Cryopreserved

1120 History: < TAC Locality: Showa-tameike Pond/Fukuoka/Japan (1989-08-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 144 Remarks: Cryopreserved

1121 History: < TAC Locality: Showa-tameike Pond/Fukuoka/Japan (1989-08-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 145 Remarks: Cryopreserved

1122 History: < TAC Locality: Lake Ohnuma/Hokkaido/Japan (1989-09-05) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis ichthyoblabe Kützing States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Reisolated from TAC 146; ST 45 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023284); ftsZ (AB324894); glnA (AB324973); gltX (AB325052); gyrB (AB325131); pgi (AB325210); recA (AB325289); tpi (AB325368) Other strain no.: TAC 146-1 References: 439, 440, 441, 681, 1056, 1059, 1060, 1140 Remarks: Cryopreserved

1123 History: < TAC Locality: Lake Ohnuma/Hokkaido/Japan (1989-09-05) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 24°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 27 (Tanabe et al. 2007) Other strain no.: TAC 147 References: 1056, 1059, 1060

1124 History: < TAC Locality: Lake Ohnuma/Hokkaido/Japan (1989-09-05) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 24°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 27 (Tanabe et al. 2007) Other strain no.: TAC 148 References: 1056, 1059, 1060, 1140

1125 History: < TAC Locality: Lake Ohnuma/Hokkaido/Japan (1989-09-05) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 27 (Tanabe et al. 2007) Other strain no.: TAC 149 References: 1056, 1059, 1060, 1140 Remarks: Cryopreserved

1126 History: < TAC Locality: Lake Ohnuma/Hokkaido/Japan (1989-09-05) Isolator: Watanabe,
Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 73 (Tanabe et al. 2007) Other strain no.: TAC 150 References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

1127 History: < TAC Locality: Lake Ohnuma/Hokkaido/Japan (1989-09-05) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 73 (Tanabe et al. 2007) Gene data: ftsZ (AB324922); glnA (AB325001); gltX (AB325080); gyrB (AB325159); recA (AB325317); tpi (AB325396) Other strain no.: TAC 151 References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

1128 History: < TAC Locality: Lake Ohnuma/Hokkaido/Japan (1989-09-05) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 46 (Tanabe et al. 2007) Other strain no.: TAC 152 References: 1056, 1059, 1060 Remarks: Cryopreserved

1129 History: < TAC Locality: Lake Ohnuma/Hokkaido/Japan (1989-09-05) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 46 (Tanabe et al. 2007) Gene data: ftsZ (AB324895); glnA (AB324974); gltX (AB325053); gyrB (AB325132); tpi (AB325211); recA (AB325290) Other strain no.: TAC 153 References: 1056, 1059, 1060 Remarks: Cryopreserved

1130 History: < TAC Locality: Lake Teganuma/Chiba/Japan (1989-09-13) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Reisolated from TAC 154; ST 75 (Tanabe et al. 2007) Gene data: ftsZ (AB324924); glnA (AB325003); gltX (AB325082); gyrB (AB325161); tpi (AB325240); recA (AB325319); tpi (AB325398) Other strain no.: TAC 154-1 References: 1056, 1059, 1060, 1140 Remarks: Cryopreserved

1131 History: < TAC Locality: Lake Teganuma/Chiba/Japan (1989-09-13) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 76 (Tanabe et al. 2007) Other strain no.: TAC 155 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1132 History: < TAC Locality: Lake Teganuma/Chiba/Japan (1989-09-13) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Reisolated from TAC 156; ST 74 (Tanabe et al. 2007) Gene data: ftsZ (AB324923); glnA (AB325002); gltX (AB325081); gyrB (AB325160); tpi (AB325239); recA (AB325318); tpi (AB325397) Other strain no.: TAC 156-1 References: 1056, 1059, 1060, 1140 Remarks: Cryopreserved

1133 History: < TAC Locality: Lake Teganuma/Chiba/Japan (1989-09-13) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 157; ST 76 (Tanabe et al. 2007) Gene data: 16S rRNA (AB023263); ftsZ (AB324925); glnA (AB325004); gltX (AB325083); gyrB (AB325162); tpi (AB325241); recA (AB325320); tpi (AB325399) Other strain no.: TAC 157-2 References: 681, 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

1134 History: < TAC Locality: Lake Teganuma/Chiba/Japan (1989-09-13) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics:
Cyanobacterial water bloom (aoko); Reisolated from TAC 159; ST 48 (Tanabe et al. 2007)  
Gene data: ftsZ (AB324897); glnA (AB324976); gltX (AB325055); gyrB (AB325134); pgi (AB325213); recA (AB325292); tpi (AB325371)  
Other strain no.: TAC 159-1  
References: 1056, 1059, 1060, 1140  
Remarks: Cryopreserved

1135  
History: < TAC Locality: Lake Teganuma/Chiba/Japan (1989-09-13)  
Isolator: Watanabe, Masayuki  
Identified by: Watanabe, Masayuki  
Formerly identified as: Microcystis viridis (A. Brown) Lemmermann  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M  
Habitat: Freshwater (Lake water)  
Characteristics: Cyanobacterial water bloom (aoko); Reisolated from TAC 160; ST 48 (Tanabe et al. 2007)  
Other strain no.: TAC 160-1  
References: 1056, 1059, 1060  
Remarks: Cryopreserved

1136  
History: < TAC Locality: Lake Teganuma/Chiba/Japan (1989-09-13)  
Isolator: Watanabe, Masayuki  
Identified by: Watanabe, Masayuki  
Formerly identified as: Microcystis wesenbergii Komárek  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M  
Habitat: Freshwater (Lake water)  
Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 26 (Tanabe et al. 2007)  
Other strain no.: TAC 162  
References: 1056, 1059, 1060  
Remarks: Toxic; Cryopreserved

1137  
History: < TAC Locality: Lake Teganuma/Chiba/Japan (1989-09-13)  
Isolator: Watanabe, Masayuki  
Identified by: Watanabe, Masayuki  
Formerly identified as: Microcystis wesenbergii Komárek  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M  
Habitat: Freshwater (Lake water)  
Characteristics: Cyanobacterial water bloom (aoko); ST 1 (Tanabe et al. 2007)  
Other strain no.: TAC 163  
References: 1056, 1059, 1060, 1086  
Remarks: Cryopreserved

1138  
History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17)  
Isolator: Watanabe, Masayuki  
Identified by: Watanabe, Masayuki  
Formerly identified as: Microcystis wesenbergii Komárek  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M  
Habitat: Freshwater (Lake water)  
Characteristics: Cyanobacterial water bloom (aoko); ST 55 (Tanabe et al. 2007)  
Gene data: ftsZ (AB324904); glnA (AB324983); gltX (AB325062); gyrB (AB325141); pgi (AB325220); recA (AB325299); tpi (AB325378)  
Other strain no.: TAC 166  
References: 1056, 1059, 1060, 1140  
Remarks: Cryopreserved

1140  
History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17)  
Isolator: Watanabe, Masayuki  
Identified by: Watanabe, Masayuki  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M  
Habitat: Freshwater (Lake water)  
Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 4 (Tanabe et al. 2007)  
Other strain no.: TAC 166  
References: 371, 840, 1056, 1059, 1060, 1140, 1143, 1146  
Remarks: Toxic; Cryopreserved

1141  
History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17)  
Isolator: Watanabe, Masayuki  
Identified by: Watanabe, Masayuki  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M  
Habitat: Freshwater (Lake water)  
Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 55 (Tanabe et al. 2007)  
Other strain no.: TAC 167  
References: 371, 1056, 1059, 1060, 1140  
Remarks: Toxic; Cryopreserved

1142  
History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17)  
Isolator: Watanabe, Masayuki  
Identified by: Watanabe, Masayuki  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M  
Habitat: Freshwater (Lake water)  
Characteristics: Cyanobacterial water bloom (aoko); ST 56 (Tanabe et al. 2007)  
Gene data: 16S rRNA (AB023264); ftsZ (AB324905); glnA (AB324984); gltX (AB325063); gyrB (AB325142); pgi (AB325221); recA (AB325300); tpi (AB325379)  
Other strain no.: TAC 169  
References: 439, 440, 441, 681, 1056, 1059, 1060, 1140, 1146  
Remarks: Cryopreserved

1143  
History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17)  
Isolator: Watanabe, Masayuki  
Identified by: Watanabe, Masayuki  
Formerly identified as: Microcystis novacekii
(Komárek) Compère States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; Reisolated from TAC 170; ST 57 (Tanabe et al. 2007) Gene data: 16S rRNA (AB012340); 16S rRNA (AB015365); ftsZ (AB324906); glnA (AB324985); gltX (AB325056); gyrB (AB325144); pgI (AB325223); recA (AB325302); tpi (AB325380) Other strain no.: TAC 170-1 References: 835, 836, 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1144 History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 58 (Tanabe et al. 2007) Gene data: ftsZ (AB324907); glnA (AB324986); gltX (AB325065); gyrB (AB325144); pgI (AB325223); recA (AB325302); tpi (AB325381) Other strain no.: TAC 171 References: 1056, 1059, 1060 Remarks: Cryopreserved

1145 History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 58 (Tanabe et al. 2007) Other strain no.: TAC 172 References: 371, 1056, 1059, 1060 Remarks: Cryopreserved


1148 History: < TAC Locality: Lake Shirakaba/Nagano/Japan (1989-08-23) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 29 (Tanabe et al. 2007) Other strain no.: TAC 175 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1149 History: < TAC Locality: Lake Shirakaba/Nagano/Japan (1989-08-23) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 29 (Tanabe et al. 2007) Other strain no.: TAC 176 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1150 History: < TAC Locality: Lake Shirakaba/Nagano/Japan (1989-08-23) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 49 (Tanabe et al. 2007) Gene data: ftsZ (AB324898); glnA (AB324977); gltX (AB325056); gyrB (AB325135); pgI (AB325214); recA (AB325293); tpi (AB325372) Other strain no.: TAC 174 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1151 History: < TAC Locality: Lake Shirakaba/Nagano/Japan (1989-08-23) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 49 (Tanabe et al. 2007) gene data: ftsZ (AB324898); glnA (AB324977); gltX (AB325056); gyrB (AB325135); pgI (AB325214); recA (AB325293); tpi (AB325372) Other strain no.: TAC 175 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1152 History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture
Cyanobacterial water bloom (aoko); Toxic; ST 55 (Tanabe et al. 2007)

History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 55 (Tanabe et al. 2007) Other strain no.: TAC 179

References: 371, 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 55 (Tanabe et al. 2007) Other strain no.: TAC 180

References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 29 (Tanabe et al. 2007) Other strain no.: TAC 181

References: 840, 841, 1140 Remarks: Cryopreserved

History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 29 (Tanabe et al. 2007) Other strain no.: TAC 182

References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Lake Teganuma/Chiba/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 48 (Tanabe et al. 2007) Other strain no.: TAC 183

References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Lake Shirakaba/Nagano/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wessenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 186

Remarks: Cryopreserved

History: < TAC Locality: Lake Teganuma/Chiba/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 55 (Tanabe et al. 2007) Other strain no.: TAC 187

References: 371, 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 55 (Tanabe et al. 2007) Other strain no.: TAC 188

References: 371, 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 55 (Tanabe et al. 2007) Other strain no.: TAC 189

References: 371, 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

History: < TAC Locality: Lake Okutama/Tokyo/Japan (1989-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 55 (Tanabe et al. 2007) Other strain no.: TAC 190
### References
- Tanabe et al. 2007, p. 16S rDNA.

### History

<table>
<thead>
<tr>
<th>Locality</th>
<th>Collection by</th>
<th>Strain no.</th>
<th>Date</th>
<th>Habitat</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Okutama/Tokyo/Japan</td>
<td>Watanabe, Masayuki</td>
<td>MA; 18</td>
<td>1989-09-17</td>
<td>Freshwater (Lake water)</td>
<td>Cyanobacterial water bloom (aoko); Toxic; Isolated; ST 55</td>
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<td>Lake Okutama/Tokyo/Japan</td>
<td>Watanabe, Masayuki</td>
<td>MA; 18</td>
<td>1990-09-17</td>
<td>Freshwater (Lake water)</td>
<td>Cyanobacterial water bloom (aoko); Toxic; Isolated; ST 55</td>
</tr>
<tr>
<td>Tsuruoka Park/Yamagata/Japan</td>
<td>Niiyama, Yuko</td>
<td>MA; 18</td>
<td>1990-08-04</td>
<td>Freshwater (Moat water)</td>
<td>Cyanobacterial water bloom (aoko)</td>
</tr>
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<td>Tsuruoka Park/Yamagata/Japan</td>
<td>Niiyama, Yuko</td>
<td>MA; 18</td>
<td>1990-08-04</td>
<td>Freshwater (Moat water)</td>
<td>Cyanobacterial water bloom (aoko)</td>
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<td>Tsuruoka Park/Yamagata/Japan</td>
<td>Niiyama, Yuko</td>
<td>MA; 18</td>
<td>1990-08-04</td>
<td>Freshwater (Moat water)</td>
<td>Cyanobacterial water bloom (aoko)</td>
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<tr>
<td>Lake Barato/Hokkaido/Japan</td>
<td>Watanabe, Masayuki</td>
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<td>1990-08-27</td>
<td>Freshwater (Lake water)</td>
<td>Cyanobacterial water bloom (aoko)</td>
</tr>
<tr>
<td>Lake Barato/Hokkaido/Japan</td>
<td>Watanabe, Masayuki</td>
<td>MA; 18</td>
<td>1990-08-27</td>
<td>Freshwater (Lake water)</td>
<td>Cyanobacterial water bloom (aoko)</td>
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### Remarks
- Toxic; Cryopreserved
- Toxic; Cryopreserved
- Toxic; Cryopreserved
- Toxic; Cryopreserved
- Toxic; Cryopreserved
- Toxic; Cryopreserved
- Toxic; Cryopreserved
- Toxic; Cryopreserved

### Gene data
- Niiyama, Yuko
- Tanabe et al. 2007

### Characteristics
- Microcystis wesenbergii Komárek
- Microcystis wesenbergii Komárek
- Microcystis wesenbergii Komárek
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- Microcystis wesenbergii Komárek
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- Microcystis wesenbergii Komárek

### References
- Watanabe, Masayuki (1989-09-17) Isolator: Watanabe, Masayuki
- Watanabe, Masayuki (1990-08-04) Isolator: Niiyama, Yuko
- Watanabe, Masayuki (1990-08-27) Isolator: Watanabe, Masayuki

### Notes
- Formerly identified as: Microcystis wesenbergii Komárek
- Formerly identified as: Microcystis wesenbergii Komárek
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- Formerly identified as: Microcystis wesenbergii Komárek
- Formerly identified as: Microcystis wesenbergii Komárek

### Characteristics
- Unialgal; Clonal; Non-axenic
- Unialgal; Clonal; Non-axenic
- Unialgal; Clonal; Non-axenic
- Unialgal; Clonal; Non-axenic
- Unialgal; Clonal; Non-axenic
- Unialgal; Clonal; Non-axenic
- Unialgal; Clonal; Non-axenic
- Unialgal; Clonal; Non-axenic

### Culture conditions
- 5 μmol/m²/s; 1 M
- 5 μmol/m²/s; 1 M
- 5 μmol/m²/s; 1 M
- 5 μmol/m²/s; 1 M
- 5 μmol/m²/s; 1 M
- 5 μmol/m²/s; 1 M
- 5 μmol/m²/s; 1 M
- 5 μmol/m²/s; 1 M
Cryopreserved

1173 History: < TAC Locality: Saburo-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18\(^\circ\)C; 15-25\(\mu\)mol/m\(^2\)/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); ST 4 (Tanabe et al. 2011) Other strain no.: TAC 311 References: 1060, 1140 Remarks: Cryopreserved

1174 History: < TAC Locality: Saburo-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18\(^\circ\)C; 15-25\(\mu\)mol/m\(^2\)/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); ST 188 (Tanabe et al. 2011) Other strain no.: TAC 312 Reference: 1060 Remarks: Cryopreserved

1175 History: < TAC Locality: Saburo-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18\(^\circ\)C; 15-25\(\mu\)mol/m\(^2\)/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); ST 189 (Tanabe et al. 2011) Other strain no.: TAC 313 Reference: 1060 Remarks: Cryopreserved

1176 History: < TAC Locality: Saburo-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18\(^\circ\)C; 15-25\(\mu\)mol/m\(^2\)/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); ST 135 (Tanabe et al. 2011) Other strain no.: TAC 314 Reference: 1060 Remarks: Cryopreserved

1177 History: < TAC Locality: Saburo-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18\(^\circ\)C; 15-25\(\mu\)mol/m\(^2\)/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); ST 190 (Tanabe et al. 2011) Other strain no.: TAC 315 Reference: 1060 Remarks: Cryopreserved

1178 History: < TAC Locality: Shin-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18\(^\circ\)C; 15-25\(\mu\)mol/m\(^2\)/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 316 Reference: 1140 Remarks: Cryopreserved

1179 History: < TAC Locality: Shin-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18\(^\circ\)C; 15-25\(\mu\)mol/m\(^2\)/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); ST 191 (Tanabe et al. 2011) Other strain no.: TAC 317 Reference: 1060 Remarks: Cryopreserved

1180 History: < TAC Locality: Shin-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis viridis (A.Brown) Lemmermann States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18\(^\circ\)C; 15-25\(\mu\)mol/m\(^2\)/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); ST 26 (Tanabe et al. 2011) Other strain no.: TAC 319 Reference: 1060 Remarks: Cryopreserved

1181 History: < TAC Locality: Shin-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wessenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18\(^\circ\)C; 15-25\(\mu\)mol/m\(^2\)/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko); ST 192 (Tanabe et al. 2011) Other strain no.: TAC 320 Reference: 1060 Remarks: Cryopreserved

1182 History: < TAC Locality: Sakase-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis ichthyoblabe Kützing States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18\(^\circ\)C; 15-25\(\mu\)mol/m\(^2\)/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 321 Reference: 1140 Remarks: Cryopreserved
1183 History: < TAC Locality: Sakase-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki Formerly identified as: Microcystis ichthyoblabe Kützing
States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Pond water)
Characteristics: Cyanobacterial water bloom (aoko); ST 193 (Tanabe et al. 2011) Other strain no.: TAC 322
References: 1060, 1140
Remarks: Cryopreserved

1184 History: < TAC Locality: Sakase-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Pond water)
Characteristics: Cyanobacterial water bloom (aoko); ST 193 (Tanabe et al. 2011) Other strain no.: TAC 325
References: 1060
Remarks: Cryopreserved

1185 History: < TAC Locality: Sakase-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Pond water)
Characteristics: Cyanobacterial water bloom (aoko); ST 194 (Tanabe et al. 2011) Other strain no.: TAC 326
References: 1060
Remarks: Cryopreserved

1186 History: < TAC Locality: Sakase-ike Pond/Kagawa/Japan (1990-09-17) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Pond water)
Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 327
Reference: 1140
Remarks: Cryopreserved

1187 History: < TAC Locality: Lake Heiso/Hyogo/Japan (1990-09-16) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Lake water)
Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 328
Remarks: Cryopreserved

1188 History: < TAC Locality: Lake Heiso/Hyogo/Japan (1990-09-16) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Lake water)
Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 329
Remarks: Cryopreserved

1189 History: < TAC Locality: Lake Heiso/Hyogo/Japan (1990-09-16) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Lake water)
Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 330
Remarks: Cryopreserved

1190 History: < TAC Locality: Lake Heiso/Hyogo/Japan (1990-09-16) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Lake water)
Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 331
Remarks: Cryopreserved

1191 History: < TAC Locality: Lake Heiso/Hyogo/Japan (1990-09-16) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Lake water)
Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 332
Remarks: Cryopreserved

1192 History: < TAC Locality: Lake Heiso/Hyogo/Japan (1990-09-16) Isolator: Watanabe, Masayuki
Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wessenbergii Komárek
States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Lake water)
Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 333
Remarks: Cryopreserved
1194 History: < TAC Locality: Lake Heiso/Hyogo/Japan (1990-09-16) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 335 Reference: 1140 Remarks: Cryopreserved

1195 History: < TAC Locality: Lake Heiso/Hyogo/Japan (1990-09-16) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 336 Reference: 1140 Remarks: Cryopreserved

1196 History: < TAC Locality: Lake Heiso/Hyogo/Japan (1990-09-16) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 337 Reference: 1140 Remarks: Cryopreserved

1197 History: < TAC Locality: Lake Heiso/Hyogo/Japan (1990-09-16) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 338 Reference: 1140 Remarks: Cryopreserved


1205 History: < TAC Locality: Johoku-ike Pond/Shimane/Japan (1990-09-18) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture
conditions: MA; 18°C; 15-25 μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 346 Reference: 1140 Remarks: Cryopreserved

1206 History: < TAC Locality: Johoku-ike Pond/Shimane/Japan (1990-09-18) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 24°C; 20-30 μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 347 Reference: 1140

1207 History: < TAC Locality: Johoku-ike Pond/Shimane/Japan (1990-09-18) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25 μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 348 Remarks: Cryopreserved

1208 History: < TAC Locality: Johoku-ike Pond/Shimane/Japan (1990-09-18) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25 μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 349 Remarks: Cryopreserved

1209 History: < TAC Locality: Lake Toro/Hokkaido/Japan (1990-09-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25 μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 32 (Tanabe et al. 2007) Gene data: ftsZ (AB324881); glnA (AB324960); gltX (AB325039); gyrB (AB325118); pgi (AB325197); recA (AB325276); tpi (AB325355) Other strain no.: TAC 350 References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

1210 History: < TAC Locality: Lake Toro/Hokkaido/Japan (1990-09-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25 μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 351 Remarks: Cryopreserved

1211 History: < TAC Locality: Lake Tofutsu/Hokkaido/Japan (1990-09-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 24°C; 20-30 μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 47 (Tanabe et al. 2007) Gene data: ftsZ (AB324896); glnA (AB324975); gltX (AB325054); gyrB (AB325133); pgi (AB325212); recA (AB325291); tpi (AB325370) Other strain no.: TAC 352 References: 1056, 1059, 1060


1213 History: < TAC Locality: Kunma Dam/Okinawa/Japan (1990-10-26) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25 μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 68 (Tanabe et al. 2007) Gene data: ftsZ (AB324917); glnA (AB324996); gltX (AB325075); gyrB (AB325154); pgi (AB325233); recA (AB325312); tpi (AB325391) Other strain no.: TAC 355 References: 438, 684, 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

1214 History: < TAC Locality: Kunma Dam/Okinawa/Japan (1990-10-26) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18°C; 15-25 μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 69 (Tanabe et al. 2007) Gene data: ftsZ (AB324918); glnA (AB324997); gltX (AB325076); gyrB (AB325155); pgi (AB325234); recA (AB325313); tpi (AB325392) Other strain no.: TAC 356 References: 1056,
1215 History: < TAC Locality: Kunuma Dam/Okinawa/Japan (1990-10-26) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18℃; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 70 (Tanabe et al. 2007) Gene data: ftsZ (AB324919); glnA (AB324998); glnX (AB325077); gyrB (AB325156); pgi (AB325235); recA (AB325314); tpi (AB325393) Other strain no.: TAC 357 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1216 History: < TAC Locality: Kunuma Dam/Okinawa/Japan (1990-10-26) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18℃; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); ST 71 (Tanabe et al. 2007) Gene data: ftsZ (AB324920); glnA (AB324999); glnX (AB325078); gyrB (AB325157); pgi (AB325236); recA (AB325315); tpi (AB325394) Other strain no.: TAC 358 References: 1056, 1059, 1060, 1140 Remarks: Cryopreserved

1217 History: < TAC Locality: Kunuma Dam/Okinawa/Japan (1990-10-26) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18℃; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); ST 71 (Tanabe et al. 2007) Other strain no.: TAC 359 References: 1056, 1059, 1060 Remarks: Cryopreserved

1218 History: < TAC Locality: Kunuma Dam/Okinawa/Japan (1990-10-26) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18℃; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); ST 71 (Tanabe et al. 2007) Other strain no.: TAC 360 References: 1056, 1059, 1060 Remarks: Cryopreserved

1219 History: < TAC Locality: Kunuma Dam/Okinawa/Japan (1990-10-26) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18℃; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 72 (Tanabe et al. 2007) Gene data: ftsZ (AB324921); glnA (AB325000); glnX (AB325079); gyrB (AB325158); pgi (AB325237); recA (AB325316); tpi (AB325395) Other strain no.: TAC 361 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1220 History: < TAC Locality: Kunuma Dam/Okinawa/Japan (1990-10-26) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18℃; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 72 (Tanabe et al. 2007) Other strain no.: TAC 362 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1221 History: < TAC Locality: Kunuma Dam/Okinawa/Japan (1990-10-26) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18℃; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 72 (Tanabe et al. 2007) Other strain no.: TAC 363 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1222 History: < TAC Locality: Tatsugami Dam/Okinawa/Japan (1990-10-27) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18℃; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 33 (Tanabe et al. 2007) Gene data: ftsZ (AB324882); glnA (AB324961); glnX (AB325040); gyrB (AB325119); pgi (AB325198); recA (AB325277); tpi (AB325356) Other strain no.: TAC 364 References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

1223 History: < TAC Locality: Tatsugami Dam/Okinawa/Japan (1990-10-27) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18℃; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 33 (Tanabe et al. 2007) Other
1224 History: < TAC Locality: Tatsugami Dam/Okinawa/Japan (1990-10-27) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18 °C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 71 (Tanabe et al. 2007) Other strain no.: TAC 368 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1225 History: < TAC Locality: Tatsugami Dam/Okinawa/Japan (1990-10-27) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18 °C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 72 (Tanabe et al. 2007) Other strain no.: TAC 369 References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

1226 History: < TAC Locality: Tatsugami Dam/Okinawa/Japan (1990-10-27) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18 °C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 72 (Tanabe et al. 2007) Other strain no.: TAC 370 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1227 History: < TAC Locality: Fukuchi Dam/Okinawa/Japan (1990-10-27) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18 °C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 72 (Tanabe et al. 2007) Other strain no.: TAC 371 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1228 History: < TAC Locality: Fukuchi Dam/Okinawa/Japan (1990-10-27) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18 °C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 72 (Tanabe et al. 2007) Other strain no.: TAC 372 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1229 History: < TAC Locality: Fukuchi Dam/Okinawa/Japan (1990-10-27) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 24 °C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 72 (Tanabe et al. 2007) Other strain no.: TAC 373 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1230 History: < TAC Locality: Ishigaki Dam/Okinawa/Japan (1990-10-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18 °C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 78 (Tanabe et al. 2007) Gene data: ftsZ (AB324927), gltA (AB325006), gltX (AB325085), gryB (AB325164), pgi (AB325243), recA (AB325322), tpi (AB325401) Other strain no.: TAC 374 References: 1056, 1059, 1060, 1140 Remarks: Toxic; Cryopreserved

1231 History: < TAC Locality: Ishigaki Dam/Okinawa/Japan (1990-10-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18 °C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); Toxic; ST 78 (Tanabe et al. 2007) Other strain no.: TAC 375 References: 1056, 1059, 1060 Remarks: Toxic; Cryopreserved

1232 History: < TAC Locality: Ishigaki Dam/Okinawa/Japan (1990-10-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18 °C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); ST 71 (Tanabe et al. 2007) Other strain no.: TAC 376 References: 1056, 1059, 1060, 1140 Remarks: Cryopreserved

1233 History: < TAC Locality: Ishigaki Dam/Okinawa/Japan (1990-10-28) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 18 °C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Reservoir water) Characteristics: Cyanobacterial water bloom (aoko); ST 71 (Tanabe et al. 2007) Other strain
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<th>Characteristics</th>
<th>Conditions</th>
<th>Habitat</th>
<th>Remarks</th>
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</thead>
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**References**
- Tanabe, Masayuki et al. (2007)
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<th>No.</th>
<th>History</th>
<th>Localities</th>
<th>Isolator</th>
<th>Identified by</th>
<th>States</th>
<th>Characteristics</th>
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<td>&lt; TAC Locality: Lake Suwa/Nagano/Japan (1990-03-31) Isolator: Watanabe, Masayuki. Identified by: Watanabe, Masayuki. Formerly identified as: Microcystis wesenbergii Komárek. States: Unialgal; Clonal; Non-axenic. <strong>Culture conditions</strong>: MA; 18°C; 15-25μmol/m²/s; 1 M. <strong>Habitat</strong>: Freshwater (Lake water). <strong>Characteristics</strong>: Cyanobacterial water bloom (aoko); ST 53 (Tanabe et al. 2007). Gene data: ftsZ (AB324902); glnA (AB324981); gtxX (AB325060); gyrB (AB325139); pgi (AB325218); recA (AB325297); tpi (AB325376). Other strain no.: TAC 396. References: 1056, 1059, 1060. Remarks: Cryopreserved.</td>
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<td>1253</td>
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Identified by: Watanabe, Masayuki Formerly identified as: Microcystis wesenbergii Komárek
States: Unialgal; Clonal; Non-axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 8
(Tanabe et al. 2007) Other strain no.: TAC 402
References: 1056, 1059, 1060
Remarks: Cryopreserved

Identification

History: < TAC
Locality: Lake Tegnanuma/Chiba/Japan (1989-09-13) Identified by: Watanabe, Masayuki
States: Unialgal; Clonal; Axenic
Culture conditions: MA; 18°C; 15-25μmol/m²/s; 1 M
Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: TAC 158-1
Remarks: Cryopreserved

History: < Tanabe, Yuhiko
Culture conditions: MA; 23°C; 20-30μmol/m²/s; 1 M
Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 122
(Tanabe et al. 2011) Gene data: ftsZ (AB547721); glnA (AB547743); pgi (AB547841) Other strain no.: Is07Yo01
Remarks: 1060
Remarks: Cryopreserved

History: < Tanabe, Yuhiko
Locality: Lake Kasumigaura/Ibaraki/Japan (2007-08-03) Identified by: Tanabe, Yuhiko (2007-08-06) States: Unialgal; Clonal; Axenic
Culture conditions: MA; 23°C; 20-30μmol/m²/s; 1 M
Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 171
(Tanabe et al. 2011) Other strain no.: Ks07TS29 Reference: 1060
Remarks: Cryopreserved

History: < Tanabe, Yuhiko
Locality: Lake Kasumigaura/Ibaraki/Japan (2007-08-09) Identified by: Tanabe, Yuhiko (2007-08-18) States: Unialgal; Clonal; Axenic
Culture conditions: MA; 23°C; 20-30μmol/m²/s; 1 M
Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko); ST 173
(Tanabe et al. 2011) Gene data:
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<td>Characteristics: Water bloom (aoko); Indicator, Toxic; ST 86 (Tanabe et al. 2009b) Gene data: ftsZ (AB465739); glnA (AB465740); gltX (AB465741); gyrB (AB465742); mcyD (AB444755); mcyG (AB444796); mcyJ (AB444837); pgi (AB465743); recA (AB465744); tpi (AB465745) References: 1054, 1059, 1060</td>
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<td>Lake Kasumigaura/Ibaraki, Japan (2004-09-01) Isolator: Tanabe, Yuuhiko</td>
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<td>Characteristics: Water bloom (aoko); Indicator, Toxic; ST 80 (Tanabe et al. 2009b) Gene data: ftsZ (AB465753); glnA (AB465754); gltX (AB465755); gyrB (AB465756); mcyD (AB444757); mcyG (AB444798); mcyJ (AB444839); pgi (AB465757); recA (AB465757); tpi (AB465759) References: 1054, 1059, 1060</td>
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<td>Characteristics: Water bloom (aoko); Indicator, Toxic; ST 84 (Tanabe et al. 2009b) Gene data: ftsZ (AB465767); glnA (AB465768); gltX (AB465769); gyrB (AB465770); mcyD (AB444759); mcyG (AB444800); mcyJ (AB444841); pgi (AB465771); recA (AB465772); tpi (AB465773) References: 1054, 1059, 1060</td>
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<td>Characteristics: Water bloom (aoko); Indicator, Toxic; ST 90 (Tanabe et al. 2009b) Gene data: ftsZ (AB465809); glnA (AB465810); gltX (AB465811); gyrB (AB465812); mcyD (AB444762); mcyG (AB444803); mcyJ (AB444844); pgi (AB465813); recA (AB465814); tpi (AB465815) References: 1054, 1057, 1059, 1060</td>
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<td>Characteristics: Water bloom (aoko); Indicator, Toxic; ST 91 (Tanabe et al. 2009b) Gene data: ftsZ (AB465816); glnA (AB465817); gltX (AB465818); gyrB (AB465819); pgi (AB465820); recA (AB465821); tpi (AB465822) References: 1054, 1057, 1059, 1060</td>
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<td>Characteristics: Water bloom (aoko); Indicator, Toxic; ST 102 (Tanabe et al. 2009b) Gene data: ftsZ (AB465893); glnA (AB465894); gltX (AB465895); gyrB (AB465896); pgi (AB465897); recA (AB465898); tpi (AB465899) References: 1054, 1057, 1059, 1060</td>
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<td>Lake Kasumigaura/Ibaraki, Japan (2005-07-17) Isolator: Tanabe, Yuuhiko</td>
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|                 |                  | Characteristics: Water bloom (aoko); Indicator, Toxic; ST 86 (Tanabe et al. 2009b) Gene data: ftsZ (AB465781); glnA (AB457735)
| History | < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20℃; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator, Toxic; ST 89 (Tanabe et al. 2009b) | Gene data: ftsZ (AB465802); glnA (AB465803); gltX (AB465804); gyrB (AB465805); pgi (AB465806); recA (AB465807); tpi (AB465808) | Other strain no.: Ki05TA07 | References: 1054, 1057, 1059, 1060 | Remarks: Cryopreserved |
| History | < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20℃; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator, Toxic; ST 87 (Tanabe et al. 2009b) | Gene data: ftsZ (AB465788); glnA (AB465789); gltX (AB465790); gyrB (AB465791); mcyD (AB444760); mcyG (AB444801); mcyJ (AB444842); pgi (AB465792); recA (AB465793); tpi (AB465794) | Other strain no.: Ks05TA51 | References: 1054, 1057, 1059, 1060 | Remarks: Cryopreserved |
| History | < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20℃; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator, Toxic; ST 90 (Tanabe et al. 2009b) | Gene data: ftsZ (AB465795); glnA (AB465796); gltX (AB465797); gyrB (AB465798); mcyD (AB444761); mcyG (AB444802); mcyJ (AB444843); pgi (AB465793); tpi (AB465794) | Other strain no.: Ks05TA62 | References: 1054, 1057, 1059, 1060 | Remarks: Cryopreserved |
| History | < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20℃; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator, Toxic; ST 95 (Tanabe et al. 2009b) | Gene data: ftsZ (AB465837); glnA (AB465838); gltX (AB465839); gyrB (AB465840); pgi (AB465841); recA (AB465842); tpi (AB465843) | Other strain no.: Tn05AK02 | References: 1054, 1057, 1059, 1060 | Remarks: Cryopreserved |
| History | < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20℃; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator, Toxic; ST 96 (Tanabe et al. 2009b) | Gene data: ftsZ (AB465951); glnA (AB465952); gltX (AB465953); gyrB (AB465954); pgi (AB465955); recA (AB465956); tpi (AB465957) | Other strain no.: Tn05AK05 | References: 1054, 1057, 1059, 1060 | Remarks: Cryopreserved |
| History | < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20℃; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator, Toxic; ST 97 (Tanabe et al. 2009b) | Gene data: ftsZ (AB465965); glnA (AB465866); gltX (AB465867); gyrB (AB465868); mcyD (AB444767); mcyG (AB444808); mcyJ (AB444849); pgi (AB465869); recA (AB465870); tpi (AB465871) | Other strain no.: Ia05Yo03 | References: 1054, 1057, 1059, 1060 | Remarks: Cryopreserved |
| History | < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20℃; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator, Toxic; ST 98 (Tanabe et al. 2009b) | Gene data: ftsZ (AB465979); glnA (AB465880); gltX (AB465881); gyrB (AB465882); mcyD (AB444769); mcyG (AB444810); mcyJ (AB444851); pgi (AB465883); recA (AB465884); tpi (AB465885) | Other strain no.: Sn05Mb05 | References: 1054, 1057, 1059, 1060 | Remarks: Cryopreserved |
| History | < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20℃; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator, Toxic; ST 99 (Tanabe et al. 2009b) | Gene data: ftsZ (AB465746); glnA (AB465747); gltX (AB465748); gyrB (AB465749); mcyD (AB444756); mcyG (AB444797); mcyJ (AB444838); pgi (AB465750); recA (AB465751); tpi (AB465752) | Other strain no.: KA-4 | References: 1054, 1057, 1059, 1060 | Remarks: Cryopreserved |
| History | < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Nagano/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20℃; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator, Toxic; ST 100 (Tanabe et al. 2009b) | Gene data: ftsZ (AB465795); glnA (AB465796); gltX (AB465797); gyrB (AB465798); mcyD (AB444761); mcyG (AB444802); mcyJ (AB444843); pgi (AB465793); tpi (AB465794) | Other strain no.: Ks05TA62 | References: 1054, 1057, 1059, 1060 | Remarks: Cryopreserved |

CONTENTS
| History | < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 109 (Tanabe et al. 2009a) | Gene data: glnA (AB511578); gltX (AB511610); gyrB (AB511634); pgi (AB511657); recA (AB511676); tpi (AB511693) | Other strain no.: Ks05TA1 | References: 1054, 1057, 1060 |
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| 2481 | History: < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 110 (Tanabe et al. 2009a) | Gene data: glnA (AB511579); gltX (AB511611); gyrB (AB511635); recA (AB511677); tpi (AB511694) | Other strain no.: Ks05TA2 | References: 1054, 1057, 1060 |
| 2482 | History: < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 111 (Tanabe et al. 2009a) | Gene data: glnA (AB511580); gyrB (AB511636); pgi (AB511658) | Other strain no.: Ks05TA3 | References: 1054, 1057, 1060 |
| 2483 | History: < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 112 (Tanabe et al. 2009a) | Gene data: gltX (AB511612) | Other strain no.: Ks05TA4 | References: 1054, 1057, 1060 |
| 2484 | History: < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 113 (Tanabe et al. 2009a) | Gene data: glnA (AB511581); gyrB (AB511637) | Other strain no.: Ks05TA5 | References: 1054, 1057, 1060 |
| 2485 | History: < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 114 (Tanabe et al. 2009a) | Gene data: glnA (AB511582); gyrB (AB511638); recA (AB511678) | Other strain no.: Ks05TA6 | References: 1054, 1057, 1060 |
| 2486 | History: < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 116 (Tanabe et al. 2009a) | Gene data: pgi (AB511660) | Other strain no.: Ks05TA21 | References: 1054, 1057, 1060 |
| 2487 | History: < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 118 (Tanabe et al. 2009a) | Gene data: glnA (AB511584); gltX (AB511613); pgi (AB511661) | Other strain no.: Ks05TA23 | References: 1054, 1057, 1060 |
| 2488 | History: < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 123 (Tanabe et al. 2009a) | Gene data: glnA (AB511588); gyrB (AB511640) | Other strain no.: Ks05TA32 | References: 1054, 1057, 1060 |
| 2489 | History: < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 125 (Tanabe et al. 2009a) | Gene data: glnA (AB511590); gyrB (AB511641) | Other strain no.: Ks05TA35 | References: 1054, 1057, 1060 |
| 2490 | History: < Tanabe, Yuuhiko | Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) | Isolator: Tanabe, Yuuhiko | Identified by: Tanabe, Yuuhiko | States: Unialgal; Clonal; Non-axenic | Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M | Habitat: Freshwater (Lake water) | Characteristics: Water bloom (aoko); Indicator; ST 127 (Tanabe et al. 2009a) | Gene data: glnA (AB511592); gltX (AB511642) | Other strain no.: Ks05TA36 | References: 1054, 1057, 1060 |
Tanabe, Yuuhiko **Identified by:** Tanabe, Yuuhiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Water bloom (aoko); Indicator; ST 126 (Tanabe et al. 2009a) **Gene data:** glnA (AB511591); gltX (AB511614); gyrB (AB511642) **Other strain no.:** Ks05TA37 References: 1054, 1057, 1060

2491 **History:** < Tanabe, Yuuhiko **Locality:** Lake Kasumigaura/Ibaraki/Japan (2005-07-17) **Isolator:** Tanabe, Yuuhiko **Identified by:** Tanabe, Yuuhiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Water bloom (aoko); Indicator; ST 126 (Tanabe et al. 2009a) **Gene data:** glnA (AB511591); gltX (AB511614); gyrB (AB511643) **Other strain no.:** Ks05TA52 References: 1054, 1057, 1060

2492 **History:** < Tanabe, Yuuhiko **Locality:** Lake Kasumigaura/Ibaraki/Japan (2005-07-17) **Isolator:** Tanabe, Yuuhiko **Identified by:** Tanabe, Yuuhiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Water bloom (aoko); Indicator; ST 130 (Tanabe et al. 2009a) **Gene data:** glnA (AB511595); gltX (AB511616); gyrB (AB511644); pgi (AB511662); tpi (AB511695) **Other strain no.:** Ki05TA10 References: 1054, 1057, 1060

2493 **History:** < Tanabe, Yuuhiko **Locality:** Lake Kasumigaura/Ibaraki/Japan (2005-09-03) **Isolator:** Tanabe, Yuuhiko **Identified by:** Tanabe, Yuuhiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Water bloom (aoko); Indicator; Probably non-toxic; ST 135 (Tanabe et al. 2009a) **Gene data:** glnA (AB511597); gltX (AB511618); gyrB (AB511648); recA (AB511681); tpi (AB511696) **Other strain no.:** Ki05TA11 References: 1054, 1057, 1060

2494 **History:** < Tanabe, Yuuhiko **Locality:** Lake Kasumigaura/Ibaraki/Japan (2005-09-03) **Isolator:** Tanabe, Yuuhiko **Identified by:** Tanabe, Yuuhiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Water bloom (aoko); Indicator; ST 136 (Tanabe et al. 2009a) **Gene data:** gltX (AB511619); recA (AB511682) **Other strain no.:** Ki05TA12 References: 1054, 1057, 1060

2495 **History:** < Tanabe, Yuuhiko **Locality:** Lake Kitaura/Ibaraki/Japan (2005-08-14) **Isolator:** Tanabe, Yuuhiko **Identified by:** Tanabe, Yuuhiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Water bloom (aoko); Indicator; ST 149 (Tanabe et al. 2009a) **Gene data:** ftsZ (AB511574); glnA (AB511603); gltX (AB511626); gyrB (AB511652); pgi (AB511670); recA (AB511688); tpi (AB511700) **Other strain no.:** Ks05YA03 References: 1054, 1057, 1060

2496 **History:** < Tanabe, Yuuhiko **Locality:** Lake Kitaura/Ibaraki/Japan (2005-08-14) **Isolator:** Tanabe, Yuuhiko **Identified by:** Tanabe, Yuuhiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Water bloom (aoko); Indicator; ST 150 (Tanabe et al. 2009a) **Gene data:** gltX (AB511604); tpi (AB511627) **Other strain no.:** Ks05YA04 References: 1054, 1057, 1060

2546 **History:** < Tanabe, Yuuhiko **Locality:** Lake Kasumigaura/Ibaraki/Japan (2005-07-17) **Isolator:** Tanabe, Yuuhiko **Identified by:** Tanabe, Yuuhiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Water bloom (aoko); Indicator; ST 137 (Tanabe et al. 2009a) **Gene data:** glnA (AB511598) **Other strain no.:** Ks05IS01 References: 1054, 1057, 1060

2547 **History:** < Tanabe, Yuuhiko **Locality:** Lake Kasumigaura/Ibaraki/Japan (2005-07-17) **Isolator:** Tanabe, Yuuhiko **Identified by:** Tanabe, Yuuhiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Water bloom (aoko); Indicator; ST 138 (Tanabe et al. 2009a) **Gene data:** pgi (AB511664) **Other strain no.:** Ks05IS04 References: 1054, 1057, 1060

2548 **History:** < Tanabe, Yuuhiko **Locality:** Lake Kasumigaura/Ibaraki/Japan (2005-07-17) **Isolator:** Tanabe, Yuuhiko **Identified by:** Tanabe, Yuuhiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MA; 20°C; 15-25μmol/m²/s; 1 M **Habitat:** Freshwater (Lake water) **Characteristics:** Water bloom (aoko); Indicator; Probably non-toxic; ST 142 (Tanabe et al. 2009a) **Other strain no.:** Ks05IS14 References: 1054, 1057, 1060
2549 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 120 (Tanabe et al. 2009a) Other strain no.: Ks05TA38 References: 1054, 1057, 1060

2550 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 134 (Tanabe et al. 2009a) Gene data: gltX (AB511617); gyrB (AB511647); recA (AB511680) Other strain no.: Ki05TA05 References: 1054, 1057, 1060

2551 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 132 (Tanabe et al. 2009a) Other strain no.: Kw05TA04 References: 1054, 1057, 1060

2552 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 144 (Tanabe et al. 2009a) Gene data: recA (AB511685) Other strain no.: Ks05YA03 References: 1054, 1057, 1060

2553 History: < Tanabe, Yuuhiko Locality: Lake Kitaura/Ibaraki/Japan (2005-08-14) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 144 (Tanabe et al. 2009a) Gene data: glnA (AB511596); gyrB (AB511645); pgi (AB511663) Other strain no.: Kw05TA03 References: 1054, 1057, 1060

2554 History: < Tanabe, Yuuhiko Locality: Lake Teganuma/Chiba/Japan (2005-09-10) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 151 (Tanabe et al. 2009a) Gene data: ftsZ (AB511575); glnA (AB511605); gltX (AB511628); pgi (AB511671); recA (AB511689); tpi (AB511701) Other strain no.: Tw05AK01 References: 1054, 1057, 1060

2555 History: < Tanabe, Yuuhiko Locality: Lake Teganuma/Chiba/Japan (2005-09-10) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 152 (Tanabe et al. 2009a) Gene data: glnA (AB511606) Other strain no.: Tw05AK02 References: 1054, 1057, 1060

2556 History: < Tanabe, Yuuhiko Locality: Lake Teganuma/Chiba/Japan (2005-09-10) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 153 (Tanabe et al. 2009a) Gene data: ftsZ (AB511576); glnA (AB511607); gltX (AB511629); pgi (AB511672); recA (AB511690) Other strain no.: Tw05AK10 References: 1054, 1057, 1060

2557 History: < Tanabe, Yuuhiko Locality: Lake Teganuma/Chiba/Japan (2005-09-10) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 154 (Tanabe et al. 2009a) Gene data: glnA (AB511608); pgi (AB511673) Other strain no.: Tw05AK11 References: 1054, 1057, 1060

2558 History: < Tanabe, Yuuhiko Locality: Lake Inbanuma/Chiba/Japan (2005-09-19) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Water) Characteristics: Water bloom (aoko); Indicator; ST 156 (Tanabe et al. 2009a) Gene data: gyrB (AB511653) Other strain no.: Iw05FU01 References: 1054, 1057, 1060
2559 History: < Tanabe, Yuuhiko  
Locality: Lake Inbanuma/Chiba/Japan (2005-09-19)  
Isolator: Tanabe, Yuuhiko  
Gene data: glnA (AB511156); gyrB (AB5111655); recA (AB5111692)  
Other strain no.: Ks05TA28  
References: 1054, 1057, 1060

2560 History: < Tanabe, Yuuhiko  
Locality: Lake Inbanuma/Chiba/Japan (2005-09-19)  
Isolator: Tanabe, Yuuhiko  
Gene data: gltX (AB5111632); gnrB (AB511655); recA (AB511692)  
Other strain no.: Ks05TA27  
References: 1054, 1057, 1060

2561 History: < Tanabe, Yuuhiko  
Locality: Lake Inbanuma/Chiba/Japan (2005-09-19)  
Isolator: Tanabe, Yuuhiko  
Gene data: glnA (AB511586); gyrB (AB511639)  
Other strain no.: Ks05TA28  
References: 1054, 1057, 1059, 1060

2562 History: < Tanabe, Yuuhiko  
Locality: Lake Suwa/Nagano/Japan (2004-10-07)  
Isolator: Tanabe, Yuuhiko  
Gene data: glnA (AB511586); gyrB (AB511639)  
Other strain no.: Ks05TA28  
References: 1054, 1057, 1060

2563 History: < Tanabe, Yuuhiko  
Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17)  
Isolator: Tanabe, Yuuhiko  
Gene data: glnA (AB511586); gyrB (AB511639)  
Other strain no.: Ks05TA28  
References: 1054, 1057, 1060

2564 History: < Tanabe, Yuuhiko  
Locality: Lake Kasumigaura/Ibaraki/Japan (2005-09-03)  
Isolator: Tanabe, Yuuhiko  
Gene data: glnA (AB511586); gyrB (AB511639)  
Other strain no.: Ks05TA28  
References: 1054, 1057, 1060

2565 History: < Tanabe, Yuuhiko  
Locality: Lake Suwa/Nagano/Japan (2005-09-28)  
Isolator: Tanabe, Yuuhiko  
Gene data: glnA (AB511586); gyrB (AB511639)  
Other strain no.: Ks05TA28  
References: 1054, 1057, 1060

2566 History: < Tanabe, Yuuhiko  
Locality: Lake Kasumigaura/Ibaraki/Japan (2007-08-03)  
Isolator: Tanabe, Yuuhiko  
Gene data: glnA (AB511586); gyrB (AB511639)  
Other strain no.: Ks05TA28  
References: 1054, 1060

2567 History: < Tanabe, Yuuhiko  
Locality: Lake Kasumigaura/Ibaraki/Japan (2007-08-03)  
Isolator: Tanabe, Yuuhiko  
Gene data: glnA (AB511586); gyrB (AB511639)  
Other strain no.: Ks05TA28  
References: 1054, 1060

2568 History: < Tanabe, Yuuhiko  
Locality: Lake Kasumigaura/Ibaraki/Japan (2007-09-03)  
Isolator: Tanabe, Yuuhiko  
Gene data: glnA (AB511586); gyrB (AB511639)  
Other strain no.: Ks05TA28  
References: 1054, 1060

2569 History: < Tanabe, Yuuhiko  
Locality: Lake Kasumigaura/Ibaraki/Japan (2007-09-03)  
Isolator: Tanabe, Yuuhiko  
Gene data: glnA (AB511586); gyrB (AB511639)  
Other strain no.: Ks05TA28  
References: 1054, 1060
conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator, Toxic; ST 185 (Tanabe et al. 2011) Gene data: gyrB (AB547809); pgi (AB547835) Other strain no.: Kn07TS91 References: 1054, 1060

2599 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2007-09-16) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 179 (Tanabe et al. 2011) Other strain no.: Ks07TS123 References: 1054, 1060

2600 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2007-09-22) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 181 (Tanabe et al. 2011) Gene data: pgi (AB547831); recA (AB547863) Other strain no.: Ks07TS137 References: 1054, 1060

2601 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2007-10-14) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 184 (Tanabe et al. 2011) Gene data: ftsZ (AB547719); gltX (AB547775); gyrB (AB547808); pgi (AB547834); recA (AB547866); tpi (AB547886) Other strain no.: Ks07TS159 References: 1054, 1060

2602 History: < Tanabe, Yuuhiko Locality: Lake Inbanuma/Chiba/Japan (2007-07-04) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 195 (Tanabe et al. 2011) Gene data: gltA (AB547721); gltX (AB547779); pgi (AB547840) Other strain no.: Li07Yo01 References: 1054, 1060

2603 History: < Tanabe, Yuuhiko Locality: Lake Suwa/Nagano/Japan (2007-09-25) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 199 (Tanabe et al. 2011) Gene data: gltA (AB547745); gltX (AB547781); pgi (AB547843) Other strain no.: Sw07Hb06 References: 1054, 1060

2604 History: < Tanabe, Yuuhiko Locality: Lake Biwa/Shiga/Japan (2007-11-12) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator, Toxic; ST 203 (Tanabe et al. 2011) Gene data: recA (AB547871) Other strain no.: Bv07BH03 References: 1054, 1060

2605 History: < Tanabe, Yuuhiko Locality: Ishigaki Isl., Nagura Dam/Okinawa/Japan (2008-02-20) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Water) Characteristics: Water bloom (aoko); Indicator, Toxic; ST 206 (Tanabe et al. 2011) Other strain no.: Rs08NA05 References: 1054, 1060

2606 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2008-08-02) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 216 (Tanabe et al. 2011) Gene data: gltA (AB547751); gltX (AB547792); tpi (AB547899) Other strain no.: Ks08TS05 References: 1054, 1060

2607 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2008-08-02) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 217 (Tanabe et al. 2011) Gene data: gyrB (AB547819) Other strain no.: Ks08TS06 References: 1054, 1060
2608 History: < Tanabe, Yuuhiko Locality: Lake Kitaura/Ibaraki/Japan (2008-08-03) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 221 (Tanabe et al. 2011) Gene data: gltX (AB547794); pgi (AB547850) Other strain no.: Ks08YA15 References: 1054, 1060

2609 History: < Tanabe, Yuuhiko Locality: Lake Kitaura/Ibaraki/Japan (2008-08-03) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 224 (Tanabe et al. 2011) Gene data: glnA (AB547752) Other strain no.: Ks08YA25 References: 1054, 1060

2610 History: < Tanabe, Yuuhiko Locality: Hachirogata/Akita/Japan (2008-08-22) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably toxic; ST 230 (Tanabe et al. 2011) Gene data: glnA (AB547757); pgi (AB547853); recA (AB547878) Other strain no.: An08Hj03 References: 1054, 1060

2611 History: < Tanabe, Yuuhiko Locality: Hachirogata/Akita/Japan (2008-08-22) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably toxic; ST 234 (Tanabe et al. 2011) Gene data: recA (AB547879) Other strain no.: As08Fu06 References: 1054, 1060

2612 History: < Tanabe, Yuuhiko Locality: Hachirogata/Akita/Japan (2008-08-22) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 228 (Tanabe et al. 2011) Gene data: glnA (AB547755); pgi (AB547851); tpi (AB547902) Other strain no.: As08Gb10 References: 1054, 1060

2613 History: < Tanabe, Yuuhiko Locality: Hachirogata/Akita/Japan (2008-08-22) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 235 (Tanabe et al. 2011) Other strain no.: Aw08Fu02 References: 1054, 1060

2617 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Toxic; ST 141 (Tanabe et al. 2011) Gene data: gltX (AB511622) Other strain no.: Ks05IS12 References: 1054, 1057, 1060

2618 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2005-07-17) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 143 (Tanabe et al. 2011) Other strain no.: Ks05IS17 References: 1054, 1057, 1060

2619 History: < Tanabe, Yuuhiko Locality: Lake Suwa/Nagano/Japan (2005-09-29) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; Probably non-toxic; ST 162 (Tanabe et al. 2011) Gene data: gltX (AB547764) Other strain no.: Sn05Hb06 References: 1054, 1060

2620 History: < Tanabe, Yuuhiko Locality: Lake Kasumigaura/Ibaraki/Japan (2007-08-03) Isolator: Tanabe, Yuuhiko Identified by: Tanabe, Yuuhiko States: Unialgal; Clonal; Non-axenic Culture conditions: MA; 20°C; 15-25μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Water bloom (aoko); Indicator; ST 127 (Tanabe et al. 2011) Other strain no.: Ks07TS13 References: 1054, 1060
MICROMONAS: Prasinophyceae

Micromonas pusilla (Butcher) Manton et Parke

1411 History: < TKB Locality: Tokyo/Japan (2004-10-28) Isolator: Nakayama, Takeshi Identified by:
Nakayama, Takeshi States: Unialgal; Non-clonal; Non-axenic Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-189 (nak78)

1412 History: < TKB Locality: Motobu, Sesoko/Okinawa/Japan (2004-11-08) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Non-clonal; Non-axenic Culture conditions: MNK; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-214 (nak100)

1413 History: < TKB Locality: Tennozu Canal/Tokyo/Japan (2004-12-03) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Non-clonal; Non-axenic Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-215 (nak101)

2672 History: < RCC (2010) Other collection strain no.: RCC 299 Locality: Equatorial Pacific (1998-02-10) Isolator: Boulben, S. Identified by: Guillou, L. States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 22-32μmol/m²/s; 14 D Habitat: Marine (Seawater) Other strain no.: NOUM17

MICROTANNION: Trebouxiophyceae

Machionion kützingianum Nägeli

479 History: < Kasai, Fumie Locality: Toyoohira River/Hokkaido/Japan (1987-07-02) Isolator: Kasai, Fumie Identified by: Kasai, Fumie; Confirmed at NIES by DNA sequencing States: Unialgal; Clonal; Non-axenic Culture conditions: C; 10°C; 6-12μmol/m²/s; 6 M (10°C; 10-15μmol/m²/s) Habitat: Freshwater (River water) Gene data: 18S rRNA (AB488588) Other strain no.: Tst11-6

References: 567, 1018, 1019 Remarks: Cryopreserved

MISCHOCOCCUS: Xanthophyceae

Mischococcus sp.

1963 History: < TKB Locality: Ryugasaki/Ibaraki/Japan (2006-01-13) Isolator: Chikuni, Tomoko Identified by: Chikuni, Tomoko (2006-**-*** States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 15-22μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Other strain no.: TKB-325

MONOMASTIX: Prasinophyceae

Monomastix minuta Skuja


256 History: < Suda, Shoichiro Locality: Ozegahara/Gunma/Japan (1983-08-29) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: AF-6; 20°C; 40-50μmol/m²/s; 1 M Habitat: Freshwater (Bog water) Other strain no.: Osz-35-m

MONORAPIDIIUM: Chlorophyceae

Monoraphidium circinale (Nygaard) Nygaard

480 History: < Suda, Shoichiro Locality: Tsuichiura/Ibaraki/Japan (1983-07-22) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Pond water) Gene data: rbcL (AB175933); rbcL (AB175934) Other strain no.: SIS-1-M Reference: 567

Monoraphidium contortum (Thuret) Komárková-Legnerová
384 History: < Sawaguchi, Tomhiro Locality: Lake Unagiike/Kagoshima/Japan (1985-02-20) Isolator: Sawaguchi, Tomhiro Identified by: Niiyama, Yuko States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Lake water) Other strain no.: Ep-i Reference: 567

Monoraphidium griffithii (Berkeley) Komárová-Legnerová

385 History: < Sawaguchi, Tomhiro Locality: Urizura/Ibaraki/Japan (1984-10-28) Isolator: Sawaguchi, Tomhiro Identified by: Niiyama, Yuko States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Pond water) Other strain no.: AWA Reference: 567

Monoraphidium minutum (Nägeli) Komárková-Legnerová

Syn. Selenastrum minutum (Nägeli) Collins

2282 History: < IAM (2007) < Murano, Fumio Other collection strain no.: IAM C-139 Isolator: Murano, Fumio Identified by: Fukushima, Hiroshi States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

Monoraphidium sp.

2267 History: < IAM (2007) < Fujii, Katsuhiko Other collection strain no.: IAM C-632 Locality: Yamaguchi/Japan Isolator: Fujii, Katsuhiko Identified by: Fujii, Katsuhiko States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: (Activated sludge) Characteristics: Astaxanthin production Other strain no.: GK 12

MURIELLA : Chlorophyceae

Muriella zofingiensis (Dönz) Hindák
Syn. Chlorella zofingiensis Dönz

2175 History: < IAM (2007) < BIU (UTEX; 1961) Other collection strain no.: IAM C-111; ATCC 30412; CCAP 211-14; SAG B211-14; UTEX 32; CAUP H6503 Locality: Ramooswald near Zofingen/Switzerland Isolator: Dönz, O. C. Identified by: Kessler, E.; Confirmed at NIES by DNA sequencing (1991) States: Unialgal; Clonal; Axenic[2012 Feb] Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: (Soil) Gene data: 18S rRNA (AB488563) References: 385, 496, 498, 499

MYCHONASTES : Chlorophyceae

Mychonastes sp.


2336 History: < Takamura, Noriko Locality: Lake Yamanaka/Yamanashi/Japan (1991-04-11) Isolator: Takamura, Noriko Identified by: Takamura, Noriko; Confirmed at NIES by DNA sequencing States: Unialgal Culture conditions: CB; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: 18S rRNA (AB488565) Other strain no.: YA 4


2340 History: < Takamura, Noriko Locality: Lake Nakatsuna/Nagano/Japan (1991-05-15) Isolator: Takamura, Noriko Identified by: Takamura, Noriko; Confirmed at NIES by DNA sequencing States: Unialgal Culture conditions: CB; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: 18S rRNA (AB488567) Other strain no.: NT 2

2341 History: < Takamura, Noriko Locality: Lake Tateshina/Nagano/Japan (1991-05-09) Isolator: Takamura, Noriko Identified by: Takamura, Noriko; Confirmed at NIES by DNA sequencing
**States**: Unialgal **Culture conditions**: CB; 15°C; 15-22μmol/m²/s; 2 M **Habitat**: Freshwater (Lake water) **Gene data**: 18S rRNA (AB488568) **Other strain no.**: TATE 1

**MYRMECIA**: Trebouxiophyceae

**Myrmecia biatorellae** (Tschermk-Woess et Plessl) Peterson

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**MYXOSARCINA**: Cyanophyceae

**Myxosarcina burmensis** Skuja

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**NANNOCHLOROPSIS**: Eustigmatophyceae

**Nannochloropsis gaditana** Lubián

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**Nannochloropsis granulata** Karlson et Potter

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**Nannochloropsis oculata** (Droop) Hibberd

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**NEMALIONOPSIS**: Florideophyceae

**Nemalionopsis tortuosa** Yoneda et Yagi

Syn. Nemalionopsis shawii Skuja f. caroliniana Howard et Parker

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**REFERENCES**: 139, 567, 1018 **Remarks**: Cryopreserved

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**CONTENTS**

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**syn. Nemalionopsis shawii Skuja f. caroliniana Howard et Parker**
| 1466 | History: < Kawachi, Masanobu **Località**: Ohkubo-ga/Okinawa/Japan (2002-03-16) **Isolatore**: Ishimoto, Miwa **Identificato da**: Kawachi, Masanobu **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: OOK-1 **Notazioni**: Cryopreserved |
| 1467 | History: < Higa, Atsushi **Località**: Izumi/Kumamoto/Japan (2002-11-01) **Isolatore**: Higa, Atsushi **Identificato da**: Yoshida, Tadao (2002-**-**-**-**) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: K52 **Referenze**: 142 **Notazioni**: Cryopreserved |
| 1468 | History: < Higa, Atsushi **Località**: Izumi/Kumamoto/Japan (2002-11-01) **Isolatore**: Higa, Atsushi **Identificato da**: Yoshida, Tadao (2002-**-**-**-**) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: KS5 **Notazioni**: Cryopreserved |
| 1469 | History: < Higa, Atsushi **Località**: Izumi/Kumamoto/Japan (2002-11-**-**) **Isolatore**: Higa, Atsushi **Identificato da**: Yoshida, Tadao (2002-**-**-**-**) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: KS6 **Notazioni**: Cryopreserved |
| 1470 | History: < Iima, Masafumi **Località**: Kashima/Kumamoto/Japan (2002-03-02) **Isolatore**: Iima, Masafumi **Identificato da**: Iima, Masafumi (2002-03-02) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 15 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: KS5 **Notazioni**: Cryopreserved |
| 1471 | History: < Iima, Masafumi **Località**: Oh River/Nagasaki/Japan (2002-04-08) **Isolatore**: Teruya, Akiko **Identificato da**: Iima, Masafumi (2002-04-08) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 15 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: KS6 **Notazioni**: Cryopreserved |
| 1472 | History: < Iima, Masafumi **Località**: Yamanota River (tributary stream of Yue River)/Nagasaki/Japan (2002-09-24) **Isolatore**: Teruya, Akiko **Identificato da**: Iima, Masafumi (2002-09-24) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: KS5 **Notazioni**: Cryopreserved |
| 1735 | History: < Higa, Atsushi **Località**: Kin River/Kagoshima/Japan (2005-05-03) **Isolatore**: Higa, Atsushi **Identificato da**: Arai, Shogo (2005-**-**-**-**) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: AMN1 |
| 1736 | History: < Higa, Atsushi **Località**: Kin River/Kagoshima/Japan (2005-05-03) **Isolatore**: Higa, Atsushi **Identificato da**: Arai, Shogo (2005-**-**-**-**) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: AMN2 **Notazioni**: Cryopreserved |
| 1737 | History: < Higa, Atsushi **Località**: Kin River/Kagoshima/Japan (2005-05-03) **Isolatore**: Higa, Atsushi **Identificato da**: Arai, Shogo (2005-**-**-**-**) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: AMN3 **Notazioni**: Cryopreserved |
| 1738 | History: < Higa, Atsushi **Località**: Kin River/Kagoshima/Japan (2005-05-03) **Isolatore**: Higa, Atsushi **Identificato da**: Arai, Shogo (2005-**-**-**-**) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: AMN4 **Notazioni**: Cryopreserved |
| 1739 | History: < Higa, Atsushi **Località**: Okichi Spring/Ehime/Japan (2005-08-09) **Isolatore**: Higa, Atsushi **Identificato da**: Kumano, Shigeru (2005-**-**-**-**) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: OKC1 |
| 1740 | History: < Higa, Atsushi **Località**: Okichi Spring/Ehime/Japan (2005-08-09) **Isolatore**: Higa, Atsushi **Identificato da**: Kumano, Shigeru (2005-**-**-**-**) **Stati**: Unialgal; Clonal; Non-axenic **Condizioni di cultura**: Bold 3N; 20 °C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Caratteristiche**: Epilithic; CR+EN **Altra specie citata no.**: OKC1 |
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; CR+EN Other strain no.: OKC2

1741 History: < Higa, Atsushi Locality: Okichi Spring/Ehime/Japan (2005-08-09) Isolator: Higa, Atsushi Identified by: Kumano, Shigeru (2005.*) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; CR+EN Other strain no.: OKC3

1742 History: < Higa, Atsushi Locality: Okichi Spring/Ehime/Japan (2005-08-09) Isolator: Higa, Atsushi Identified by: Kumano, Shigeru (2005.*) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; CR+EN Other strain no.: OKC4

1743 History: < Higa, Atsushi Locality: Okichi Spring/Ehime/Japan (2005-08-09) Isolator: Higa, Atsushi Identified by: Kumano, Shigeru (2005.*) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; CR+EN Other strain no.: OKC5


1745 History: < Higa, Atsushi Locality: Okichi Spring/Ehime/Japan (2005-08-09) Isolator: Higa, Atsushi Identified by: Kumano, Shigeru (2005.*) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; CR+EN Other strain no.: OKC7 Remarks: Cryopreserved

1746 History: < Higa, Atsushi Locality: Okichi Spring/Ehime/Japan (2005-08-09) Isolator: Higa, Atsushi Identified by: Kumano, Shigeru (2005.*) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; CR+EN Other strain no.: OKC8

1747 History: < Higa, Atsushi Locality: Okichi Spring/Ehime/Japan (2005-08-09) Isolator: Higa, Atsushi Identified by: Kumano, Shigeru (2005.*) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; CR+EN Other strain no.: OKC9

1748 History: < Higa, Atsushi Locality: Okichi Spring/Ehime/Japan (2005-08-09) Isolator: Higa, Atsushi Identified by: Kumano, Shigeru (2005.*) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; CR+EN Other strain no.: OKC10


2023 History: < Higa, Atsushi Locality: Kuma River, near Meuba Bridge/Kumamoto/Japan (2006-03-30) Isolator: Higa, Atsushi Identified by: Kumano, Shigeru (2006-03-30) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; CR+EN Other strain no.: KMN1

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</tbody>
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Non-axenic **Culture conditions**: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Characteristics**: Epilithic; CR+EN **Other strain no.**: 030314

**History**: < Iima, Masafumi **Locality**: Asakura, Shimoura/Fukuoka/Japan (2005-06-12) **Isolator**: Kubota, Yuki **Identified by**: Iima, Masafumi (2005-06-14) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Characteristics**: Epilithic; CR+EN **Other strain no.**: 050612

**History**: < Iima, Masafumi **Locality**: Asakura, Kuwahara/Fukuoka/Japan (2005-06-30) **Isolator**: Kubota, Yuki **Identified by**: Iima, Masafumi (2005-06-30) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Characteristics**: Epilithic; CR+EN **Other strain no.**: 050630

**History**: < Iima, Masafumi **Locality**: Kawabe/Kagoshima/Japan (2006-03-29) **Isolator**: Yamashita, Hirokatsu **Identified by**: Iima, Masafumi (2006-03-29) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Characteristics**: Epilithic; CR+EN **Other strain no.**: 060329

**History**: < Iima, Masafumi **Locality**: Jin-ya River/Fukuoka/Japan (2006-06-19) **Isolator**: Yamashita, Hirokatsu **Identified by**: Iima, Masafumi (2006-06-20) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Characteristics**: Epilithic; CR+EN **Other strain no.**: 060619

**NEOHETEROMITA**: Sarcomonadacea

**Neoheteromita caudratti** Howe, Bass, Vickerman, Chao et Cavalier-Smith

**History**: < Howe, Alexis T. **Locality**: U.K. (2001.-**-***) **Isolator**: Vickerman, Keith **Identified by**: Vickerman, Keith (2001.-**-***) **Culture conditions**: AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat**: Terrestrial (Soil) **Characteristics**: Heterotrophic; Authentic strain; Resting spore forming **Other strain no.**: IVY21a **Reference**: 225

**Neoheteromita hederae** Howe, Bass, Vickerman, Chao et Cavalier-Smith

**History**: < Howe, Alexis T. **Locality**: Wytham Wood/U.K. (2006.-**-***) **Isolator**: Howe, Alexis T. **Identified by**: Howe, Alexis T. (2006.-**-***) **Culture conditions**: URO-H + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat**: Terrestrial (Plant (Ivy leaf)) **Characteristics**: Heterotrophic; Authentic strain; Resting spore forming **Other strain no.**: IVY21a **Reference**: 225

**Neoheteromita soli** Howe, Bass, Vickerman, Chao et Cavalier-Smith

**History**: < Howe, Alexis T. **Locality**: Wytham Wood/U.K. (2006.-**-***) **Isolator**: Howe, Alexis T. **Identified by**: Howe, Alexis T. (2006.-**-***) **Culture conditions**: URO-H + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat**: Terrestrial (Soil) **Characteristics**: Heterotrophic; Authentic strain; Resting spore forming **Other strain no.**: WA4a **Reference**: 225

**NEPHROSELMIS**: Prasinophyceae

**Nephroselmis astigmatica** Inouye et Pienaar

**History**: < Inouye, Isao **Locality**: Tateyama Harbor/Chiba/Japan (1983-08-10) **Isolator**: Inouye, Isao **Identified by**: Inouye, Isao **States**: Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions**: f/2; ESM; 20°C; 32-40μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Characteristics**: Red tide **Other strain no.**: 810-13 **References**: 658, 1262

**History**: < TKB **Locality**: Isonoura Beach/Wakayama/Japan (2003-06-***) **Isolator**: Okamoto, Noriko **Identified by**: Okamoto, Noriko **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: f/2; 20°C; 20-30μmol/m²/s; 14 D **Habitat**: Marine (Sand and seawater) **Characteristics**: Benthic **Other strain no.**: TKB-075 (nrc054)

**Nephroselmis olivacea** Stein

**History**: < Suda, Shoichiro **Locality**: Tsuchiura/Ibaraki/Japan (1986-02-***) **Isolator**: Suda, Shoichiro **Identified by**: Suda, Shoichiro **States**: Unialgal; Clonal; Axenic[2011 Aug] **Culture
conditions: AF-6; 20 °C ; 22-32μmol/m²/s; 20 D Habitat: Freshwater (Pond sediment) Characteristics: Heterothallic; Mating type(+) Other strain no.: S-N-2-1 References: 138, 490, 687, 988, 990, 1014, 1262

484 History: < Suda, Shoichiro Locality: Tsuchiura/Ibaraki/Japan (1986-02-***) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic[2011 Aug] Culture conditions: AF-6; 20 °C ; 22-32μmol/m²/s; 20 D Habitat: Freshwater (Pond sediment) Characteristics: Heterothallic; Mating type(−) Gene data: chloroplast genome (NC_000927); Mitochondrial DNA (AF110138); plastid DNA (AF137379) Other strain no.: S-N-5-5 References: 1104, 1105, 1106


Nephroselmis pyriformis (Carter) Ettl

1416 History: < TKB Locality: East China Sea/Japan (2004-07-28) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 15-22μmol/m²/s; 2 M Habitat: Marine (Seawater) Other strain no.: TKB-187 (nak76)

1817 History: < TKB Locality: Onahama Harbor/Fukushima/Japan (2004-07-07) Isolator: Chikuni, Tomoko Identified by: Chikuni, Tomoko (2005-***) States: Unialgal; Non-clonal; Non-axenic Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-247

Nephroselmis sp.

1414 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2003-06-***) Isolator: Okamoto, Noriko Identified by: Okamoto, Noriko States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Sand) Characteristics: Benthic Other strain no.: TKB-076 (nrc055)

1417 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2002-08-09) Isolator: Okamoto, Noriko Identified by: Okamoto, Noriko States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 15-22μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-041 (nrc015-028)

1418 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2004-03-09) Isolator: Okamoto, Noriko States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-096 (nrc)

1818 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2005-03-30) Isolator: Okamoto, Noriko Identified by: Okamoto, Noriko (2005-***) States: Unialgal; Clonal; Non-axenic Culture conditions: MNK; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Sand) Other strain no.: TKB-244

2309 History: < Suda, Shoichiro Locality: Harima-nada/Japan (1988-08-***) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 22-32μmol/m²/s; 20 D Habitat: Marine (Seawater) Other strain no.: 813H-7

Nephroselmis spinosa Suda et M.M. Watanabe

934 History: < Suda, Shoichiro Locality: Port Hedland/Australia (1991-10-10) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 15-22μmol/m²/s; 2 M Habitat: Marine (Sediment) Characteristics: Euryhaline Other strain no.: S222 References: 984, 1262

**Neproselmis viridis** Inouye, Pienaar, Suda et Chihara

486 History: < Suda, Shoichiro **Locality:** Harima-Nada/Japan (1983-02-**) **Isolator:** Suda, Shoichiro **Identified by:** Inouye, Isao **States:** Unialgal; Clonal; Axenic **Culture conditions:** ESM; 20°C; 15-22μmol/m²/s; 1 M **Habitat:** Marine (Sediment) **Characteristics:** Red tide; Authentic strain **Gene data:** 18S rRNA (AB214976) **Other strain no.:** H-70-2 **References:** 138, 1216, 1262

**NETRIUM** : Charophyceae

*Netrium digitus* (Ehrenberg ex Ralfs) Itzigsohn et Rothe var. *digitus*

2288 History: < IAM (2007) < UTEX (1996) **Other collection strain no.:** IAM C-587 (=C-311); UTEX 1257 **Isolator:** Biebel **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M **Characteristics:** Homothallic

*N. digitus* (Ehrenberg ex Ralfs) Itzigsohn et Rothe var. *lanellosum* (Brébisson) Grönnblad

2289 History: < IAM (2007) < UTEX (1996) **Other collection strain no.:** IAM C-588 (=C-312); UTEX 1255 **Isolator:** Biebel **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M **Characteristics:** Heterothallic; Crosses with UTEX 1256

**NITELLA** : Charophyceae

*Nitella acuminata* A.Braun ex Wallman var. capitulifera (Allen) Imahori

1607 History: < Sakayama, Hidetoshi **Locality:** Kasumigaura General Park, aquatic plant area/Ilbaraki/Japan (2004-07-28) **Identified by:** Sakayama, Hidetoshi (2004-**.**) **States:** Clonal; Non-axenic **Culture conditions:** SWCN-1; SWCN-3; 20°C; 16-20μmol/m²/s; 1 M **Habitat:** Freshwater **Characteristics:** Monoecious; CR+EN **Other strain no.:** CH-96

*N. axilliformis* Imahori

Syn. Nitella translucens (Persoon) C.Agardh f. axilliformis (Imahori) R.D. Wood

1608 History: < Shimmen, Teruo **States:** Clonal; Non-axenic **Culture conditions:** mSWC-2; SWCN-1; SWCN-2; SWCN-3; 22°C; 16-20μmol/m²/s; 1 M **Habitat:** Freshwater **Characteristics:** Monoecious; CR+EN **Other strain no.:** CH-27

1609 History: < Sakayama, Hidetoshi **Locality:** Tamatsukuri/Ilbaraki/Japan (2004-06-29) **Identified by:** Sakayama, Hidetoshi (2004-**.**) **States:** Clonal; Non-axenic **Culture conditions:** mSWC-2; SWCN-1; SWCN-2; SWCN-3; 22°C; 16-20μmol/m²/s; 1 M **Habitat:** Freshwater **Characteristics:** Monoecious; CR+EN **Other strain no.:** CH-81

*Nitella comptonii* J.Groves

1704 History: < Sakayama, Hidetoshi **Locality:** Kunigami/Okinawa/Japan (2005-03-03) **Identified by:** Sakayama, Hidetoshi (2005-03-03) **States:** Clonal; Non-axenic **Culture conditions:** mSWC-2; SWC-1; SWCN-2; SWCN-3; 20°C; 16-20μmol/m²/s; 1 M **Habitat:** Freshwater **Characteristics:** Monoecious **Gene data:** 18S-ITS1-5.8S-ITS2-28S (AB236678); atpB (AB236672); psaB (AB236675); rbcL (AB236669) **Other strain no.:** S091 **References:** 871, 872

1705 History: < Sakayama, Hidetoshi **Locality:** Kume Isl/Okinawa/Japan (2005-01-25) **Identified by:** Sakayama, Hidetoshi (2005-01-25) **States:** Clonal; Non-axenic **Culture conditions:** mSWC-2; SWC-1; SWCN-2; SWCN-3; 20°C; 16-20μmol/m²/s; 1 M **Habitat:** Freshwater **Characteristics:** Monoecious **Gene data:** 18S-ITS1-5.8S-ITS2-28S (AB236679); atpB (AB236673); psaB (AB236676); rbcL (AB236670) **Other strain no.:** S137 **References:** 871, 872

1706 History: < Sakayama, Hidetoshi **Locality:** Onna/Okinawa/Japan (2005-03-03) **Identified by:** Sakayama, Hidetoshi (2005-03-03) **States:** Clonal; Non-axenic **Culture conditions:** mSWC-2; SWC-1; SWCN-2; SWCN-3; 20°C; 16-20μmol/m²/s; 1 M **Habitat:** Freshwater **Characteristics:** Monoecious **Gene data:** 18S-ITS1-5.8S-ITS2-28S (AB236680); atpB (AB236674); psaB (AB236677); rbcL (AB236671) **Other strain no.:** S138 **References:** 871, 872

*Nitella flexilis* (L.) C.Agardh

1610 History: < Shimmen, Teruo **Locality:** Senda/Hyogo/Japan **States:** Clonal; Non-axenic **Culture
conditions: mSWC-2; SWCN-1; SWCN-2; SWCN-3; 20°C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-28

History: < Sakayama, Hidetoshi Locality: Oh-ike Pond/Hyogo/Japan (2001-06-02) Isolator: Sakayama, Hidetoshi Identified by: Sakayama, Hidetoshi States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-2; SWCN-3; 20°C; 16-20μmol/m²/s; 6 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-62: S069 References: 735, 871

Sakayama, Hidetoshi (2004) (Roxburgh ex Bruzelius) C.Agardh var. furcata

Nitella furcata (Roxburgh ex Bruzelius) C.Agardh var. furcata

History: < Shimmen, Teruo States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20°C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-23 Reference: 735

History: < Sakayama, Hidetoshi Locality: Urabandai-kogen/Fukushima/Japan (1999-10-08) Identified by: Sakayama, Hidetoshi States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20°C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Gene data: 18S-ITS1-5.8S-ITS2-28S (AB169927); atpB (AB110843); psaB (AB191749); rbcL (AB076059) Other strain no.: CH-111; S037 References: 735, 871, 873, 874, 875, 876

History: < Sakayama, Hidetoshi Locality: Kasumigaura General Park, aquatic plant area/Ibaraki/Japan (2004-07-28) Identified by: Sakayama, Hidetoshi (2004-**,** States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20°C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-95

Nitella gracilens Morioka

Syn. Nitella furcata (Roxburgh ex Bruzelius) C.Agardh f. gracilens (Morioka) R.D. Wood

History: < Shimmen, Teruo Identified by: Sakayama, Hidetoshi (2004-04-13) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-2; 20°C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-26

History: < Nozaki, Hisayoshi Locality: Lake Ashinoko/Kanagawa/Japan (1995-11-18) Isolator: Ishimoto, Miwa (Re-isolation) Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20°C; 16-20μmol/m²/s; 6 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-34

History: < Sakayama, Hidetoshi Locality: Ojii-ga-ike Pond/Hyogo/Japan (2004-06-18) Isolator: Ishimoto, Miwa (Re-isolation) Identified by: Sakayama, Hidetoshi (2004-**,** States: Unialgal; Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20°C; 16-20μmol/m²/s; 6 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-76

History: < Sakayama, Hidetoshi Locality: Ojii-ga-ike Pond/Hyogo/Japan (2004-06-18) Identified by: Sakayama, Hidetoshi (2004-**,** States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20°C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-77

Nitella hyalina (DC.) C.Agardh

History: < Shimmen, Teruo States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-2; SWCN-3; 20°C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-29

170
Nitella japonica Allen
Syn. Nitella furcata (Roxburgh ex Bruzelius) C.Agardh f. japonica (Allen) R.D. Wood

1624 History: < Sakayama, Hidetoshi Locality: Mannou/Kagawa/Japan (2004-06-16) Identified by: Sakayama, Hidetoshi (2004-***,***) States: Clonal; Non-axenic Culture conditions: mSWC-1; SWCN-3; 22 °C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-63

Nitella megaspora (J.Gloves) Sakayama
Syn. Nitella pseudoflabellata A.Braun f. megaspora (J.Groves) R.D. Wood

1628 History: < Sakayama, Hidetoshi Locality: Junsai-numa Pond/Hyogo/Japan (2002-09-12) Identified by: Sakayama, Hidetoshi States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-3; 20 °C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Gene data: 18S-ITS1-5.8S-ITS2-28S (AB169944); atpB (AB169962); psaB (AB191768); rbcL (AB169970) Other strain no.: CH-114; S073 References: 871, 874, 875

Nitella mirabilis Nordstedt ex J.Groves

1629 History: < Higuchi, Sumio Locality: Ohgemi-ike Pond/Nagano/Japan Identified by: Sakayama, Hidetoshi (2004-***,***) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-2; SWCN-3; 20 °C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious Other strain no.: CH-107; S134

Nitella moriokae R.D. Wood

1616 History: < Sakayama, Hidetoshi Locality: Naradani-ike Pond/Kagawa/Japan (2004-06-15) Identified by: Sakayama, Hidetoshi (2004-***,***) Formerly identified as: Nitella furcata (Roxburgh ex Bruzelius) C.Agardh States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20 °C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Other strain no.: CH-68

1632 History: < Nohara, Seichi Locality: Lake Kasumigaura, Takahamairi/Ibaraki/Japan (2001-08-23) Isolator: Ishimoto, Miwa Identified by: Sakayama, Hidetoshi (2004-12-20) States: Unialgal; Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-3; 20 °C; 16-20μmol/m²/s; 6 M Habitat: Freshwater Characteristics: Monoecious; Germinated from a buried oospore Other strain no.: CH-48; S133

1633 History: < Sakayama, Hidetoshi Locality: Sandra, Kamizukise/Hyogo/Japan (2002-09-20) Identified by: Sakayama, Hidetoshi States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-3; 20 °C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious Other strain no.: CH-61; S105

Nitella pulchella Allen

1634 History: < Sakayama, Hidetoshi Locality: Lake Onifukuro/Hyogo/Japan (2001-06-03) Identified by: Sakayama, Hidetoshi States: Clonal; Non-axenic Culture conditions: SWC-1; SWCN-2; 20 °C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Monoecious; CR+EN Gene data: atpB (AB110841); rbcL (AB110867) Other strain no.: CH-112; S051 References: 871, 873

Nitella sp.

1618 History: < Sakayama, Hidetoshi Locality: Onnato River/Okinawa/Japan Identified by: Sakayama, Hidetoshi (2006-07-10) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20 °C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Other strain no.: CH-105

1635 History: < Satake, Kiyoshi Locality: Jinden-ike Pond/Ibaraki/Japan (2001-07-04) Identified by: Kawachi, Masanobu (2001-***,***) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-2; 20 °C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Other strain no.: CH-46

1636 History: < Sakayama, Hidetoshi Locality: Kasumigaura General Park, aquatic plant area/Ibaraki/Japan (2004-07-28) Identified by: Sakayama, Hidetoshi States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-3; 20 °C; 16-20μmol/m²/s; 1 M Habitat: Freshwater Other
strain no.: CH-97

*NITELLOPSIS* : Charophyceae

*Nitellopsis obtusa* (Desvaux) J.Groves

1637 History: < Iwasaki, Naohiko Location: Lake Nojiri/Nagano/Japan (1974-08-08) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-2; SWCN-3; 20 °C; 16-20μmol/m²/s; 6 M Habitat: Freshwater Characteristics: Dioecious; CR+EN Other strain no.: CH-1

1638 History: < Higuchi, Sumio < Iwasaki, Naohiko Location: Lake Nojiri/Nagano/Japan (1974-08-08) Identified by: Iwasaki, Naohiko (1974-08-08) States: Clonal; Non-axenic Culture conditions: mSWC-2; SWCN-1; SWCN-2; SWCN-3; 20 °C; 16-20μmol/m²/s; 6 M Habitat: Freshwater Characteristics: Dioecious; Male; CR+EN Gene data: rbcL (AB195320) Other strain no.: CH-56 Reference: 367

*NITZSCHIA* : Bacillariophyceae

*Nitzschia closterium* (Ehrenberg) Smith

2351 History: < IAM (2007) Other collection strain no.: IAM B-16 Location: Misaki/Kanagawa/Japan Isolator: Tokuda States: Unialgal; Clonal; Axenic[2012 Mar] Culture conditions: ESM; 20°C; 8-15μmol/m²/s; 3 M

*Nitzschia palea* (Kützing) W.Smith


*Nitzschia* sp.

1339 History: < Nakano, Shinichi Location: Uchiumi/Ehime/Japan (2003-07-18) Isolator: Shime, Mari Identified by: Nakano, Shinichi States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 15°C; 10-18μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: A6

1340 History: < Nakano, Shinichi Location: Uchiumi/Ehime/Japan (2003-07-18) Isolator: Shime, Mari Identified by: Nakano, Shinichi States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 15°C; 10-18μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: B4

*NORRISIELLA* : Chlorarachniophyceae

*Norrisiella sphaerica* Ota et Ishida

2433 History: < TKB Location: Baja California/Mexico (1992-05-22) Isolator: Ishida, Ken-ichiro Identified by: Ohta, Shuhei (2007-**.***) States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 15-22μmol/m²/s; 1 M Habitat: Marine (Seaweed) Other strain no.: TKB-329

*NOSTOC* : Cyanophyceae

*Nostoc carneum* Agardh


*Nostoc commune* Vaucher ex Bornet et Flahault

2538 History: < Sakamoto, Toshio Location: Kanazawa University/Ishikawa/Japan Isolator: Sakamoto, Toshio Identified by: Sakamoto, Toshio States: Non-Axenic Culture conditions: BG-11 (N-free); 20°C; 4-6μmol/m²/s; 2 M Habitat: Terrestrial Characteristics: N2 fixation; Gene data: 16S
Nostoc commune

History: < IAM (1983) Other collection strain no.: IAM M-13 Locality: Kurobe Gorge/Toyama/Japan Isolator: Watanabe, Atsushi Identified by: Fukushima, Hiroshi; Watanabe, Makoto M. (Reidentify) States: Unialgal; Non-clonal; Non-axenic Culture conditions: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (Plant (The moss Cavicularia densa)) Characteristics: Epiphytic References: 235, 567, 669, 671, 1008, 1015, 1125, 1159 Remarks: Cryopreserved

Nostoc linckia

History: < IAM (1983) Other collection strain no.: IAM M-16 (=M-251) Locality: Kagoshima/Japan Isolator: Ishikawa, Masako Identified by: Fukushima, Hiroshi; Maruyama, Ko; Watanabe, Makoto M. (Reidentify) States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Gene data: 16S rRNA (AB074503); gyrB (AB074769); rpoC1 (AB074792); rpoD1 (AB074819) References: 567, 937, 1125

Nostoc linckia var. arvense

History: < IAM (1983) Other collection strain no.: IAM M-30 Locality: Kagoshima/Japan Isolator: Ishikawa, Masako Identified by: Fukushima, Hiroshi; Maruyama, Ko; Watanabe, Makoto M. (Reidentify) States: Unialgal; Clonal; Axenic Culture conditions: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) References: 235, 567, 1125 Remarks: Cryopreserved

Nostoc minutum

History: < IAM (1983) Other collection strain no.: IAM M-17 Locality: Ishigaki Isl./Okinawa/Japan Isolator: Ishikawa, Masako Identified by: Watanabe, Makoto M. States: Unialgal; Non-clonal; Non-axenic Culture conditions: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Characteristics: Chromatic adaptation References: 139, 567, 583, 808, 1125, 1159

Nostoc punctiforme

History: < IAM (2007) < Watanabe, Atsushi Other collection strain no.: IAM M-15 Isolator: Watanabe, Atsushi Identified by: Watanabe, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: MDM (agar); 20°C; 13-18μmol/m²/s; 3 M Habitat: Terrestrial (The lichen Peltigera erumpens) Characteristics: Nitrogen fixation; Chromatic adaptation

Nostoc sp.


Nostoc sp.


Nostoc verrucosum Vaucher

2539 History: < Sakamoto, Toshio Locality: Ishikawa/Japan Isolator: Sakamoto, Toshio Identified by: Sakamoto, Toshio States: Non-Axenic Culture conditions: BG-11 (N-free); 20°C; 4-6μmol/m²/s; 2 M Habitat: Freshwater Characteristics: N2 fixation; Epilithic Gene data: 16S rRNA (AB494996); wspA (AB509258) Other strain no.: KU005 Remarks: Cryopreserved

OCHROMONAS : Chrysophyceae

Ochromonas danica Pringsheim

2142 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM CS-4 (=CS-2); ATCC 30004; CCAP 933/2; SAG 933-7; UTEX L 1298; CCAP 933/2B; CMMP 585 Locality: near Everdrup/Denmark Isolator: Pringsheim, E. G. Identified by: Pringsheim, E. G. States: Unialgal; Clonal; Axenic Culture conditions: O (semi-solid); 20°C; 40-50μmol/m²/s; 14 D Habitat: Freshwater References: 57, 379, 512, 1191

Ochromonas minuta Pringsheim

2143 History: < IAM (2007) < UTEX (1996) Other collection strain no.: IAM CS-5 (=CS-3); CCAP 933/10; SAG 933-10; UTEX L 1300 Locality: Solling/Germany Isolator: Pringsheim, E. G. States: Unialgal; Clonal; Axenic[2012 Mar] Culture conditions: O (semi-solid); 20°C; 40-50μmol/m²/s; 1 M Habitat: Freshwater (Pond water)

Ochromonas sp.

1828 History: < TKB Locality: East China Sea (2004-07-28) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi (2004-**,**-**) States: Unialgal; Non-clonal; Non-axenic Culture conditions: ESM; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-152 Remarks: Fragile species to transportation stresses

2300 History: < Suda, Shoichiro Locality: Mitsukaido/Ibaraki/Japan (1986-01-17) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 15-22μmol/m²/s; 2 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Pond sediment) Other strain no.: KY-1S

OCHROSPHAERA : Prymnesiophyceae

Ochrophaera neapolitana Schüssnig

CONTENTS

1964 History: < TKB Locality: Tatsukushi Beach/Kochi/Japan (2006-07-14) Isolator: Chikuni, Tomoko Identified by: Chikuni, Tomoko (2006-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: IMK; 20°C; 15-22μmol/m²/s; 14 D Habitat: Marine (Seawater) Other strain no.: TKB-324

**ODONTELLA** : Bacillariophyceae

*Odontella aurita* Agardh


*Odontella longicurris* (Greville) Hoban

590 History: < Ono, Sachiko Locality: Hitachi/Ibaraki/Japan (1990-09-26) Isolator: Ono, Sachiko Identified by: Ono, Sachiko States: Unialgal; Non-clonal; Non-axenic Culture conditions: f/2; 15°C; 10-18μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: St-11

**OEDOGONIUM** : Chlorophyceae

*Oedogonium obesum* Wittrock ex Hirn

203 History: < IAM (1983) Other collection strain no.: IAM C:348 Locality: Japan Isolator: Saito, E. Identified by: Saito, E. States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Other strain no.: 807 References: 235, 567, 1014

**OLISTHODISCUS** : Raphidophyceae

*Olisthodiscus luteus* Carter

15 History: < Inouye, Isao Locality: Seto Inland Sea/Oyakama/Japan Isolator: Inouye, Isao Identified by: Inouye, Isao States: Unialgal; Clonal; Axenic Culture conditions: f/2; 20°C; 15-22μmol/m²/s; 1 M Habitat: Marine (Coastal soil) Characteristics: Red tide Other strain no.: TKB-097 Remarks: Fragile species to transportation stresses

1379 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2004-03-09) Isolator: Okamoto, Noriko Identified by: Okamoto, Noriko States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-097 (nrc) Remarks: Fragile species to transportation stresses

1831 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2005-07-***) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi (2005-**-***) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Sand) Other strain no.: TKB-262 Remarks: Fragile species to transportation stresses

**OLTMANNSIELLOPSIS** : Ulvophyceae

*Oltmannsiellopsis geminata* Inouye et Chihara


*Oltmannsiellopsis unciallaris* Inouye et Chihara

Oltmannsiellopsis viridis (Hargraves et Steele) Chihara et Inouye

360 History: < Suda, Shoichiro Locality: Onagawa Bay/Miyagi/Japan (1984-08-28) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic[2012 Feb] Culture conditions: ESM; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Gene data: 18S rRNA (D86495); Plastid DNA (DQ291132) Other strain no.: 8280G41-2 References: 49, 567, 659, 847, 848, 857

OOCYSTIS: Trebouxiophyceae

Oocystis borgeti Snow


Oocystis lacustris Chodat


661 History: < Kasai, Fumie Locality: Miyata River/Ibaraki/Japan (1987-05-22) Isolator: Kasai, Fumie Identified by: Kasai, Fumie States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 8-15μmol/m²/s; 6 M Habitat: Freshwater (River water) Other strain no.: 4st-3-9 References: 567, 1018 Remarks: Cryopreserved

662 History: < Kasai, Fumie Locality: Miyata River/Ibaraki/Japan (1987-02-25) Isolator: Kasai, Fumie Identified by: Kasai, Fumie States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 8-15μmol/m²/s; 6 M Habitat: Freshwater (River water) Other strain no.: 1st-2-9 References: 567, 1017, 1018 Remarks: Cryopreserved

OOLITHOTUS: Prymnesiophyceae

Oolithotus fragilis (Lohmann) Reinhardt

1320 History: < Kawachi, Masanobu Locality: Hachijo Isl., Yaene Harbor/Tokyo/Japan (2002-01-23) Isolator: Noël, Mary-Hélène Identified by: Noël, Mary-Hélène States: Unialgal; Clonal; Non-axenic; Coccolith(±)[2013 Jan] Culture conditions: mIMR; MNK; 20°C; 25-40μmol/m²/s; 20 D Habitat: Marine (Seawater) Other strain no.: MH 35

1321 History: < Kawachi, Masanobu Locality: Hachijo Isl., Yaene Harbor/Tokyo/Japan (2003-01-15) Isolator: Noël, Mary-Hélène Identified by: Noël, Mary-Hélène States: Unialgal; Clonal; Non-axenic; Coccolith(±)[2013 Jan] Culture conditions: mIMR; MNK; 20°C; 22-32μmol/m²/s; 20 D Habitat: Marine (Seawater) Other strain no.: MH 58

1322 History: < Kawachi, Masanobu Locality: East China Sea (2003-08-06) Isolator: Noël, Mary-Hélène Identified by: Noël, Mary-Hélène States: Unialgal; Clonal; Non-axenic; Coccolith(−)[2013 Jan] Culture conditions: MNK; 20°C; 22-32μmol/m²/s; 20 D Habitat: Marine (Seawater) Other strain no.: MH 80

OPHIOCYTUM: Xanthophyceae

Ophiocytium capitatum Wolle
CONTENTS

1011 History: < Moriya, Mayumi Location: Shishizuka-ohike Pond/Ibaraki/Japan (2000-05-***) Isolator: Moriya, Mayumi Identified by: Moriya, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Other strain no.: #86 Reference: 137

1384 History: < TKB Location: Hyotaro-ike Pond/Ibaraki/Japan (2004-06-24) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 40-50μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Other strain no.: TKB-125 (nak19)

Ophiocytium parvulum Wolle

1385 History: < TKB Location: Shishizuka-ohike Pond/Ibaraki/Japan (2004-06-24) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 40-50μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Other strain no.: TKB-126 (nak20)

OSCILLATORIA : Cyanophyceae

Oscillatoria amphibia Agardh ex Gomont

361 History: < Watanabe, Makoto M. Location: Asaji Bay/Nagasaki/Japan (1985-07-***) Isolator: Watanabe, Makoto M. Identified by: Fukushima, Hiroshi; Watanabe, Makoto M. (Reidentify) States: Unialgal; Clonal; Non-axenic Culture conditions: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Marine (Seawater) Characteristics: Benthic Other strain no.: Oa References: 139, 567 Remarks: Cryopreserved

Oscillatoria animalis Agardh ex Gomont

206 History: < IAM (1983) Other collection strain no.: IAM M-75 Location: Japan Isolator: Murano, Fumio Identified by: Fukushima, Hiroshi; Watanabe, Makoto M. (Reidentify) States: Unialgal; Clonal; Non-axenic Culture conditions: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater References: 139, 235, 567 Remarks: Cryopreserved

Oscillatoria laelevirens Gomont

31 History: < IAM (1983) Other collection strain no.: IAM M-42 (=M-242) Location: Kawaji Hot Spring/Tochigi/Japan Isolator: Ishikawa, Masako Identified by: Fukushima, Hiroshi; Watanabe, Makoto M. (Reidentify) States: Unialgal; Clonal; Non-axenic Culture conditions: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Hot spring References: 235, 567, 1159

Oscillatoria limnetica Lemmermann

36 History: < IAM (1983) Other collection strain no.: IAM M-92 Location: Nakano-ku/Tokyo/Japan Isolator: Murano, Fumio Identified by: Fukushima, Hiroshi; Watanabe, Makoto M. (Reidentify) States: Unialgal; Clonal; Non-axenic Culture conditions: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial References: 20, 139, 235, 567, 797 Remarks: Cryopreserved

Oscillatoria mougeotii Kützing


Oscillatoria neglecta Lemmermann


Oscillatoria rosea Utermöhl
208 History: < Ichimura, Yoji Other collection strain no.: IAM M-220 Locality: Asagi Bay/Nagasaki/Japan (1983-08-19) Isolator: Ichimura, Yoji Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Axenic Culture conditions: f/2; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Gene data: 16S rRNA (AB003163) Other strain no.: IAM M-117 References: 139, 214, 280, 281, 567, 916 Remarks: Cryopreserved

Oscillatoria

2118 History: < Safferman, R. S. Other collection strain no.: IAM M-117 Identified by: Ishida, Tatuya States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: f/2; 20°C; 13-18μmol/m²/s; 3 M Gene data: 16S rRNA (AB003163) Other strain no.: CU 1407/1 References: 214, 280, 281

2308 History: < Yanagimoto, Masakatsu Locality: Lake Chad/Chad Isolator: Yanagimoto, Masakatsu Identified by: Yanagimoto, Masakatsu States: Unialgal; Clonal; Axenic Culture conditions: SOT; 20°C; 4-10μmol/m²/s; 4 M (25°C; 60-70μmol/m²/s) Habitat: Salt water (Water)

Oscillatoria tenuis

33 History: < Ichimura, Yoji Other collection strain no.: IAM M-50 Locality: Setagaya-ku, Ohara-cho/Tokyo/Japan Isolator: Ishikawa, Masako Identified by: Maruyama, Ko; Watanabe, Makoto M. (Reidentify) States: Unialgal; Clonal; Non-axenic Culture conditions: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) Gene data: 16S rRNA (AB042844) References: 139, 235, 567, 796 Remarks: Cryopreserved

OSTREOCOCCUS

2674 History: < RCC (2010) Other collection strain no.: RCC 809 Locality: Tropical Atlantic (1991-10-01) Isolator: Partensky F.; Rodriguez F. (Re-isolation) States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 22-32μmol/m²/s; 14 D Habitat: Marine (Seawater) Other strain no.: Eum16BBL_clonal

OSTREOCoccus tauri


OSTREOPSIS

208 History: < TKB Locality: Yaene Harbor/Tokyo/Japan (2003-06-27) Isolator: Kai, Atsushi Identified by: Kai, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: MNK; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-064 (AK-06) Remarks: Fragile species to transportation stresses

OVULINATA


OXYRRHIS

494 History: < Sawaguchi, Tomohiro Locality: Hachinohe/Aomori/Japan (1988-08-22) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro States: Mixed; Clonal; Non-axenic
Culture conditions: f/2; 20 °C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater)

Characteristics: Predator; Feeds on Pyramimonas parkeae (NIES-254) Other strain no.: 370OX

Remarks: Fragile species to transportation stresses

PANDORINA: Chlorophyceae

Pandorina colemaniae Nozaki

572 History: < Nozaki, Hisayoshi Locality: Kourakuen/Ookayama/Japan (1988-10-12) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Authentic strain; Isogamy; Mating type(+); Crosses with NIES-573 Gene data: atpB (AB014027); psaA (AB044232); psaB (AB044457); psbC (AB044512); rbcL (D63441) Other strain no.: 88-1025-1 References: 567, 715, 726, 733, 738

Pandorina morum (O.F. Müller) Bory

242 History: < Suda, Shoichiro Locality: Lake Ozenuma/Fukushima/Japan (1983-08-30) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: CA; 20 °C; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Heterothallic; Mating type(+); Crosses with NIES-243 and 362 Other strain no.: Oz-Pa-2 Reference: 567

362 History: < Suda, Shoichiro Locality: Lake Ozenuma/Fukushima/Japan (1983-08-30) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Axenic Culture conditions: CA; 20 °C; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Heterothallic; Mating type(−); Crosses with NIES-242 Other strain no.: Oz-Pa-3 Reference: 567

886 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 854 Locality: Bloomington/Indiana/U.S.A. (1955-09-**) Isolator: Coleman, A. W. Identified by: Coleman, A. W. States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Heterothallic; Isogamy Gene data: atpB (AB044180); psaA (AB044231); psaB (AB044456); psbC (AB044510); rbcL (AB044511) References: 56, 733

887 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 880 Locality: Tulare County/California/U.S.A. (1951-02-**) Isolator: Coleman, A. W. Identified by: Coleman, A. W. States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 22-27μmol/m²/s; 1 M Habitat: (Soil) Characteristics: Heterothallic; Isogamy Gene data: atpB (AB044179); psaA (AB044229); psaA (AB044230); psbA (AB044455); psbC (AB044509); rbcL (AB044166) References: 56, 733


889 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1727 Localita: Kimberley/South Africa (1967-07-22) Isolator: Palmer, E. Identified by: Palmer, E. States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20 °C; 22-27μmol/m²/s; 1 M Habitat:
(Soil) Characteristics: Heterothallic; Isogamy; Mating type(−); Crosses with NIES-888

**Gene data:** atpB (AB044178); psaA (AB044228); psaB (AB044454); psbC (AB044508); rbcL (AB044165) **Reference:** 733

890 **History:** < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 2326 **Locality:** Kawai Dam/Ishikawa/Japan (1977-09-**)) **Isolator:** Nozaki, Hisayoshi **Identified by:** Nozaki, Hisayoshi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 22-27μmol/m²/s; 1 M **Habitat:** Freshwater (Reservoir water) **Characteristics:** Other water bloom; Heterothallic; Isogamy **Gene data:** atpB (AB044177); psaA (AB044227); psaB (AB044453); psbC (AB044506); rbcL (AB044507) **Other strain no.:** 7916-P-7 **References:** 720, 733

**Pandorina morum** (O.F. Müller) Bory var. *morum*

574 **History:** < Nozaki, Hisayoshi **Locality:** Nepal (1986-09-**)) **Isolator:** Nozaki, Hisayoshi **Identified by:** Nozaki, Hisayoshi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** VT; 20°C; 22-27μmol/m²/s; 1 M **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Isogamy; Mating type(+); Crosses with NIES-575 **Gene data:** atpB (AB014025); atpB (AB014026); psaA (AB044226); psaB (AB044452); psbC (AB044505); rbcL (D63442) **Other strain no.:** 7916-P-7 **References:** 567, 662, 698, 715, 733, 738, 740

575 **History:** < Nozaki, Hisayoshi **Locality:** Nepal (1986-09-**)) **Isolator:** Nozaki, Hisayoshi **Identified by:** Nozaki, Hisayoshi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 22-27μmol/m²/s; 1 M **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Isogamy; Mating type(−); Crosses with NIES-574 **Other strain no.:** 7916-P-8 **References:** 567, 698

**PARACERCOMONAS** : Sarcomonadea

**Paracercomonas elongata** Howe et Cavalier-Smith

2450 **History:** < Bass, David **Locality:** U.K. (2006-***)) **Isolator:** Howe, Alexis T. **Identified by:** Bass, David; Howe, Alex T. (2008-***)) **Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat:** Terrestrial (Plant (Ivy leaf)) **Characteristics:** Heterotrophic; Authentic strain; Resting spore forming **Other strain no.:** IVY11 **Reference:** 32

**Paracercomonas oxoniensis** Howe et Cavalier-Smith

2451 **History:** < Bass, David **Locality:** Wytham Wood/U.K. (2006-***)) **Isolator:** Howe, Alexis T. **Identified by:** Bass, David; Howe, Alex T. (2008-***)) **Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat:** Terrestrial (Soil) **Characteristics:** Heterotrophic; Authentic strain; Resting spore forming **Other strain no.:** WA8 **Reference:** 32

**Paracercomonas paralaciniaegerens** Bass et Cavalier-Smith

2452 **History:** < Bass, David **Locality:** U.K. (2004-***)) **Isolator:** Bass, David **Identified by:** Bass, David; Howe, Alex T. (2008-***)) **Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat:** Terrestrial (Soil) **Characteristics:** Heterotrophic; Authentic strain; Resting spore forming **Other strain no.:** 31-1C **Reference:** 32

**Paracercomonas pleomorpha** Bass et Cavalier-Smith

2453 **History:** < Bass, David **Locality:** U.K. (2004-***)) **Isolator:** Bass, David **Identified by:** Bass, David; Howe, Alex T. (2008-***)) **Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat:** Terrestrial (Soil) **Characteristics:** Heterotrophic; Authentic strain; Resting spore forming **Other strain no.:** 19-5C **Reference:** 32

**Paracercomonas producta** Howe et Cavalier-Smith

2454 **History:** < Bass, David **Locality:** Wytham Wood/U.K. (2006-***)) **Isolator:** Howe, Alexis T. **Identified by:** Bass, David; Howe, Alex T. (2008-***)) **Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat:** Terrestrial (Soil) **Characteristics:** Heterotrophic; Authentic strain; Resting spore forming **Other strain no.:** WA42 **Reference:** 32

**PARACHLORELLA** : Trebouxiophyceae
**Parachlorella kessleri** (Fott et Nováková) Krienitz, Hegewald, Hepperle, Huss, Rohr et Wolf

Syn. *Chlorella kessleri* Fott et Nováková

### History:
- IAM C-33 Isolator: Watanabe, Atsushi Identified by: Kessler, E. (1994); Confirmed at NIES by DNA sequencing (1994) States: Unialgal; Clonal; Axenic [2008 Apr] Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Gene data: 18S rRNA (AB488589) Remarks: Cryopreserved

### History:
- IAM C-37 Isolator: Watanabe, Atsushi Identified by: Kessler, E. (1994); Confirmed at NIES by DNA sequencing (1994) States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Gene data: 18S rRNA (AB488590) Remarks: Cryopreserved

### History:
- IAM C-38 Isolator: Watanabe, Atsushi Identified by: Kessler, E. (1994); Confirmed at NIES by DNA sequencing (1994) States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Gene data: 18S rRNA (AB488591) Remarks: Cryopreserved

### History:
- IAM C-39 Isolator: Watanabe, Atsushi Identified by: Kessler, E. (1994); Confirmed at NIES by DNA sequencing (1994) States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Gene data: 18S rRNA (AB488592) Remarks: Cryopreserved

### History:
- IAM C-47 Identified by: Kessler, E. (1994); Confirmed at NIES by DNA sequencing (1994) States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Gene data: 18S rRNA (AB488594) References: 496, 548, 559, 560 Remarks: Cryopreserved

### History:
- IAM C-143 Isolator: Ishikawa, Masako Identified by: Fukushima, Hiroshi; Kessler E. (1993); Confirmed at NIES by DNA sequencing (1993) States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Gene data: 18S rRNA (AB488596) References: 1212 Remarks: Cryopreserved

### History:
- IAM C-155 Identified by: Kessler, E. (1994); Re-identified at NIES by DNA sequencing (1994) Formerly identified as: Scenedesmus acutus Meyen States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Gene data: 18S rRNA (AB488595) Remarks: Cryopreserved

### History:
- IAM C-208; CAUP H1901; CCAP 211/11G; SAG 211-11g; UTEX 262 Isolator: Winokur Identified by: Kessler, E. (1993); Confirmed at NIES by DNA sequencing (1993) States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Gene data: 16S rRNA (AJ242769); 16S rRNA (AJ387750); 18S rRNA (AJ242765); 18S rRNA (AB488596) Reference: 1212 Remarks: Cryopreserved

### History:
- IAM C-531; ATCC 11468; CCAP 211/11H; SAG 211-11h; UTEX 263 Locality: U.S.A. Isolator: Pratt, R. Identified by: Confirmed at NIES by DNA sequencing States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20 °C; 8-15 μmol/m²/s; 3 M Gene data: 18S rRNA (AB488597) References: 5, 123, 131, 195, 210, 211, 385, 451, 511, 537, 539, 541, 547, 548, 549, 554, 557, 558, 559, 560, 561, 633, 635, 636, 637, 638, 639, 640, 641, 642, 643, 781, 959, 960, 963, 964, 1022, 1023, 1024, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1211, 1223, 1224 Remarks: Cryopreserved

### History:
- IAM C-425; SAG 211-11h20 Isolator: Schwarze, P.; Frandsen, N. O. Identified by: Re-identified at NIES by DNA sequencing Formerly identified as: *Chlorella vulgaris* Beijerinck States: Unialgal; Clonal; Axenic Culture conditions: Tre (agar); 20 °C; 8-15 μmol/m²/s; 3 M Characteristics: Yellow mutant of NIES-2160 (IAM C-531) Gene data: 18S rRNA (AB488598) References: 511, 915, 1101 Remarks: Cryopreserved

### History:
- IAM C-90-10-23 < Kamiya, A. (1990-23) < Miyachi, Shigetoh < Schmid, G. H. Other collection strain no.: IAM C-90-23 Isolator:...
collection strain no.: IAM C-539; SAG 9.80 Identified by: Re-identified at NIES by DNA sequencing Formerly identified as: Chlorella vulgaris Beijerinck States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Characteristics: White mutant of NIES-2160 (IAM C-531) Gene data: 18S rRNA (AB488599) Other strain no.: Schwarze 125 References: 337, 338, 339, 340, 540, 541, 915, 1101 Remarks: Cryopreserved

**PARAPHYSOMONAS**: Chrysophyceae

**Paraphysomonas vestita** De Saedeleer


**PAULINELLA**: Imbricatea

**Paulinella chromatophora** Lauterborn

**History**: < Ishida, Ken-ichiro Locality: Fukuroda/Ibaraki/Japan (2006-05-15) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi (2006-05-17) States: Unialgal; Clonal; Non-axenic Culture conditions: 1/2 WarisH+Si; 20°C; 1-3μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Symbiotic; Benthic Other strain no.: FK01

**PAULSCHULZIA**: Chlorophyceae

**Paulschulzia pseudovolvox** Skuja

**History**: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 167 Locality: Tvarminne/Finland States: Unialgal; Clonal; Axenic Culture conditions: AF-6; 20°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater Gene data: atpB (AB014040); psaA (AB044422); psaA (AB044423); psbA (AB044473); psbC (AB044531); psbC (AB044532); rbcL (D86837) References: 86, 567, 733, 738

**PAVLOVA**: Pavlovophyceae

**Pavlova pyrenoidosa** Butcher

**History**: < Sawaguchi, Tomohiro Locality: Matoya Bay/Mie/Japan (1984-09-01) Isolator: Sawaguchi, Tomohiro Identified by: Suda, Shoichi States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 22-32μmol/m²/s; 2 M Habitat: Marine (Water) Other strain no.: MB-D-24

**Pavlova pinguis** J.C. Green

**History**: < TKB Locality: Wakayama/Japan (2003-05-19) Isolator: Kai, Atsushi Identified by: Kai, Atsushi States: Unialgal; Non-clonal; Non-axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Water) Other strain no.: TKB-068 (AK-10)
Pavlova sp.

1399 History: < TKB Locality: Wakayama/Japan (2003-07-29) Isolator: Kai, Atsushi Identified by: Kai, Atsushi States: Unialgal; Non-clonal; Non-axenic Culture conditions: f/2; 20 °C; 40-50μmol/m²/s; 1 M Habitat: Marine (Water) Other strain no.: TKB-069 (AK-11)

1400 History: < TKB Locality: Ishikawa/Japan Isolator: Yoshii, Yukie Identified by: Kai, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20 °C; 40-50μmol/m²/s; 1 M Habitat: Marine Other strain no.: TKB-070 (AK-12)

1401 History: < TKB Locality: Amachi Beach/Okinawa/Japan (2003-12-**) Isolator: Okamoto, Noriko States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20 °C; 20-30μmol/m²/s; 1 M Habitat: Marine (Sand) Other strain no.: TKB-241

1815 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2005-03-30) Isolator: Okamoto, Noriko Identified by: Okamoto, Noriko (2005-**..**) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20 °C; 20-30μmol/m²/s; 1 M Habitat: Marine (Sand) Other strain no.: TKB-242

1965 History: < TKB Locality: Isonoura Beach/Wakayama/Japan (2005-10-18) Isolator: Chikuni, Tomoko Identified by: Chikuni, Tomoko (2005-**..**) States: Unialgal; Clonal; Non-axenic Culture conditions: IMK; 20 °C; 15-22μmol/m²/s; 14 D Habitat: Marine (Sand) Other strain no.: TKB-326

Pediastrum: Chlorophyceae

Pediastrum angulosum Meneghini var. angulosum

300 History: < Kasai, Fumie Locality: Higashihiroshima/Hiroshima/Japan (1983-10-**) Isolator: Kasai, Fumie Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C; 20 °C; 4-10μmol/m²/s; 3 M (25 °C; 70-80μmol/m²/s) Habitat: Freshwater (Lake water) Other strain no.: 83-24-1-7 Reference: 567

Pediastrum boryanum (Turpin) Meneghini

209 History: < Watanabe, Michiko H. Locality: Lake Kasumigaura/Ibaraki/Japan (1982-12-**) Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. States: Unialgal; Clonal; Axenic Culture conditions: C; 20 °C; 8-15μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: CO1 (D63659) Other strain no.: K-P-40 References: 188, 567 Remarks: Cryopreserved

301 History: < TAC Locality: Lake Shoji/Yamanashi/Japan (1981-10-27) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic Culture conditions: C; 20 °C; 8-15μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: Pcy (AB218889) Other strain no.: TAC 56-3A (TAN-56-3A) References: 567, 631, 632 Remarks: Cryopreserved

Pediastrum duplex Meyen

212 History: < Watanabe, Michiko H. Locality: Lake Kawaguchi/Yamanashi/Japan (1981-06-**) Isolator: Watanabe, Michiko H. Identified by: Watanabe, Michiko H. States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20 °C; 8-15μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Other strain no.: KW-P-1 References: 567, 1112 Remarks: Cryopreserved

Pediastrum duplex Meyen var. duplex

210 History: < Yuri, Akira Locality: Tsukuba/Ibaraki/Japan (1983-05-25) Isolator: Yuri, Akira Identified by: Yuri, Akira; Watanabe, Masayuki (Reidentify) States: Unialgal; Clonal; Axenic Culture conditions: C; 20 °C; 4-10μmol/m²/s; 3 M (25 °C; 70-80μmol/m²/s) Habitat: Freshwater (Pond water) Other strain no.: Pe-16 Reference: 567 Remarks: Cryopreserved
Pediastrum duplex Meyen var. gracillimum W. et G.S. West

Pediastrum simplex Meyen

Pediastrum tetras (Ehrenberg) Ralfs

PEDINELLA : Dictyochophyceae

Pedinella sp.

Pedinella squamata Sekiguchi, Kawachi, Nakayama et Inouye

PEDINOMONAS : Pedinophyceae

Pedimonas minor Korshikov

PELAGOMONAS : Pelagophyceae
**Pelagomonas calceolata** Andersen et Saunders

2689  **History:** < RCC (2010)  **Other collection strain no.**: RCC 102; CCMP 1864  **Locality:** Sargasso Sea (1987-10-09)  **Isolator:** Vaulot, Daniel  **Identified by:** Simon, N.  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** ESM; 20°C; 22-32μmol/m²/s; 1 M  **Habitat:** Marine (Seawater)  **Other strain no.:** MAXEuk 72

2690  **History:** < RCC (2010)  **Other collection strain no.**: RCC 103; CCMP 1865  **Locality:** Red Sea (Gulf of Aqaba) (1993-01-01)  **Isolator:** Veldhuis, M.; Simon, N. (Re-isolation)  **Identified by:** Simon, N.  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** ESM; 20°C; 22-32μmol/m²/s; 1 M  **Habitat:** Marine (Seawater)  **Other strain no.:** REDSEA2C

2691  **History:** < RCC (2010)  **Other collection strain no.**: RCC 108  **Locality:** Equatorial Pacific (1994-11-26)  **Isolator:** Vaulot, Daniel  **Identified by:** Guillou, L.  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** ESM; 20°C; 22-32μmol/m²/s; 1 M  **Habitat:** Marine (Seawater)  **Other strain no.:** OL1120FC

**Pelagomonas calceorata** Andersen et Saunders

1003  **History:** < Kawachi, Masanobu < CCMP 1214  **Locality:** North Pacific, Central Gyre (1973-02-17)  **Isolator:** Lewin, Ralph A.  **Identified by:** Andersen, Robert A.  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** MNK; 22°C; 20-30μmol/m²/s; 14 D  **Habitat:** Marine  **Reference:** 137

**PENIUM** : Charophyceae  

**Penium margaritaceum** Brébisson

217  **History:** < IAM (1983)  **Other collection strain no.**: IAM C-397 (=C-589)  **Locality:** Rumalbhara/Nepal (1965-11-01)  **Isolator:** Ichimura, Terunobu  **Identified by:** Ichimura, Terunobu  **States:** Unialgal; Clonal; Axenic  **Culture conditions:** C; 20°C; 8-15μmol/m²/s; 2 M (25°C; 70-80μmol/m²/s)  **Habitat:** Freshwater (Paddy soil)  **Characteristics:** Heterothallic  **Other strain no.:** N-76-20  **References:** 235, 567

303  **History:** < Kasai, Fumie  **Locality:** Tsukiyono/Gunma/Japan (1984-06-01)  **Isolator:** Kasai, Fumie  **Identified by:** Kasai, Fumie  **States:** Unialgal; Clonal; Axenic[2013 Jan]  **Culture conditions:** C; 20°C; 8-15μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s)  **Habitat:** Freshwater (Ditch water)  **Other strain no.:** 84-25-1  **Reference:** 567

**PERCOLOMONAS** : Heterolobosea  

**Percolomonas** sp.

1441  **History:** < TKB  **Locality:** Chiba Harbor/Chiba/Japan (2002-11-29)  **Isolator:** Nakayama, Takeshi  **Identified by:** Nakayama, Takeshi  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** f/2 + Wheat; 15°C; 0μmol/m²/s; 20 D  **Habitat:** Marine (Seawater)  **Characteristics:** Heterotrophic  **Other strain no.:** TKB-016 (NY0123)  **Reference:** 142

**PERIDINIUM** : Dinophyceae  

**Peridinium bipes** Stein f. **globosum** Lindemann

495  **History:** < Sawaguchi, Tomohiro  **Locality:** Lake Onogawa/Fukushima/Japan (1985-07-30)  **Isolator:** Sawaguchi, Tomohiro  **Identified by:** Sawaguchi, Tomohiro  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** AF-6; 15°C; 35-50μmol/m²/s; 2 M  **Habitat:** Freshwater (Lake water)  **Other strain no.:** LOND-9  **Reference:** 387  **Remarks:** Fragile species to transportation stresses

**Peridinium bipes** Stein f. **occultatum** (Lindemann) Lefèvre

497  **History:** < Sawaguchi, Tomohiro  **Locality:** Lake Kizaki/Nagano/Japan (1988-04-20)  **Isolator:** Sawaguchi, Tomohiro  **Identified by:** Sawaguchi, Tomohiro  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** Carefoot; 15°C; 35-50μmol/m²/s; 2 M  **Habitat:** Freshwater (Lake water)  **Characteristics:** Red tide  **Other strain no.:** LK420  **Remarks:** Poor growth; Fragile species to
transportation stresses

**Peridinium pseudolaeve** Lefèvre

1405  
**History:** < TKB  
**Locality:** Hyotaro-ike Pond/Ibaraki/Japan (2003-01-**)  
**Isolator:** Nakayama, Takeshi  
**Identified by:** Nakayama, Takeshi  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** AF-6; 15°C; 35-50μmol/m²/s; 2 M  
**Habitat:** Freshwater (Pond water)  
**Characteristics:** Other water bloom  
**Other strain no.:** TKB-048 (nak-03)  
**Remarks:** Fragile species to transportation stresses

**Peridinium volii** Lemmermann

365  
**History:** < Sawaguchi, Tomohiro  
**Locality:** Ajiro/Iwate/Japan (1984-09-08)  
**Isolator:** Sawaguchi, Tomohiro  
**Identified by:** Sawaguchi, Tomohiro  
**States:** Unialgal; Clonal; Axenic  
**Culture conditions:** Carefoot; 15°C; 35-50μmol/m²/s; 2 M  
**Habitat:** Freshwater (Pond water)  
**Other strain no.:** HND-1  
**Remarks:** Poor growth; Fragile species to transportation stresses

501  
**History:** < Sawaguchi, Tomohiro  
**Locality:** Tsuchiura/Ibaraki/Japan (1986-04-**)  
**Isolator:** Sawaguchi, Tomohiro  
**Identified by:** Sawaguchi, Tomohiro  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** Carefoot; 15°C; 35-50μmol/m²/s; 2 M  
**Habitat:** Freshwater (Pond sediment)  
**Characteristics:** Homothallic  
**Other strain no.:** SPSP-2  
**Remarks:** Fragile species to transportation stresses

**Peridinium willei** Huitfeldt-Kaas

304  
**History:** < Sawaguchi, Tomohiro  
**Locality:** Tsukiyono/Gunma/Japan (1984-06-01)  
**Isolator:** Sawaguchi, Tomohiro  
**Identified by:** Sawaguchi, Tomohiro  
**States:** Unialgal; Clonal; Axenic  
**Culture conditions:** Carefoot; 15°C; 35-50μmol/m²/s; 2 M  
**Habitat:** Freshwater (Pond water)  
**Characteristics:** Homothallic  
**Other strain no.:** 8423-P  
**Reference:** 143  
**Remarks:** Fragile species to transportation stresses

366  
**History:** < Sawaguchi, Tomohiro  
**Locality:** Tsuchiura/Ibaraki/Japan (1985-04-13)  
**Isolator:** Sawaguchi, Tomohiro  
**Identified by:** Sawaguchi, Tomohiro  
**States:** Unialgal; Clonal; Axenic  
**Culture conditions:** Carefoot; 15°C; 35-50μmol/m²/s; 2 M  
**Habitat:** Freshwater (Pond water)  
**Characteristics:** Homothallic  
**Other strain no.:** SPD-1  
**Remarks:** Poor growth; Fragile species to transportation stresses

**PHACOTUS** : Chlorophyceae

**Phacotus lenticularis** (Ehrenberg) Stein

858  
**History:** < Nozaki, Hisayoshi  
**Locality:** Germany  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** C; 20°C; 15-22μmol/m²/s; 2 M  
**Gene data:** 18S rRNA (X91628); atpB (AB014039); psaB (AB084373); psaB (AB084374); rbcL (AJ001883)  
**Other strain no.:** KR 91/1  
**References:** 189, 738, 740

859  
**History:** < Nozaki, Hisayoshi  
**Locality:** < SAG  
**Collection strain no.:** SAG 61-1  
**Locality:** Germany  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** C; 20°C; 15-22μmol/m²/s; 2 M  
**Gene data:** rbcL (AJ001884)  
**Reference:** 189

**PHAEOCYSTIS** : Prymnesiophyceae

**Phaeocystis globosa** Scherffel

388  
**History:** < Sawaguchi, Tomohiro  
**Locality:** Hachijo Isl./Tokyo/Japan (1984-04-19)  
**Isolator:** Sawaguchi, Tomohiro  
**Identified by:** Sawaguchi, Tomohiro  
**Formerly identified as:** Phaeocystis puchetii (Hariot) Lagerheim  
**States:** Unialgal; Non-clonal; Non-axenic  
**Culture conditions:** ESM; 15°C; 20-30μmol/m²/s; 10 D  
**Habitat:** Marine (Seawater)  
**Characteristics:** Red tide  
**Gene data:** CO1 (AB000120)  
**Other strain no.:** 8-P  
**References:** 142, 187  
**Remarks:** Unstable

1396  
**History:** < TKB  
**Locality:** Tsukuba Univ. Marine Research Center/Shizuoka/Japan (2003-04-02)  
**Isolator:** Kai, Atsushi  
**Identified by:** Kai, Atsushi  
**Formerly identified as:** Phaeocystis sp.  
**States:** Unialgal; Non-clonal; Non-axenic  
**Culture conditions:** ESM; 20°C; 40-50μmol/m²/s; 14 D  
**Habitat:** Marine (Seawater)  
**Characteristics:** Red tide  
**Other strain no.:** TKB-032 (AK-03)
Reference: 759

**PHAEOMONAS** : Pinguiophyceae

*Phaeomonas* sp.

2693 **History**: < RCC (2010) **Other collection strain no.**: RCC 503 **Locality**: Mediterranean Sea (Spanish Coast)/Spain (2001-06-25) **Isolator**: Guillou, L.; Guillou, L. (Re-isolation) **Identified by**: Confirmed at RCC by DNA sequencing **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: f/2; 20°C; 22-32μmol/m²/s; 1 M **Habitat**: Marine (Seawater) **Other strain no.**: BL_149-10

**PHORMIDIUM** : Cyanophyceae

*Phormidium ambiguum* Gomont

2119 **History**: < IAM (2007) < Murano, Fumio **Other collection strain no.**: IAM M-71 **Isolator**: Murano, Fumio **Identified by**: Fukushima, Hiroshi **States**: Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions**: MDM (agar); 20°C; 13-18μmol/m²/s; 3 M **Characteristics**: Hydrogen evolution **Gene data**: 16S rRNA (AB003167) **Other strain no.**: Murano 394 (W1-27(1)) **References**: 20, 214, 280, 281

2120 **History**: < IAM (2007) < Tsuzuki, Mikio (2005) < IAM (1994) **Other collection strain no.**: IAM M-283 (=M-89) **Isolator**: Murano, Fumio **Identified by**: Fukushima, Hiroshi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: MDM (agar); 20°C; 13-18μmol/m²/s; 3 M **Remarks**: Cryopreserved

2121 **History**: < IAM (2007) < Tsuzuki, Mikio (2005) < IAM (1994) **Other collection strain no.**: NIG, Japan **Locality**: Africa **Isolator**: Ishikawa, Masako **Identified by**: Fukushima, Hiroshi **States**: Unialgal; Clonal; Axenic[2012 Nov] **Culture conditions**: MDM (agar); 20°C; 13-18μmol/m²/s; 3 M **Habitat**: Terrestrial (Soil) **Remarks**: Cryopreserved

2122 **History**: < IAM (2007) < Tsuzuki, Mikio (2005) < IAM (1994) **Other collection strain no.**: IAM M-285 (=M-108) **Locality**: Kyoto/Kyoto/Japan **Isolator**: Murano, Fumio; Ishikawa, Masako **Identified by**: Fukushima, Hiroshi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: MDM (agar); 20°C; 13-18μmol/m²/s; 3 M **Remarks**: Cryopreserved

*Phormidium angustissimum* W. et G. S.West

2123 **History**: < IAM (2007) < Ishikawa, Masako **Other collection strain no.**: IAM M-21 **Isolator**: Ishikawa, Masako **Identified by**: Fukushima, Hiroshi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: MDM (agar); 20°C; 13-18μmol/m²/s; 3 M **Remarks**: Cryopreserved

*Phormidium foveolarum* Gomont

32 **History**: < IAM (1983) **Other collection strain no.**: IAM M-43 **Locality**: Lake Shirakaba/Nagano/Japan **Isolator**: Ishikawa, Masako **Identified by**: Fukushima, Hiroshi; Watanabe, Makoto M. (Reidentify) **States**: Unialgal; Non-clonal; Non-axenic **Culture conditions**: MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) **Habitat**: Freshwater **References**: 235, 567, 1075, 1108 **Remarks**: Cryopreserved

34 **History**: < IAM (1983) **Other collection strain no.**: IAM M-59 **Locality**: Sakunami Hot Spring/Miyagi/Japan **Isolator**: Ishikawa, Masako **Identified by**: Maruyama, Ko; Watanabe, Makoto M. (Reidentify) **States**: Unialgal; Non-clonal; Non-axenic **Culture conditions**: MDM (agar); 20°C; 4-10 μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s) **References**: 235, 567 **Remarks**: Cryopreserved

503 **History**: < Watanabe, Makoto M. **Locality**: Mt. Tsukuba/Ibaraki/Japan (1987-04-17) **Isolator**: Kasai, Fumie **Identified by**: Watanabe, Makoto M. **States**: Unialgal; Non-clonal; Non-axenic **Culture conditions**: CSi; CSi + Cu; 20°C; 4-10μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s) **Habitat**: Freshwater (Stream sediment) **Other strain no.**: (1)-48 **References**: 567, 1018

504 **History**: < Kasai, Fumie **Locality**: Miyata River/Ibaraki/Japan (1987-03-25) **Isolator**: Kasai, Fumie **Identified by**: Watanabe, Makoto M. **States**: Unialgal; Non-clonal; Non-axenic **Culture conditions**: MDM (agar); 20°C; 13-18μmol/m²/s; 3 M **Remarks**: Cryopreserved
conditions: CSi; CSi + Cu; 20℃; 4-10μmol/m²/s; 3 M (20℃; 15-27μmol/m²/s) Habitat: Freshwater (River sediment) Other strain no.: 2st-2-4 References: 567, 1017, 1018, 1019

505 History: < Kasai, Fumie Locality: Watarase River/Gunma/Japan (1987-08-15) Isolator: Kasai, Fumie Identified by: Watanabe, Makoto M. States: Unialgal; Non-clonal; Non-axenic Culture conditions: CSi; CSi + Cu; 20℃; 4-10μmol/m²/s; 2 M (20℃; 15-27μmol/m²/s) Habitat: Freshwater (River sediment) Other strain no.: AT4-17 References: 567, 1018, 1019

Phormidium henningii Lemmermann

2124 History: < IAM (2007) < Murano, Fumio Other collection strain no.: IAM M-88 Isolator: Murano, Fumio Identified by: Fukushima, Hiroshi States: Unialgal; Clonal; Axenic Culture conditions: MDM (agar); 20℃; 13-18μmol/m²/s; 3 M Other strain no.: Murano 387 (W1-21(2)) Remarks: Cryopreserved

Phormidium jenkelianum G.Schmid

506 History: < Kasai, Fumie Locality: Watarase River/Gunma/Japan (1987-08-15) Isolator: Kasai, Fumie Identified by: Watanabe, Makoto M. States: Unialgal; Non-clonal; Non-axenic Culture conditions: CSi; CSi + Cu; 20℃; 4-10μmol/m²/s; 2 M (20℃; 15-27μmol/m²/s) Habitat: Freshwater (River sediment) Other strain no.: AT5-37 References: 567, 1018

507 History: < Kasai, Fumie Locality: Watarase River/Gunma/Japan (1987-08-15) Isolator: Kasai, Fumie Identified by: Watanabe, Makoto M. States: Unialgal; Non-clonal; Non-axenic Culture conditions: CSi; CSi + Cu; 20℃; 4-10μmol/m²/s; 2 M (20℃; 15-27μmol/m²/s) Habitat: Freshwater (River sediment) Other strain no.: Ast-1-4 References: 139, 567, 1018, 1019

Phormidium luridum (Kützing) Gomont

2125 History: < IAM (2007) < Murano, Fumio Other collection strain no.: IAM M-84 Isolator: Murano, Fumio Identified by: Fukushima, Hiroshi States: Unialgal; Clonal; Non-axenic Culture conditions: MDM (agar); 20℃; 13-18μmol/m²/s; 3 M Other strain no.: Murano 397 (W1-32(2)) Remarks: Cryopreserved

Phormidium molle (Kützing) Gomont

509 History: < Kasai, Fumie Locality: Watarase River/Gunma/Japan (1987-08-15) Isolator: Kasai, Fumie Identified by: Watanabe, Makoto M. States: Unialgal; Non-clonal; Non-axenic Culture conditions: CSi; CSi + Cu; 20℃; 4-10μmol/m²/s; 2 M (20℃; 15-27μmol/m²/s) Habitat: Freshwater (River sediment) Other strain no.: AT2-17 References: 567, 1018, 1019

2126 History: < IAM (2007) < Murano, Fumio Other collection strain no.: IAM M-77 Isolator: Murano, Fumio Identified by: Fukushima, Hiroshi States: Unialgal; Clonal; Axenic Culture conditions: MDM (agar); 20℃; 13-18μmol/m²/s; 3 M Other strain no.: Murano 386 (W1-21U) Remarks: Cryopreserved

Phormidium mucicola Huber-Pestalozzi et Naum

510 History: < Watanabe, Makoto M. Other collection strain no.: IAM M-221 Locality: Mt. Tsukuba/Ibaraki/Japan (1987-04-17) Isolator: Kasai, Fumie Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Non-axenic Culture conditions: CSi; CSi + Cu; 20℃; 4-10μmol/m²/s; 4 M (20℃; 15-27μmol/m²/s) Habitat: Freshwater (Stream sediment) Gene data: 16S rRNA (AB003165) Other strain no.: (1)-23 References: 214, 280, 281, 567, 1018

Phormidium ramosum Boye-Petersen

305 History: < Suda, Shoichiro Locality: Takatori River/Ibaraki/Japan (1984-12-11) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: CSi; CSi + Cu; 20℃; 4-10μmol/m²/s; 4 M (20℃; 15-27μmol/m²/s) Habitat: Freshwater (Sediment) Other strain no.: 841211St5-1 References: 139, 567, 1017, 1018

Phormidium sp.

2128 History: < IAM (2007) < BIU (UTEX; 1961-08-11) Other collection strain no.: IAM M-99; (BIU 426) Isolator: Boresch Identified by: Ishida, Tatsuya States: Unialgal; Clonal; Axenic Culture conditions: MDM (agar); 20℃; 13-18μmol/m²/s; 3 M Gene data: 16S rRNA
189

References: 280, 281, 937

Remarks: Cryopreserved

PICOCHLORUM: Trebouxiophyceae

Picochlorum sp.

1270 History: < Moriya, Mayumi Locality: Banzu Tidal Flat/Chiba/Japan (2002-05-14) Isolator: Moriya, Mayumi Identified by: Moriya, Mayumi; Confirmed at NIES by DNA sequencing Formerly identified as: Nanochlorum sp. States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 22-32μmol/m²/s; 1 M Habitat: Marine (Tidal flat water) Gene data: 18S rRNA (AB488603) Other strain no.: M-66

Remarks: Cryopreserved

PICOPHAGUS: Chrysophyceae

Picophagus flagellatus Guillou et Chrétiennot-Dinet

2586 History: < RCC (2009) Other collection strain no.: RCC 22; CCMP 1953 Locality: Equatorial Pacific (1994-11-07) Isolator: Vaulot, Daniel Identified by: Guillou, L. States: Unialgal; Clonal; Non-axenic Culture conditions: Rice; 20°C; 15-20μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Heterotrophic; Authentic strain Other strain no.: #51

Remarks: Cryopreserved

PLACIDIA: Placididea

Placidia cafeteriopsis Moriya, Nakayama et Inouye

1013 History: < Moriya, Mayumi Locality: Tokyo Bay/Kanagawa/Japan (1998-01-11) Isolator: Moriya, Mayumi Identified by: Moriya, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: SUY 1/10; 15°C; 0μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Phagotrophic; Heterotrophic Gene data: 18S rRNA (AB061218) Other strain no.: #69 Reference: 574

Remarks: Cryopreserved

PLANCTONEMA: Chlorophyceae

Planctonema lauterbornii Schmidle

514 History: < Niiyama, Yuko Locality: Lake Kasumigaura/Ibaraki/Japan (1988-08-18) Isolator: Niiyama, Yuko Identified by: Niiyama, Yuko States: Unialgal; Clonal; Axenic Culture conditions: C; 20°C; 8-15μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Other strain no.: K880818 Reference: 567 Remarks: Cryopreserved

PLANKTOPSphaeria: Chlorophyceae

Planktosphaeria gelatinosa G.M. Smith

2268 History: < IAM (2007) Other collection strain no.: IAM C-405 States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 8-15μmol/m²/s; 3 M

PLANKTOTHRICOIDES: Cyanophyceae

Planktothricoides raciborskii Suda et M.M. Watanabe

Syn. Oscillatoria raciborskii Woloszynska


189
**PLANKTOTHRIX** : Cyanophyceae

*Planktorthrix agardhii* (Gomont) Anagnostidis et Komárek

Syn. Oscillatoria agardhii Gomont

Characteristics: Water bloom

**Gene data**: 16S rRNA (AB045953)

**Other strain no.**: INBaOR

**Reference**: 991

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**History**: Suda, Shoichiro

**Locality**: Lake Inbanuma/Chiba/Japan

**Identified by**: Li, Renhui

**States**: Unialgal; Clonal; Axenic[2013 Jan]

**Culture conditions**: CT; 20℃; 15-25μmol/m²/s; 1 M

**Habitat**: Freshwater (Lake water)

**Characteristics**: Water bloom

**Gene data**: 16S rRNA (AB045953)

**Other strain no.**: INBaOR

**Reference**: 991

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**History**: Suda, Shoichiro

**Locality**: Lake Kasumigaura/Ibaraki/Japan (1983-08-24)

**Isolator**: Suda, Shoichiro

**Identified by**: Suda, Shoichiro

**States**: Unialgal; Clonal; Axenic

**Culture conditions**: CB; 25℃; 20-30μmol/m²/s; 1 M

**Habitat**: Freshwater (Lake water)

**Characteristics**: Cyanobacterial water bloom (aoko)

**Type strain**

**Gene data**: 16S rRNA (AB045954)

**Other strain no.**: K-O-A

**References**: 50, 192, 290, 323, 477, 567, 582, 593, 594, 595, 669, 671, 903, 905, 906, 949, 951, 953, 954, 991, 1077, 1159, 1187, 1272

**Remarks**: Cryopreserved

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**History**: Suda, Shoichiro

**Locality**: Lake Kasumigaura/Ibaraki/Japan (1983-08-24)

**Isolator**: Watanabe, Masayuki

**Identified by**: Suda, Shoichiro

**States**: Unialgal; Clonal; Non-axenic

**Culture conditions**: MA; 25℃; 20-30μmol/m²/s; 1 M

**Habitat**: Freshwater (Lake water)

**Characteristics**: Cyanobacterial water bloom (aoko)

**Other strain no.**: TAC 53 (K-TAN-53)

**References**: 290, 477, 567, 578, 858, 950, 991

**Remarks**: Cryopreserved

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**History**: Takamura, Noriko

**Locality**: Northern Ireland/U.K.

**Identified by**: Suda, Shoichiro

**States**: Unialgal; Clonal; Axenic

**Culture conditions**: CT; 20℃; 4-10μmol/m²/s; 2 M

**Habitat**: Freshwater

**Gene data**: 16S rRNA (AB045956)

**Other strain no.**: K-8

**References**: 567, 991

**Remarks**: Cryopreserved

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**History**: Takamura, Noriko

**Locality**: Northern Ireland/U.K.

**Identified by**: Suda, Shoichiro

**States**: Unialgal; Clonal; Axenic

**Culture conditions**: CT; 20℃; 4-10μmol/m²/s; 2 M

**Habitat**: Freshwater

**Gene data**: 16S rRNA (AB045957)

**Other strain no.**: 3A(2)

**References**: 292, 567, 991

**Remarks**: Cryopreserved

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**History**: Takamura, Noriko

**Locality**: Veluwemeer/Netherland

**Identified by**: Suda, Shoichiro

**States**: Unialgal; Clonal; Axenic

**Culture conditions**: CT; 20℃; 4-10μmol/m²/s; 2 M

**Habitat**: Freshwater

**Gene data**: 16S rRNA (AB045958)

**Other strain no.**: VLOA 7

**References**: 90, 290, 567, 578, 991

**Remarks**: Cryopreserved

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**History**: Suda, Shoichiro

**Locality**: Windermere/England, Cambria/U.K. (1975-**.**

**Identified by**: Suda, Shoichiro

**States**: Unialgal; Clonal; Axenic

**Culture conditions**: CT; 20℃; 20-30μmol/m²/s; 1 M

**Habitat**: Freshwater

**Characteristics**: Cyanobacterial water bloom (aoko)

**Toxic Gene data**: 16S rRNA (AB045896)

**References**: 884, 991

**Remarks**: Toxic

**Remarks**: Cryopreserved

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**History**: Sano, Tomoharu

**Locality**: Lake Mikata/Fukui/Japan (2000-12-05)

**Isolator**: Sano, Tomoharu

**Identified by**: Kawachi, Masanobu

**States**: Unialgal; Clonal; Non-axenic

**Culture conditions**: CT; 20℃; 20-30μmol/m²/s; 1 M

**Habitat**: Freshwater (Lake water)

**Characteristics**: Cyanobacterial water bloom (aoko)

**Other strain no.**: Mikata1-3

**Remarks**: Cryopreserved

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**History**: Sano, Tomoharu

**Locality**: Lake Mikata/Fukui/Japan (2000-12-05)

**Isolator**: Sano, Tomoharu

**Identified by**: Kawachi, Masanobu

**States**: Unialgal; Clonal; Non-axenic

**Culture conditions**: CT; 20℃; 20-30μmol/m²/s; 1 M

**Habitat**: Freshwater (Lake water)

**Characteristics**: Cyanobacterial water bloom (aoko)

**Other strain no.**: Mikata1-6

**Remarks**: Cryopreserved

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**History**: Sano, Tomoharu

**Locality**: Germany (2000-08-18)

**Isolator**: Sano, Tomoharu

**Identified by**: Otsuka, Shigeto

**States**: Unialgal; Clonal; Non-axenic

**Culture conditions**: CT; 20℃; 22-32μmol/m²/s; 1 M

**Habitat**: Freshwater

**Characteristics**: Cyanobacterial water bloom (aoko)

**Toxic Other strain no.**: DU-Oa-2-3

**Remarks**: Toxic

**Remarks**: Cryopreserved

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**History**: Sano, Tomoharu

**Locality**: Neuglobsow/Brandenburg/Germany (2000-08-18)

**Isolator**: Sano, Tomoharu

**Identified by**: Otsuka, Shigeto

**States**: Unialgal; Clonal; Non-axenic

**Culture conditions**: CT; 20℃; 22-32μmol/m²/s; 1 M

**Habitat**: Freshwater

**Characteristics**: Cyanobacterial water bloom (aoko)

**Toxic Other strain no.**: DU-Oa-2-3

**Remarks**: Toxic

**Remarks**: Cryopreserved
conditions: CT; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Toxic Other strain no.: DU-Oa-3-3 Remarks: Toxic; Cryopreserved

**1265** History: < Sano, Tomoharu Locality: Neuglobsow/Brandenburg/Germany (2000-08-15) Isolator: Sano, Tomoharu Identified by: Otaka, Shigeto States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko) Other strain no.: DU-Oa-5-5 Remarks: Cryopreserved

**Plankthothrix rubescens** (DC. ex Gomont) Anagnostidis et Komárek
Syn. Oscillatoria rubescens DC. ex Gomont

**610** History: < CCAP Other collection strain no.: CCAP 1459/22; NIVA CYA 18 Locality: Lake Gjersjøen/Noorway Isolator: Romstad Identified by: Suda, Shoichiro (Reidentify) Formerly identified as: Oscillatoria agardhii Gomont States: Axenic Culture conditions: CB; MA; 20°C; 40-50μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Type strain Gene data: 16S rRNA (AB045959) References: 221, 383, 567, 880, 881, 882, 991 Remarks: Cryopreserved

**928** History: < Suda, Shoichiro < CCAP Other collection strain no.: CCAP 1459/14 Locality: England, Cambria/U.K. (1975.-**.-**.) Isolator: Jaworski, G. H. M. Identified by: Suda, Shoichiro (Reidentified) States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20°C; 22-30μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Toxic References: 478, 883, 884 Remarks: Toxic; Cryopreserved

**1266** History: < Sano, Tomoharu Locality: Neuglobsow/Brandenburg/Germany (2000-08-19) Isolator: Sano, Tomoharu Identified by: Sano, Tomoharu States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Toxic Other strain no.: DU-Oa-4-1 Reference: 478 Remarks: Toxic; Cryopreserved

**1267** History: < Sano, Tomoharu Locality: Neuglobsow/Brandenburg/Germany (2000-08-19) Isolator: Sano, Tomoharu Identified by: Sano, Tomoharu States: Unialgal; Clonal; Non-axenic Culture conditions: CT; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Toxic Other strain no.: DU-Oa-4-2 Remarks: Toxic; Cryopreserved

**PLATYDORINA** : Chlorophyceae

**Platydorina caudata** Kofoid

**728** History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1658 Locality: Kansas/U.S.A. States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 32-40μmol/m²/s; 2 M Habitat: Freshwater (Pond water) Gene data: atpB (AB014032); psaA (AB044211); psaA (AB044212); psaB (AB044442); psbC (AB044494); rbcL (D86828) References: 244, 567, 662, 716, 733, 738

**729** History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1661 Locality: Kansas/U.S.A. States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 23°C; 180-200μmol/m²/s; 1 M Habitat: Freshwater marsh Gene data: rbcL (D86827) References: 244, 567, 662, 716

**PLATYMONAS** : Prasinophyceae

**Platymonas subcordiformis** (Wille) Hazen
Syn. Tetraselmis subcordiformis (Wille) Butcher

**2572** History: < IAM (2007) < BIU (UTE; 1967) Other collection strain no.: IAM C-298; SAG 161-1a; UTEX 171; CCAP 161/1a Locality: New Haven/Connecticut/U.S.A. Isolator: Lewin, Ralph A. States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: BES2 (agar); 20°C; 8-15μmol/m²/s; 3 M Reference: 460

**PLECTONEMA** : Cyanophyceae

**Plectonema calothricoides** Gomont
PLEODORINA : Chlorophyceae

Pleodorina californica Shaw

576 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 809; SAG 162/1; IAM C-336 (=C-590) Locality: Bloomington/Indiana/U.S.A. Isolator: Starr. R. C. States: Unialgal; Clonal; Axenic Culture conditions: VT; 25℃; 100-120μmol/m²/s; 1 M Habitat: Freshwater (Paddy water) Identified by: Ogasawara, Yoshikazu

577 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 2523 Locality: Fuji/Shizuoka/Japan (1986-07-13) Isolator: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20℃; 180-200μmol/m²/s; 1 M Habitat: Freshwater (Paddy water) Characteristics: Axenic strain; Homothallic; Dioecious; Anisogamy Gene data: atpB (AB014006); psaA (AB044195); psaA (AB044197); psaB (AB044432); psbB (AB044433); psbC (AB044483); rbcL (D63440) References: 716, 733, 738

Pleodorina indica (Iyengar) Nozaki

578 History: < Nozaki, Hisayoshi Other collection strain no.: UTEX 378, 567, 715, 724, 733, 738

Pleodorina starrii Nozaki, Ott et Coleman


581 History: < Nozaki, Hisayoshi Locality: Lake Sagami/Kanagawa/Japan (2000-06-02) Identified by: Nozaki, Hisayoshi (2005) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; VTAC; 20℃; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Other water bloom; Authentic strain; Heterothalllic; Anisogamy; Male Other strain no.: 2000-060-P15

582 History: < Nozaki, Hisayoshi Locality: Lake Tsukui/Kanagawa/Japan (2001-06-08) Identified by: Nozaki, Hisayoshi (2005) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20℃; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Other water bloom; Heterothalllic; Anisogamy; Male Other strain no.: 2000-060-P15
bloom; Heterothallic; Anisogamy; Male Other strain no.: 2001-608-P17

1365 History: < Nozaki, Hisayoshi Locality: Lake Tsukui/Kanagawa/Japan (2001-06-08) Identified by: Nozaki, Hisayoshi (2005) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20℃; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Other water bloom; Heterothallic; Anisogamy; Male Other strain no.: 2001-608-P21

1366 History: < Nozaki, Hisayoshi Locality: Lake Tsukui/Kanagawa/Japan (2001-06-08) Identified by: Nozaki, Hisayoshi (2005) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20℃; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Other water bloom; Heterothallic; Anisogamy; Female Other strain no.: 2001-608-P26

1852 History: < Nozaki, Hisayoshi Locality: Lake Tsukui/Kanagawa/Japan (2001-06-08) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi (2005-07-01) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20℃; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Other water bloom; Heterothallic; Anisogamy; Male; F1 clone of NIES-1364, 1365 and 1366 Other strain no.: 2005-701-F1-1 Reference: 708

1853 History: < Nozaki, Hisayoshi Locality: Lake Tsukui/Kanagawa/Japan (2001-06-08) Identified by: Nozaki, Hisayoshi (2005-07-01) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20℃; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Other water bloom; Heterothallic; Anisogamy; Male; F1 clone of NIES-1364, 1365 and 1366 Gene data: EF-1 like (AB272614); MID (AB272614) Other strain no.: 2005-701-F1-3 Reference: 708

1854 History: < Nozaki, Hisayoshi Locality: Lake Tsukui/Kanagawa/Japan (2001-06-08) Identified by: Nozaki, Hisayoshi (2005-07-01) States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20℃; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Other water bloom; Heterothallic; Anisogamy; Female; F1 clone of NIES-1364, 1365 and 1366 Other strain no.: 2005-701-F1-5 Reference: 708

PLEUROCHYSIS : Prymnesiophyceae

Pleurochysis haptonemofera (Inouye et Chihara) Gayral et Fresnel

1813 History: < TKB Locality: Yufu Isl./Okinawa/Japan (2004-12-24) Isolator: Chikuni, Tomoko Identified by: Chikuni, Tomoko (2005-**.***) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20℃; 20-30μmol/m²/s; 1 M Habitat: Salt water Other strain no.: TKB-230

Pleurochysis roscoffensis (Dangeard) Fresnel et Billard

Syn. Cricosphaera roscoffensis (Dangeard) Gayral et Fresnel


Pleurochysis sp.

1814 History: < TKB Locality: Amami Isl./Kagoshima/Japan (2005-02-26) Isolator: Chikuni, Tomoko Identified by: Chikuni, Tomoko (2005-**.***) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20℃; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-231

PLEUROTAENIUM : Charophyceae

Pleurotanium cylindricum (Turner) Schmidle var. stuhlmannii (Hieronymus) Krieger


Pleurotanium ehrenbergii (Ralfs) De Bary var. curtum Krieger

308 History: < IAM (1983) Other collection strain no.: IAM C-379 Locality: Wakayama/Japan
(1969-10-***) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Axenic **Culture conditions:** CA; 20°C; 8-15μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Mating type(−) **Other strain no.:** W-1-3 **Reference:** 567

311 **History:** < IAM (1983) **Other collection strain no.:** IAM C-430 **Locality:** Iriomote Isl./Okinawa/Japan (1973-06-10) **Isolator:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 20°C; 8-15μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Mating type(+) **Other strain no.:** R-13-19 **Reference:** 567

**Pleurotaenium ehrenbergii** (Rafls) De Bary var. *ehrenbergii*

309 **History:** < IAM (1983) **Other collection strain no.:** IAM C-467 (=C-591) **Locality:** Iriomote Isl./Okinawa/Japan (1973-06-10) **Isolator:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 22-27μmol/m²/s; 2 M **Habitat:** Freshwater (Bog water) **Other strain no.:** 93-913-Gon-1 **Reference:** 567

663 **History:** < Nozaki, Hisayoshi **Locality:** Miyatoko Mire/Fukushima/Japan (1993-09-13) **Isolator:** Nozaki, Hisayoshi **Identified by:** Nozaki, Hisayoshi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 22-27μmol/m²/s; 2 M **Habitat:** Freshwater (Bog water) **Other strain no.:** 93-913-Gon-1 **Reference:** 567

664 **History:** < Nozaki, Hisayoshi **Locality:** Miyatoko Mire/Fukushima/Japan (1993-09-13) **Isolator:** Nozaki, Hisayoshi **Identified by:** Nozaki, Hisayoshi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 22-27μmol/m²/s; 2 M **Habitat:** Freshwater (Bog water) **Other strain no.:** 93-913-Gon-1 **Reference:** 567

**Pleurotaenium nodosum** (Bailey ex Ralfs) Lundell var. *borgei* Grönbлад

787 **History:** < Kasai, Fumie **Locality:** 4 km northwest of Melaka/Malaysia (1985-08-20) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Crosses with NIES-788 **Other strain no.:** 85-30-9

788 **History:** < Kasai, Fumie **Locality:** 4 km northwest of Melaka/Malaysia (1985-08-20) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Heterothallic; Crosses with NIES-787 **Other strain no.:** 85-30-56

**Pleurotaenium nodosum** (Bailey ex Ralfs) Lundell var. *nodosum*

312 **History:** < Kasai, Fumie **Locality:** Higashihiroshima/Hiroshima/Japan (1983-10-19) **Isolator:** Kasai, Fumie **Identified by:** Kasai, Fumie **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** CAM; 20°C; 8-15μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Pond water) **Other strain no.:** 83-24-3 **Reference:** 567

785 **History:** < Kasai, Fumie **Locality:** Imuta-ike Pond/Kagoshima/Japan (1986-10-09) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Pond water) **Characteristics:** Heterothallic; Crosses with NIES-786 **Other strain no.:** 86-7-15

786 **History:** < Kasai, Fumie **Locality:** Imuta-ike Pond/Kagoshima/Japan (1986-10-09) **Isolator:**
CONTENTS

Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Pond water) Characteristics: Heterothallic; Crosses with NIES-785 Other strain no.: 86-7-16

Pleurotaenium ovatum Nordstedt
313 History: < Kasai, Fumie Locality: Niimi/Okayama/Japan (1983-09-11) Isolator: Kasai, Fumie Identified by: Kasai, Fumie States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 8-15μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Paddy water) Other strain no.: F57-17-8 Reference: 567

POLYEDRIOPSIS : Chlorophyceae
Polyedriopsis spinulosa (Schmidle) Schmidle
232 History: < Kasai, Fumie Locality: Tsukuba/Ibaraki/Japan (1984-05-07) Isolator: Kasai, Fumie Identified by: Kasai, Fumie States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Freshwater (Pond water) Other strain no.: F128 Reference: 567

PORPHYRIDIUM : Porphyridiophyceae
Porphyridium aerugineum Geitler
1957 History: < TAC Locality: Nepal (1986-09-24) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 4-6μmol/m²/s; 1 M Habitat: Terrestrial Other strain no.: TAC 578 Remarks: Cryopreserved
1958 History: < TAC Locality: Nepal (1986-09-24) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 4-6μmol/m²/s; 1 M Habitat: Terrestrial Other strain no.: TAC 579 Remarks: Cryopreserved
1959 History: < TAC Locality: Nepal (1986-09-24) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 4-6μmol/m²/s; 1 M Habitat: Terrestrial Other strain no.: TAC 580
1960 History: < TAC Locality: Nepal (1986-09-24) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 4-6μmol/m²/s; 1 M Habitat: Terrestrial Other strain no.: TAC 581 Remarks: Cryopreserved

Porphyridium purpureum (Bory) Drew et Ross
Syn. Porphyridium cruentum (Agardh) Nägeli
2140 History: < IAM (2007) < Imai Other collection strain no.: IAM R-3 States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 13-18μmol/m²/s; 3 M Reference: 794 Remarks: Cryopreserved

Porphyridium sp.
1032 History: < Hatakeyama, Noriko Locality: Iriomote Isl./Okinawa/Japan (1990-10-16) Isolator: Hatakeyama, Noriko Identified by: Hatakeyama-Ishida, Noriko States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 15-27μmol/m²/s; 2 M Habitat: Brackish water
POTERIOOCHROMONAS: Chrysophyceae

Poteriococmonas malhamensis (Pringsheim) Peterfi
Syn. Ochromonas malhamensis Pringsheim

PRASINODERMA: Prasinophyceae

Prasinoderma coloniale Hasegawa et Chinara

PROCHLOROCOCCUS: Cyanophyceae

Prochlorococcus marinus Chisholm, Frankel, Goerick, Olson, Palenik, Waterbury, West-Johnsrud et Zettler

PROROCENTRUM: Dinophyceae

Prorocentrum dentatum Stein

682 History: < KAGAWA < Yoshimatsu, Sadaaki Locality: Hiuchi-nada/Japan (1979-12-13) Isolator: Yoshimatsu, Sadaaki Identified by: Yoshimatsu, Sadaaki States: Unialgal; Clonal; Non-axenic

193 History: < Hatakeyama, Noriko Locality: Iriomote Isl./Okinawa/Japan (1990-10-16) Isolator: Hatakeyama, Noriko Identified by: Hatakeyama-Ishida, Noriko States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 15-27μmol/m²/s; 2 M Habitat: Brackish water (Water) Remarks: Cryopreserved


1807 History: < TKB Locality: Motobu/Okinawa/Japan (2005-01-22) Isolator: Yamaguchi, Haruyo Identified by: Nakayama, Takeshi (2005.-**.) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-255 Remarks: Cryopreserved

Contents
**Contents**

**Proorocentrum gracile** Schütt


**Proorocentrum lima** (Ehrenberg) Dodge

617  History: < Murata, Michio Locality: Motobu/Okinawa/Japan (1993-06-06) Isolator: Kobayashi, Hidetaka Identified by: Fukuyo, Yasuo States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; ESM; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Plant) Characteristics: Toxic Other strain no.: PL-03 Remarks: Fragile species to transportation stresses

**Proorocentrum mexicanum** Osorio-Tafall

618  History: < Murata, Michio Locality: Motobu/Okinawa/Japan (1993-06-06) Isolator: Kobayashi, Hidetaka Identified by: Fukuyo, Yasuo States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine (Plant) Other strain no.: PX-01 Remarks: Fragile species to transportation stresses

1967  History: < TKB Locality: Motobu/Okinawa/Japan (2005-01-22) Isolator: Yamaguchi, Haruyo States: Unialgal; Clonal; Non-axenic Culture conditions: IMK; 20°C; 10-15μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-328 Remarks: Fragile species to transportation stresses

**Proorocentrum micans** Ehrenberg

12  History: < Yamochi, Susumu Locality: Osaka Bay/Osaka/Japan (1981-07-***) Isolator: Yamochi, Susumu States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: ESM; 20 °C ; 32-40μmol/m²/s; 1 M Habitat: Marine Characteristics: Red tide Gene data: CO1 (AB000134); CO1 (AB000133); psbA (AB025585) Other strain no.: OPm References: 143, 261, 262, 592,
1035, 1115, 1243 Remarks: Fragile species to transportation stresses

218 History: < KAGAWA Locality: Yoshima Bay/Kagawa/Japan (1978-08-05) Isolator: Yuki, Katsuhsa States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: f/2; 20 °C; 32-40μmol/m²/s; 1 M Habitat: Marine Characteristics: Red tide Other strain no.: KGW-13-7 Remarks: Fragile species to transportation stresses

316 History: < Sawaguchi, Tomohiro Locality: Matoya Bay/Mie/Japan (1984-09-01) Isolator: Sawaguchi, Tomohiro Identified by: Sawaguchi, Tomohiro States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: f/2; ESM; 20°C; 32-40μmol/m²/s; 2 M Habitat: Marine (Seawater) Characteristics: Red tide Other strain no.: MB-D-4 Remarks: Fragile species to transportation stresses

601 History: < Honjo, Tsuneo Locality: Mikawa Bay/Aichi/Japan Isolator: Toriumi, Saburo States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20 °C; 32-40μmol/m²/s; 1 M Habitat: Marine (Seawater) Remarks: Fragile species to transportation stresses


1406 History: < TKB Locality: Saroma/Hokkaido/Japan (2003-10-** ) Isolator: Chikuni, Tomoko Identified by: Chikuni, Tomoko States: Unialgal; Non-clonal; Non-axenic Culture conditions: ESM: 20°C; 40-50μmol/m²/s; 20 D Habitat: Marine (Seawater) Other strain no.: TKB-138 (TC01) Remarks: Fragile species to transportation stresses

Protoceratium minimum (Pavillard) Schiller


238 History: < KAGAWA Locality: Harima-Nada/Japan (1983-04-22) Isolator: Yoshimatsu, Sadaaki States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; ESM; 20°C; 32-40μmol/m²/s; 1 M Habitat: Marine Characteristics: Red tide Other strain no.: KGW-14-2-5 Remarks: Unstable; Fragile species to transportation stresses

PROTOCRERATIUM : Dinophyceae

Protoceratium reticulatum (Claparède et Lachmann) Bartschli


PROTODESMUS : Chlorophyceae

Protodesmus globulifer Nakahara, Tsubota et Handa

1703 History: < Nakanara, Miho Locality: Higashihiroshima/Hiroshima/Japan (1997-03-**) Identified by: Nakahara, Miho (2004-11-**) States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: C (agar); 20 °C; 4-10μmol/m²/s; 6 M (25°C ; 70-80μmol/m²/s) Habitat: Brackish water (Paramecium in a reservoir) Characteristics: Symbiotic; Authentic strain Gene data: 18S rRNA (AB212094) Other strain no.: HP1-13-26

PROTOTHECA : Trebouxiophyceae

Protothece portoricensis Cifferi, Ashford et Dalmau var. cifferii (Negroni et Blaistin) Cifferi, Ashford et Dalmau
PRYMNESIUM : Prymnesiophyceae

Prymnesium calathiferum Chang et Ryan


Prymnesium parvum Carter


PSEUDANABAENA : Cyanophyceae

Pseudanabaena galeata Böcher


Pseudanabaena sp.


PSEUDENDOCOLONIUM : Ulvophyceae

Pseudendoclonium sp.

PSEUDOCARTERIA : Chlorophyceae

Pseudocarteria mucosa (Korshikov) Etzl

522 History: < Suda, Shoichiro Locality: Izumi/Miyagi/Japan (1985-08-02) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20℃; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Homothallic Gene data: atpB (AB084324); psaB (AB084364); rbcL (AB084335) Other strain no.: M-2 References: 567, 740, 989


524 History: < Suda, Shoichiro Locality: Izumi/Miyagi/Japan (1985-08-02) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20℃; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Pond water) Characteristics: Homothallic Other strain no.: M-4 References: 567, 989

PSEUDOCHATTONELLA : Dictyoophyceae

Pseudochattonella verruculosa (Hara et Chihara) Tanabe-Hosoi, Honda, Fukaya, Inagaki et Sako Syn. Chattonella verruculosa (Korshikov) Eikrem


850 History: < Sawaguchi, Tomohiro Locality: Shodo Isl/Kagawa/Japan (1989-01.**) Isolator: Sawaguchi, Tomohiro Identified by: Harai, Yoshiaki States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; ESM; 15℃; 15-22μmol/m²/s; 20 D Habitat: Marine (Seawater) Characteristics: Red tide Remarks: Fragile species to transportation stresses

PSEUDOKIRCHNERIELLA : Chlorophyceae

Pseudokirchneriella subcapitata (Korshikov) Hindák Syn. Ankistrodesmus subcapitata Korshikov; Kirchneriella subcapitata Korshikov; Raphidocelis subcapitata (Korshikov) Nygaard

35 History: < Yagi, Osami Locality: Nitelva River/Norway Isolator: Skulberg, O. M. Formerly identified as: Selenastrum capricornutum (Printz) Nygaard States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20℃; 4-10μmol/m²/s; 3 M (25℃; 70-80μmol/m²/s) Habitat: Freshwater Characteristics: AGP Other strain no.: P-26 References: 170, 220, 347, 348, 355, 360, 381, 445, 567, 596, 620, 625, 630, 680, 685, 801, 814, 992, 1031, 1092, 1199, 1200, 1202, 1222, 1233 Remarks: Cryopreserved

PSEUDONITZSCHIA : Bacillariophyceae

Pseudonitzschia sp.

1383 History: < TKB Localy: Hachijo Isl/Tokyo/Japan (2002-12-13) Isolator: Yoshida, Masaki Identified by: Yoshida, Masaki (2003.**) States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; mLMR; 15℃; 10-18μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain
no.: TKB-101 (ym-09) Remarks: Poor growth

**PSEUDOPEDINELLA** : Dictyochophyceae

*Pseudedinella pyriformis* Carter

1381 **History**: < TKB **Locality**: Edogawa-ku/Tokyo/Japan (2004-10-28) **Isolator**: Nakayama, Takeshi **Identified by**: Nakayama, Takeshi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**

| ESM | 20°C; 15-22μmol/m²/s | 1 M **Habitat**: Marine (Seawater) **Other strain no.**: TKB-191 (nak80) |

1810 **History**: < TKB **Locality**: East China Sea/Japan (2004-07-28) **Isolator**: Kai, Atsushi **Identified by**: Kai, Atsushi (2005-**-***) **States**: Unialgal; Non-clonal; Non-axenic **Culture conditions**

| ESM | 20°C; 20-30μmol/m²/s | 1 M **Habitat**: Marine (Seawater) **Other strain no.**: TKB-221 |

**PSEUDOPLEROCCUS** : Chlorophyceae

*Pseudoleurococcus printzii* Vischer var. *longissimus* S.Watanabe

159 **History**: < Watanabe, Shin **Locality**: Kyoto/Japan (1975-03-07) **Isolator**: Watanabe, Shin **Identified by**: Watanabe, Shin **States**: Unialgal; Non-axenic **Culture conditions**

| C (agar) | 20°C; 4-10μmol/m²/s | 3 M (25°C; 70-80μmol/m²/s) **Habitat**: Terrestrial (Plant (Bark of Ulmus parviflora)) **Characteristics**: Authentic strain **Other strain no.**: KUC6-2 **References**: 567, 1186 **Remarks**: Cryopreserved |

**PSEUDOSCOURFIELDIA** : Prasinophyceae

*Pseudoscourfieldia marina* (Thronsden) Manton

1419 **History**: < TKB **Locality**: East China Sea/Japan (2004-07-28) **Isolator**: Nakayama, Takeshi **Identified by**: Nakayama, Takeshi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**

| f/2 | 20°C; 20-30μmol/m²/s | 1 M **Habitat**: Marine (Seawater) **Gene data**: psbB (AB561053); psbC (AB561061) **Other strain no.**: TKB-144 (nak33) |

1420 **History**: < TKB **Locality**: Motobu, Sesoko/Okinawa/Japan (2004-11-08) **Isolator**: Nakayama, Takeshi **Identified by**: Nakayama, Takeshi **States**: Unialgal; Non-axenic **Culture conditions**

| MNK | 20°C; 20-30μmol/m²/s | 1 M **Habitat**: Marine (Seawater) **Other strain no.**: TKB-212 (nak99) |

**PSEUDOTREBOUXIA** : Trebouxiophyceae

*Pseudotrebouxia corticola* Archibald

2183 **History**: < IAM (2007) < BIU (UTEX; 1965) **Other collection strain no.**: IAM C-194; ASIB IB326; UTEX 909 **Isolator**: Ahmadjian, V. **Identified by**: Ahmadjian, V. **Formerly identified as**: Trebouxiarboricola Puymaly **States**: Unialgal; Clonal; Non-axenic **Culture conditions**

| C (agar) | 20°C; 8-15μmol/m²/s | 3 M **Reference**: 18 |

**PTEROMONAS** : Chlorophyceae

*Pteromonas aculeata* Lemmermann

738 **History**: < Nozaki, Hisayoshi **Locality**: Shinobazu-no-ike Pond/Tokyo/Japan (1996-10-17) **Isolator**: Tanaka, Shin-ichiro **Identified by**: Nozaki, Hisayoshi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**

| MG | 20°C; 15-27μmol/m²/s | 2 M **Habitat**: Freshwater (Pond water) **Other strain no.**: 970603-PtAc1 **Reference**: 1061 |

860 **History**: < Nozaki, Hisayoshi **Locality**: Darstein/Germany (1997-07-31) **Isolator**: Nozaki, Hisayoshi **Identified by**: Nozaki, Hisayoshi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**

| AF-6 | 20°C; 15-22μmol/m²/s | 2 M **Habitat**: Freshwater (Ditch water) **Other strain no.**: 970801-2 |

*Pteromonas angulosa* (Carter) Lemmermann

CONTENTS


PTEROSPERMA : Prasinophyceae

Pterosperma cristatum Schiller


626 History: < Sawaguchi, Tomohiro Localy: Seto Inland Sea/Kagawa/Japan (1989-02-14) Isolator: Sawaguchi, Tomohiro Identified by: Inouye, Isao States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15°C; 20-30μmol/m²/s; 20 D Habitat: Marine (Seawater) Gene data: psbB (AB561056); psbC (AB561064) Other strain no.: 89KGW-1 Remarks: Fragile species to transportation stresses


PYRAMIMONAS : Prasinophyceae

Pyramimonas aff. amylifera Conrad


Pyramimonas cordata McFadden

1421 History: < TKB Localy: Chiba Harbor/Chiba/Japan (2004-07-***) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Non-clonal; Non-axenic Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.: TKB-130 (nak24)

1422 History: < TKB Localy: Amami Isl/Kagoshima/Japan (2004-10-14) Isolator: Nakayama, Takeshi Identified by: Nakayama, Takeshi States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine (Seawater) Other strain no.:
Pyramimonas dissomata Butcher ex McFadden, Hill et Wetherbee

Pyramimonas grossii Parke

Pyramimonas parkeae Norris et Pearson

Pyramimonas propulsa Moestrup et Hill

Pyramimonas sp.
**Pyrobotrys squarrosa** (Korshikov) Korshikov

Syn. Chlamybotrys squamata (Korshikov); Uva squamata (Korshikov) Fott

2044 **History**: < Nakada, Takashi **Other collection strain no.**: NBRC 107039 **Locality**: Otsuka-minami/Toyama/Japan (2005-09-23) **Isolator**: Nakada, Takashi **Identified by**: Nakada, Takashi (2009-11-***) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: mAC; 20°C; 32-40μmol/m²/s; 1 M **Habitat**: Freshwater (Sediment) **Characteristics**: Mixotrophic; Resting spore forming **Gene data**: 18S rRNA (AB542919); psaB (AB542924); rbcL (AB542927) **Other strain no.**: KrCl905 **Reference**: 611

**Pyrocystis**: Dinophyceae

**Pyrocystis lunula** (Schütt) Schütt

609 **History**: < Nakamura, Hideshi **Locality**: Japan **States**: Unialgal; Non-clonal; Non-axenic **Culture conditions**: f/2; 20°C; 40-50μmol/m²/s; 1 M **Habitat**: Marine **Reference**: 1188 **Remarks**: Fragile species to transportation stresses

**Raphidiophrys contractilis** Kinoshita et al.

2498 **History**: < Suzaki, Toshinobu **Locality**: Shukkeien Park/Hiroshima/Japan (1995-9-23) **Isolator**: Suzaki, Toshinobu **Identified by**: Suzaki, Toshinobu (1995-9-23) **States**: Unialgal; Clonal; Axenic[2011 Sept] **Culture conditions**: Helio; 20°C; 13-18μmol/m²/s; 7-14 D **Habitat**: Brackish water **Other strain no.**: HSR

**Raphidiopsis**: Cyanophyceae

**Raphidiopsis curvata** F.E. Fritsch et F.Rich

932 **History**: < Otsuka, Shigeto **Locality**: Shinobazu-no-ike Pond/Tokyo/Japan (2000-07-04) **Isolator**: Otsuka, Shigeto **Identified by**: Otsuka, Shigeto **States**: Unialgal; Clonal; Axenic[2011 Sept] **Culture conditions**: CT; 25°C; 20-30μmol/m²/s; 1 M **Habitat**: Freshwater (Pond water) **Characteristics**: Cyanobacterial water bloom (aoko) **Other strain no.**: RAP1 **Reference**: 139

**Raphidiopsis sp.**

1729 **History**: < Li, Renhui **Locality**: Shinobazu-no-ike Pond, Ueno Park/Tokyo/Japan (1998-10-***) **Isolator**: Li, Renhui **Identified by**: Li, Renhui (1998-10-***) **States**: Unialgal **Culture conditions**: MG; 20°C; 12-22μmol/m²/s; 2 M **Habitat**: Freshwater (Lake water) **Characteristics**: Cyanobacterial water bloom (aoko); Resting spore forming **Other strain no.**: Rap J1

**Raphidonema**: Trebouxiophyceae

**Raphidonema nivele** Lagerheim

2290 **History**: < IAM (2007) < Holm-Hansen, O. **Other collection strain no.**: IAM C-166 **Locality**: Wright Dry Valley/Antarctica **Isolator**: Holm-Hansen, O. **Identified by**: Confirmed at NIES by DNA sequencing **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: C (agar); 20°C; 8-15μmol/m²/s; 3 M **Habitat**: (Sand) **Gene data**: 18S rRNA (AB488604) **Other strain no.**: Holm-Hansen W-35

**Rhizochromulina**: Dictyochophyceae

**Rhizochromulina sp.**

1382 **History**: < TKB **Locality**: Isonoura Beach/Wakayama/Japan (2002-09-***) **Isolator**: Okamoto, Noriko **Identified by**: Okamoto, Noriko **States**: Unialgal; Non-clonal; Non-axenic **Culture conditions**: ESM (agar); 20°C; 40-50μmol/m²/s; 6 M **Habitat**: Marine (Seawater) **Characteristics**: Benthic **Other strain no.**: TKB-042 (nrc029)

**Rhizosolenia**: Bacillariophyceae
Rhizosolenia sp.

2669 History: < Hagiwara, Tomiji > Isolator: Hagiwara, Tomiji Identified by: Hagiwara, Tomiji States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 15°C; 10-18μmol/m²/s; 1 M Habitat: Marine (Seawater)

RHODELLA: Rhodellophyceae

Rhodella sp.


1037 History: < Hatakeyama, Noriko > Locality: Iriomote Isl./Okinawa/Japan (1990-10-16) Isolator: Hatakeyama, Noriko Identified by: Hatakeyama-Ishida, Noriko States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 15-27μmol/m²/s; 2 M Habitat: Brackish water (Water) Remarks: Cryopreserved

1972 History: < Sato, Mayumi > Isolator: Sato, Mayumi Identified by: Yokoyama, Akiko States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20°C; 15-22μmol/m²/s; 2 M Habitat: Marine (Seawater) Other strain no.: M-182

RHODOMONAS: Cryptophyceae

Rhodomonas atrorosea Butcher ex Hill et Wetherbee

Syn. Chroomonas atrorosea Butcher

699 History: < Erata, Mayumi & Hara, Yoshiaki > Locality: Isle of Wight/U.K. Identified by: Butter, R. W. States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15°C; 20-30μmol/m²/s; 1 M Habitat: Marine Characteristics: Authentic strain Gene data: 18S rRNA (AB240957) Other strain no.: M07 References: 85, 142

Rhodomonas baltica Karsten

Syn. Cryptomonas pseudobaltica Butcher

700 History: < Erata, Mayumi & Hara, Yoshiaki > Locality: Channel Isls./U.K. (1961-**-***) Identified by: Butter, R. W. States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15°C; 20-30μmol/m²/s; 1 M Habitat: Marine Characteristics: Authentic strain Gene data: 18S rRNA (AB241128) Other strain no.: M06 Reference: 85

Rhodomonas chrysoidea Butcher ex Hill et Wetherbee

Syn. Cryptomonas chrysoidea Butcher

701 History: < Erata, Mayumi & Hara, Yoshiaki > Locality: River Colne/Essex/U.K. (1953-**-***) Identified by: Butter, R. W. States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15°C; 20-30μmol/m²/s; 1 M Habitat: Brackish water Characteristics: Authentic strain Gene data: 18S rRNA (AB240958); Nuclear actin-1 (AB126020); Nuclear actin-2 (AB126021); Nucleomorph actin (AB126026) Other strain no.: M03 Reference: 85

Rhodomonas duplex Hill et Wetherbee

765 History: < Erata, Mayumi > Locality: Yaga/Okinawa/Japan (1986-**-***) Isolator: Inouye, Isao Identified by: Erata, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 15°C; 20-30μmol/m²/s; 1 M Habitat: Marine Gene data: 18S rRNA (AB240960); Nuclear actin (AB126022); Nucleomorph actin (AB126027) Other strain no.: M14

Rhodomonas falcata Butcher ex Hill et Wetherbee

Syn. Chroomonas falcata Butcher

702 History: < Erata, Mayumi & Hara, Yoshiaki > Other collection strain no.: CCAP 978/5a
Localities: Aberystwyth/Wales/U.K. (1956-**.**) **Identified by:** Butcher, R. W. **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** ESM; 15°C; 20-30μmol/m²/s; 1 M **Habitat:** Marine **Characteristics:** Authentic strain **Gene data:** 18S rRNA (AB240959) **Other strain no.:** M10 **Reference:** 85

**Rhodomonas salina** (Wislouch) Hill et Wetherbee

<table>
<thead>
<tr>
<th>No.</th>
<th>History</th>
<th>Localities</th>
<th>Isolator</th>
<th><strong>Culture conditions</strong></th>
<th><strong>Habitat</strong></th>
<th><strong>Other strain no.:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1006</td>
<td>&lt; Moriya, Mayumi</td>
<td>Hirara, Shimajiri/Okinawa/Japan (2002-03-17)</td>
<td>Moriya, Mayumi</td>
<td>Identified by: Moriya, Mayumi</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>ESM; 15°C; 20-30μmol/m²/s; 1 M</td>
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<th><strong>Culture conditions</strong></th>
<th><strong>Habitat</strong></th>
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<tbody>
<tr>
<td>1375</td>
<td>&lt; TKB</td>
<td>Tokyo Bay/Kanagawa/Japan (2003-09-<strong>.</strong>)</td>
<td>Kai, Atsushi</td>
<td>Identified by: Kai, Atsushi</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>f/2 + NH₄Cl; 20°C; 15-22μmol/m²/s; 1 M</td>
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<td>TKB-122 (AK-15)</td>
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**Rhodomonas** sp.

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<th>Localities</th>
<th>Isolator</th>
<th><strong>Culture conditions</strong></th>
<th><strong>Habitat</strong></th>
<th><strong>Other strain no.:</strong></th>
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<td>1005</td>
<td>&lt; Moriya, Mayumi</td>
<td>Shinjo Beach/Okinawa/Japan (2002-03-17)</td>
<td>Moriya, Mayumi</td>
<td>Identified by: Moriya, Mayumi</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>ESM; 15°C; 20-30μmol/m²/s; 1 M</td>
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<th><strong>Habitat</strong></th>
<th><strong>Other strain no.:</strong></th>
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<td>1730</td>
<td>&lt; Inouye, Isao</td>
<td>&lt; CCMP 768</td>
<td>Chang, F.</td>
<td>Identified by: Hill, D. R. A. (1984-<strong>.</strong>)</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>f/2; 20°C; 15-22μmol/m²/s; 1 M</td>
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<td>CCMP 768 (NIES-1731)</td>
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<td>2332</td>
<td>&lt; Hatakeyama, Noriko</td>
<td>Shizugawa Bay/Miyagi/Japan (1991-11-<strong>.</strong>)</td>
<td>Hatakeyama, Noriko</td>
<td>Identified by: Hatakeyama, Noriko</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>ESM; WESM; 20°C; 15-27μmol/m²/s; 1 M</td>
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**ROYA**: Charophyceae

**Roya anglica** G.S. West

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<th><strong>Culture conditions</strong></th>
<th><strong>Habitat</strong></th>
<th><strong>Other strain no.:</strong></th>
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**RUBRATELLA**: Foraminiferea

**Rubratella** sp.

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<td>1445</td>
<td>&lt; TKB</td>
<td>Hachijo Isl./Tokyo/Japan (2002-12-13)</td>
<td>Yoshida, Masaki</td>
<td>Identified by: Tsuchiya, Masashi</td>
<td>Mixed; Clonal; Non-axenic</td>
<td>mlMR (Pseudonitzschia sp. NIES-1383 should be cultured in advance as a prey); 15°C; 10-18μmol/m²/s; 2 M</td>
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**RUSALKA**: Chlorophyceae

**Rusalka fusiformis** (Matvienko) Nakada

Syn. Chlorogonium fusiforme Matvienko

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<th>History</th>
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<th><strong>Culture conditions</strong></th>
<th><strong>Habitat</strong></th>
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<td>123</td>
<td>&lt; IAM (1983)</td>
<td>&lt; TKB</td>
<td>Ichimura, Terunobu</td>
<td>Identified by: Ichimura, Terunobu</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>ESM; 15°C; 20-30μmol/m²/s; 1 M</td>
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**Formerly identified as:**
Chlorogonium metamorphum Skuja (in IAM)  
**States:** Unialgal; Clonal; Axenic  
**Culture conditions:** AF-6; 20°C; 4-10μmol/m²/s; 2 M (25°C; 70-80μmol/m²/s)  
**Habitat:** Freshwater  
**Characteristics:** Homothallic; Authentic strain; Type specimen (NIES-50007, Epitype)  
**Gene data:** atmP (AB084329); psaB (AB084370); rbcL (AB010242)  
**Other strain no.:** MKF-14  
**References:** 235, 567, 610, 711, 737, 740

**SALPINGOECIA** : Choanoflagellatea

Salpingoea infusionum Kent

1442  
**History:** < TKB  
**Locality:** Tokyo Bay/Kanagawa/Japan (2003-05-***)  
**Isolator:** Nakayama, Takeshi  
**Identified by:** Nakayama, Takeshi  
**States:** Unialgal; Non-clonal; Non-axenic  
**Culture conditions:** SUY 1/10 + Wheat; 15°C; 0μmol/m²/s; 2 M  
**Habitat:** Marine (Seawater)  
**Characteristics:** Phagotrophic  
**Other strain no.:** TKB-117 (nak13)

**SANDONA** : Sarcomonadea

Sandonia aestiva Howe, Bass, Vickerman, Chao et Cavalier-Smith

2419  
**History:** < Howe, Alexis T.  
**Locality:** Wytham Wood/U.K. (2006-***)  
**Isolator:** Howe, Alexis T.  
**Identified by:** Howe, Alexis T. (2006-***)  
**Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M  
**Habitat:** Terrestrial (Soil)  
**Characteristics:** Heterotrophic; Authentic strain; Resting spore forming  
**Other strain no.:** WA81  
**Reference:** 225

Sandonia dimutans Howe, Bass, Vickerman, Chao et Cavalier-Smith

2421  
**History:** < Howe, Alexis T.  
**Locality:** U.K. (2006-***)  
**Isolator:** Vickerman, Keith  
**Identified by:** Vickerman, Keith (2006-***)  
**Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M  
**Habitat:** Terrestrial (Plant (Piece of moss))  
**Characteristics:** Heterotrophic; Authentic strain; Resting spore forming  
**Other strain no.:** G11  
**Reference:** 225

Sandonia dissimilis Howe, Bass, Vickerman, Chao et Cavalier-Smith

2422  
**History:** < Howe, Alexis T.  
**Locality:** Wytham Wood/U.K. (2006-***)  
**Isolator:** Howe, Alexis T.  
**Identified by:** Howe, Alexis T. (2006-***)  
**Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M  
**Habitat:** Terrestrial (Soil)  
**Characteristics:** Heterotrophic; Authentic strain; Resting spore forming  
**Other strain no.:** WA46a  
**Reference:** 225

Sandonia erratica Howe, Bass, Vickerman, Chao et Cavalier-Smith

2508  
**History:** < Howe, Alexis T.  
**Locality:** U.K. (2006-***)  
**Isolator:** Howe, Alexis T.  
**Identified by:** Howe, Alexis T. (2006-***)  
**Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M  
**Habitat:** Terrestrial (Plant (Ivy leaf))  
**Characteristics:** Heterotrophic; Authentic strain; Resting spore forming  
**Other strain no.:** IVY16

Sandonia pentamutans Howe, Bass, Vickerman, Chao et Cavalier-Smith

2423  
**History:** < Howe, Alexis T.  
**Locality:** Wytham Wood/U.K. (2006-***)  
**Isolator:** Howe, Alexis T.  
**Identified by:** Howe, Alexis T. (2006-***)  
**Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M  
**Habitat:** Terrestrial (Soil)  
**Characteristics:** Heterotrophic; Authentic strain; Resting spore forming  
**Other strain no.:** WA60a  
**Reference:** 225

Sandonia similis Howe, Bass, Vickerman, Chao et Cavalier-Smith

2424  
**History:** < Howe, Alexis T.  
**Locality:** Wytham Wood/U.K. (2006-***)  
**Isolator:** Howe, Alexis T.  
**Identified by:** Howe, Alexis T. (2006-***)  
**Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M  
**Habitat:** Terrestrial (Soil)  
**Characteristics:** Heterotrophic; Authentic strain; Resting spore forming  
**Other strain no.:** WA57  
**Reference:** 225

Sandonia tetramutans Howe, Bass, Vickerman, Chao et Cavalier-Smith

2425  
**History:** < Howe, Alexis T.  
**Locality:** Wytham Wood/U.K. (2006-***)  
**Isolator:** Howe, Alexis T.  
**Identified by:** Howe, Alexis T. (2006-***)  
**Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M  
**Habitat:** Terrestrial (Soil)  
**Characteristics:** Heterotrophic; Authentic strain; Resting spore forming  
**Other strain no.:** WA46a  
**Reference:** 225
**Sandonia tetrasimilis** Howe, Bass, Vickerman, Chao et Cavalier-Smith

2426 **History:** < Howe, Alexis T. **Locality:** Wytham Wood/U.K. (2006-**.) **Isolator:** Howe, Alexis T. **Identified by:** Howe, Alexis T. (2006-**.) **Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat:** Terrestrial (Soil) **Characteristics:** Heterotrophic; Authentic strain; Resting spore forming **Other strain no.:** WA36 **Reference:** 225

**Sandonia ubiquita** Howe, Bass, Vickerman, Chao et Cavalier-Smith

2427 **History:** < Howe, Alexis T. **Locality:** Wytham Wood/U.K. (2006-**.) **Isolator:** Howe, Alexis T. **Identified by:** Howe, Alexis T. (2006-**.) **Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat:** Terrestrial (Soil) **Characteristics:** Heterotrophic; Authentic strain; Resting spore forming **Other strain no.:** W36 **Reference:** 225

2428 **History:** < Howe, Alexis T. **Locality:** Wytham Wood/U.K. (2006-**.) **Isolator:** Howe, Alexis T. **Identified by:** Howe, Alexis T. (2006-**.) **Culture conditions:** URO-H + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat:** Terrestrial (Soil) **Characteristics:** Heterotrophic; Resting spore forming; genetic variant a **Other strain no.:** B68 **Reference:** 225

2429 **History:** < Howe, Alexis T. **Locality:** Wytham Wood/U.K. (2006-**.) **Isolator:** Howe, Alexis T. **Identified by:** Howe, Alexis T. (2006-**.) **Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat:** Terrestrial (Soil) **Characteristics:** Heterotrophic; Resting spore forming; genetic variant b **Other strain no.:** W73 **Reference:** 225

2430 **History:** < Howe, Alexis T. **Locality:** Wytham Wood/U.K. (2006-**.) **Isolator:** Howe, Alexis T. **Identified by:** Howe, Alexis T. (2006-**.) **Culture conditions:** AF-6 + Wheat; 20°C; 0μmol/m²/s; 2-3 M **Habitat:** Terrestrial (Soil) **Characteristics:** Heterotrophic; Resting spore forming; genetic variant c **Other strain no.:** B13 **Reference:** 225

**SCENEDESMUS** : Chlorophyceae

**Scenedesmus acuminatus** (Lageraeim) Chodot var. **tetradesmoides** G.M. Smith

92 **History:** < Hiwatari, Takehiko **Locality:** Lake Kasumigaura/Ibaraki/Japan (1983-08-26) **Isolator:** Hiwatari, Takehiko **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Axenic **Culture conditions:** CT; 20°C; 8-15μmol/m²/s; 2 M **Habitat:** Freshwater (Lake water) **Other strain no.:** K-S-I **References:** 567, 1187 **Remarks:** Cryopreserved

**Scenedesmus acutus** Meyen

94 **History:** < Yuri, Akira **Locality:** Kosaka River/Akita/Japan (1983-04-19) **Isolator:** Yuri, Akira **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (River water) **Other strain no.:** 2-2-3-1 **References:** 567, 1134, 1187 **Remarks:** Cryopreserved

95 **History:** < Suda, Shoichiro **Locality:** Tsukuba/Ibaraki/Japan (1983-05-20) **Isolator:** Suda, Shoichiro **Identified by:** Watanabe, Masayuki **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Pond water) **Other strain no.:** Aq-S-1 **References:** 207, 567, 1159 **Remarks:** Cryopreserved

120 **History:** < Suda, Shoichiro **Locality:** inside NIES/Ibaraki/Japan (1983-05-20) **Isolator:** Suda, Shoichiro **Identified by:** Suda, Shoichiro **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Pond water) **Other strain no.:** Aq-S-2 **References:** 567, 1159 **Remarks:** Cryopreserved

2269 **History:** < IAM (2007) < Watanabe, Atsushi **Other collection strain no.:** IAM C-64 **Isolator:** Watanabe, Atsushi **Identified by:** Fukushima, Hiroshi **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M

2270 **History:** < IAM (2007) < Tsuzuki, Mikio (1988) < Avramova, S. T. (1982) < Semenenko, V. (?) **Other collection strain no.:** IAM C-537 **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M

**Scenedesmus basiliensis** Chodat
Schizocladia ischiensis

Other strain no.: KU 333


Isolator: Suda, Shoichiro

Habitat: Freshwater (Lake water)

Other strain no.: F-18-1

References: 567 Remarks: Cryopreserved

Schizocladia ischiensis


Habitat: Freshwater (Bog water)

Other strain no.: OZ-29

References: 567

CONTENTS

2271 History: < IAM (2007) > Watanabe, Atsushi Other collection strain no.: IAM C-65

Isolator: Watanabe, Atsushi

Identified by: Fukushima, Hiroshi

States: Unialgal; Clonal; Axenic[2013 Jan]

Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

2272 History: < IAM (2007) > Watanabe, Atsushi Other collection strain no.: IAM C-66

Isolator: Watanabe, Atsushi

Identified by: Fukushima, Hiroshi

States: Unialgal; Clonal; Axenic[2013 Jan]

Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

Scenedesmus bijuga (Turpin) Lagerheim

2273 History: < IAM (2007) > Other collection strain no.: IAM C-347

States: Unialgal; Clonal; Axenic[2013 Jan]

Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

References: 628, 864

Scenedesmus chlorelloides Chodat

2274 History: < IAM (2007) > Other collection strain no.: IAM C-67

Isolator: Watanabe, Atsushi

Identified by: Fukushima, Hiroshi

States: Unialgal; Clonal; Axenic[2013 Jan]

Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

References: 628, 864

Scenedesmus costulatus (Bohlin) Schmidle

2275 History: < IAM (2007) > Other collection strain no.: IAM C-68

Isolator: Watanabe, Atsushi

Identified by: Fukushima, Hiroshi

States: Unialgal; Clonal; Axenic[2013 Jan]

Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

References: 628, 864

Scenedesmus dimorphus (Turpin) Kützing


Identified by: Watanabe, Masayuki

States: Unialgal; Clonal; Axenic

Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s)

Habitat: Freshwater (Lake water)

Other strain no.: C (agar); 20°C; 8-15μmol/m²/s; 3 M

References: 567, 1159


Identified by: Hiwatari, Takehiko

States: Unialgal; Clonal; Axenic

Culture conditions: C; 20°C; 8-15μmol/m²/s; 2 M

Habitat: Freshwater (Bog water)

Other strain no.: OZ-29

References: 567

Remarks: Cryopreserved

Scenedesmus obliquus (Turpin) Kützing

2279 History: < IAM (2007) > UTEX (1989-07-04) Other collection strain no.: IAM C-521 (=C-72); CCAP 276/6A; SAG 276-6; UTEX 393

Isolator: Gaffron, H.

States: Unialgal; Clonal; Axenic[2012 Mar]

Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

Other strain no.: Gaffron D-3

References: 38, 628, 863, 864


Other collection strain no.: IAM C-538

Isolator: Gaffron, H.

States: Unialgal; Clonal; Axenic[2013 Jan]

Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M

Other strain no.: Gaffron D-3

References: 447, 560, 765, 766, 767, 768, 1101

SCHIZOCLADIA: Schizocladidiophyceae

Schizocladiella ischiensis

Henry, Okuda et Kawai

1044 History: < Kawai, Hiroshi > Localities: Ischia Isl./Italy (1987-10-21)

Isolator: Henry, Eric C.

Identified by: Kawai, Hiroshi

States: Unialgal; Clonal; Non-axenic

Culture conditions: ESM; 20°C; 4-10μmol/m²/s; 3 M

Habitat: Marine (Plant)

Characteristics: Authentic strain

Gene data: 18S rRNA (AB085614); rbcL (AB085615)

Other strain no.: KU-333

References: 137, 380

SCHROEDERIA: Chlorophyceae
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<th>Isolator</th>
<th>Identified by</th>
<th>States</th>
<th>Culture conditions</th>
<th>Habitat</th>
<th>Other strain no.</th>
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<td>2022</td>
<td>History: &lt; Noël, Mary-Hélène</td>
<td>Kobe/Hyogo/Japan (2005-09-13)</td>
<td>Noël, Mary-Hélène</td>
<td>Noël, Mary-Hélène (2006-01-**)</td>
<td>Unialgal</td>
<td>Clonal; Non-axenic</td>
<td>Marine (Sediment)</td>
<td>MHW36</td>
<td>Remarks: Fragile species to transportation stresses</td>
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SCYTONEMA : Cyanophyceae

Scytonema javanicum Bornet et Flahault

1956 History:< TAC Locality: Tsukuba Botanical Garden/Ibaraki/Japan Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Non-axenic Culture conditions: C (agar); 20°C; 10-15μmol/m²/s; 20 D Habitat: Terrestrial Other strain no.: TAC 582

Scytonema sp.


SELLAPHORA : Bacillariophyceae

Sellaphora seminulum (Grunow) D.G. Mann

Syn. Navicula seminulum Grunow


SKELETONEMA : Bacillariophyceae

Skeletonema marinoi-dohrnii complex

16 History:< Watanabe, Makoto M. Locality: Harima-Nada/Japan (1982-02.-**) Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. Formerly identified as: Skeletonema costatum (Greville) Cleve States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 10°C; 6-12μmol/m²/s; 1 M Habitat: Marine (Sediment) Characteristics: Red tide; DNA sequencing indicates this strain is included in Skeletonema marinoi/dohrnii clade Gene data: 18S rRNA (AB488607) Other strain no.: H-53-3 References: 408, 446, 838, 916, 1021

17 History:< Watanabe, Makoto M. Locality: Harima-Nada/Japan (1983-02.**.) Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. Formerly identified as: Skeletonema costatum (Greville) Cleve States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 10°C; 6-12μmol/m²/s; 1 M Habitat: Marine (Sediment) Characteristics: Red tide; DNA sequencing indicates this strain is included in Skeletonema marinoi/dohrnii clade Gene data: 18S rRNA (AB488608) Other strain no.: H-90-2 References: 446, 576

223 History:< KAGAWA Locality: Shodo Isl./Kagawa/Japan (1979-07-12) Isolator: Yuki, Katsuhisa Formerly identified as: Skeletonema costatum (Greville) Cleve States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 10°C; 6-12μmol/m²/s; 1 M Habitat: Marine Characteristics: Red tide; DNA sequencing indicates this strain is included in Skeletonema marinoi/dohrnii clade Gene data: 18S rRNA (AB488609) Other strain no.: KGW-26 Reference: 446

323 History:< Osaka Pref. Fish. Exp. St. Locality: Osaka Bay/Osaka/Japan (1985-01-21) Isolator: Yamochi, Susumu Identified by: Yamochi, Susumu Formerly identified as: Skeletonema costatum (Greville) Cleve States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: f/2; 10°C; 6-12μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide; DNA sequencing indicates this strain is included in Skeletonema marinoi/dohrnii clade Gene data: 18S rRNA (AB488610); chloroplast genome (AJ132263); chloroplast genome (AJ132264); chloroplast genome (AJ132265); chloroplast genome (AJ132266); ycf24 (AJ132267) Other strain no.: Sk-85w References: 115, 137, 289, 434, 446, 802, 1012
324 History: < Osaka Pref. Fish. Exp. St. Locali ty: Osaka Bay/Hyogo/Japan (1985-07-02) Isolator: Yamochi, Susumu Identified by: Yamochi, Susumu Formerly identified as: Skeletonema costatum (Greville) Cleve States: Unialgal; Clonal; Axenic [2013 Jan] Culture conditions: f/2; 10°C; 6-12μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Red tide; DNA sequencing indicates this strain is included in Skeletonema marinoi/dohrnii clade Gene data: 18S rRNA (AB488611) Other strain no.: Sk-85su References: 115, 446, 604, 803, 812

SPHAEROZOSMA: Charophyceae
Spaerozosa sp.

2306 History: < Suda, Shoichiro Locali ty: Lake Ozenuma/Fukushima/Japan (1983-08-30) Isolator: Suda, Shoichiro Identified by: Suda, Shoichiro States: Unialgal; Clonal; Non-axenic Culture conditions: CA; 20°C; 8-15μmol/m²/s; 3 M (25°C; 60-70μmol/m²/s) Habitat: Freshwater (Lake water) Other strain no.: OZ-N-1-12

SPINOCLOSTERIUM: Charophyceae
Spinoclosterium cuspidatum (Bailey ex Ralfs) Hirano


SPIRULINA: Cyanophyceae
Spirulina subsalsa Oersted ex Gomont


598 History: < Hagiwara, Tomiji Locali ty: Chiyoda-ku/Tokyo/Japan (1989-10-02) Isolator: Hagiwara, Tomiji Identified by: Hagiwara, Tomiji States: Unialgal; Non-clonal; Non-axenic Culture conditions: CB; CSI; 20°C; 8-15μmol/m²/s; 2 M (25°C; 60-70μmol/m²/s) Habitat: Freshwater (Pond water) Other strain no.: KO-39 References: 139, 567

SPUMELLA: Chrysophyceae
Spu m ella sp.


STAURA STRUM: Charophyceae
Staurastraum dorsidentiferum W. et G.S. West

665 History: < Ishida, Yuzaburo Locali ty: Lake Biwa/Shiga/Japan (1986-09-***) Isolator: Ohara, S. Identified by: Nakanishi, Masami States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 25°C; 100-120μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Other strain no.: NB References: 14, 567, 760, 1203, 1204
Staurastrum inconspicuum Nordstedt

390  History: < Kasai, Fumie Locality: Ozegahara/Gunma/Japan (1983-08-29) Isolator: Kasai, Fumie States: Unialgal; Clonal; Axenic Culture conditions: CAM; 20°C; 8-15μmol/m²/s; 3 M (20°C; 15-27μmol/m²/s) Habitat: Freshwater (Bog water) Other strain no.: 34-10 Reference: 567

Staurastrum levanderi Grönlblad


Staurastrum paradoxum Meyen

528  History: < Watanabe, Michiko H. Locality: Lake Kasumigaura/Ibaraki/Japan (1982-12-**) Isolator: Watanabe, Michiko H. States: Unialgal; Clonal; Axenic [2013 Jan] Culture conditions: C; 20°C; 8-15μmol/m²/s; 2 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater (Lake water) Other strain no.: Kas-K-3 Reference: 567

Staurastrum tsukubicum Gontcharov et M.M. Watanabe

842  History: < Gontcharov, A. Locality: Tsukuba/Ibaraki/Japan (1997-12-07) Isolator: Gontcharov, A. Identified by: Gontcharov, A. States: Unialgal; Clonal; Non-axenic Culture conditions: C; 20°C; 8-15μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: (Freshwater) Characteristics: Authentic strain Reference: 127

STAURODESMUS : Charophyceae

Staurodsemus dejectum (Brébisson ex Ralfs) Teiling

Syn. Staurastrum dejectum Brébisson ex Ralfs

224  History: < TAC Locality: Lake Yamanaka/Yamanashi/Japan (1981-10-26) Isolator: Watanabe, Masayuki Identified by: Watanabe, Masayuki States: Unialgal; Clonal; Axenic [2012 Nov] Culture conditions: AF-6; 20°C; 8-15μmol/m²/s; 2 M (20°C; 22-32μmol/m²/s) Habitat: Freshwater Other strain no.: TAC 53-1 (TAN-53-1) Reference: 567

STICHOOCOCUS : Trebouxiophyceae

Stichococcus ampulliformis S.Handa

996  History: < Handa, Shinji Locality: Taishakukyo Valley/Hiroshima/Japan (1987-12-13) Isolator: Handa, Shinji Identified by: Handa, Shinji States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (Plant (Bark of Cephalotaxus harringtonia)) Characteristics: Epiphytic; Authentic strain Gene data: 18S rRNA (AB087559) Other strain no.: Handa-299(f) Reference: 146 Remarks: Cryopreserved

Stichococcus bacillaris Nägeli

529  History: < Kasai, Fumie Locality: Watarase River/Gunma/Japan (1987-08-15) Isolator: Kasai, Fumie Identified by: Kasai, Fumie; Confirmed at NIES by DNA sequencing States: Unialgal; Non-clonal; Non-axenic Culture conditions: C; 15°C; 15-22μmol/m²/s; 3 M Habitat: Freshwater (River water) Gene data: 18S rRNA (AB488606) Other strain no.: AT2-16 References: 567, 1018 Remarks: Cryopreserved

530  History: < Kasai, Fumie Locality: Watarase River/Gunma/Japan (1987-08-15) Isolator: Kasai, Fumie Identified by: Kasai, Fumie; Confirmed at NIES by DNA sequencing States: Unialgal; Non-clonal; Non-axenic Culture conditions: C; 15°C; 15-22μmol/m²/s; 3 M Habitat: Freshwater (River water) Gene data: 18S rRNA (AB488605) Other strain no.: AT5-17 References: 567, 1018, 1019 Remarks: Cryopreserved

2184  History: < IAM (2007) < Holm-Hansen, O. Other collection strain no.: IAM C-170 Locality: Marble Point/Antarctica Isolator: Holm-Hansen, O. States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 3 M Habitat: Freshwater Other strain no.:
### Stigeoclonium:

**Stigeoclonium aestivale** (Hazen) Collins

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**Stigeoclonium fasciculare** Kitzing var. fasciculare

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### Stigonema:

**Stigonema ocellatum** (Dillwyn) Thuret ex Bornet et Flahault

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**Remarks:** Cryopreserved
conditions: IMK; 20 °C; 8-15μmol/m²/s; 3 M Habitat: Marine (Sand) Characteristics: Benthic Gene data: 28S-ITS (EU106355) Other strain no.: Oku05 References: 206, 1122 Remarks: Fragile species to transportation stresses

**SYMBIOMONAS** : Bicocea

*Sybionomonas scintillans* Guillou et Chriètiennot-Dinet


**SYMPLOCA** : Cyanophyceae

*Symplaca muscorum* (Agardh) Gomont

2132 History: < IAM (2007) Other collection strain no.: IAM M-133 States: Unialgal; Clonal; Non-axenic Culture conditions: MDM (agar); 20 °C; 13-18μmol/m²/s; 3 M

**SYNECHOCOCCUS** : Cyanophyceae

*Synechococcus* sp.


943 History: < Takamura, Noriko Locality: Lake Kojima/Okayama/Japan (1991-07-09) Isolator:
Takamura, Noriko Identified by: Takamura, Noriko States: Unialgal Culture conditions: C; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: cpcBA-IGS (AF223441) Other strain no.: KOJ 1 Reference: 856 Remarks: Cryopreserved

944 History: < Takamura, Noriko Locality: Lake Abashiri/Hokkaido/Japan (1991-05-10) Isolator: Takamura, Noriko Identified by: Takamura, Noriko States: Unialgal Culture conditions: C; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: 16S rRNA (AF216951); cpcBA-IGS (AF223428); rpoC1 (AF245124) Other strain no.: ABS 10 Reference: 856 Remarks: Cryopreserved

945 History: < Takamura, Noriko Locality: Lake Biwa, North Basin/Shiga/Japan (1990-09-12) Isolator: Takamura, Noriko Identified by: Takamura, Noriko States: Unialgal Culture conditions: C; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: cpcBA-IGS (AF223443) Other strain no.: 2K 11 References: 856, 1077 Remarks: Cryopreserved


951 History: < Takamura, Noriko Locality: Lake Akan/Hokkaido/Japan (1991-05-14) Isolator: Takamura, Noriko Identified by: Takamura, Noriko States: Unialgal Culture conditions: C; 15°C; 10-18μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Gene data: 16S rRNA (AF216952); cpcB, cpcA (AF223429); rpoC1 (AF245125) Other strain no.: AKN 3 Reference: 856 Remarks: Cryopreserved


953 History: < Takamura, Noriko Locality: Lake Biwa, North Basin/Shiga/Japan (1990-09-12) Isolator: Takamura, Noriko Identified by: Takamura, Noriko States: Unialgal Culture conditions: C; 15°C; 10-18μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Gene data: 16S rRNA (AF216953); cpcBA-IGS (AF223430) Other strain no.: B 10 Reference: 856 Remarks: Cryopreserved


958 History: < Takamura, Noriko Locality: Lake Biwa, North Basin/Shiga/Japan (1990-09-12) Isolator: Takamura, Noriko Identified by: Takamura, Noriko States: Unialgal Culture conditions: C; 15°C; 10-18μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Gene data: 16S rRNA (AF216955); cpcBA-IGS (AF223432) Other strain no.: B 4 Reference: 856 Remarks: Cryopreserved

959 History: < Takamura, Noriko Locality: Lake Biwa, North Basin/Shiga/Japan (1990-09-12) Isolator: Takamura, Noriko Identified by: Takamura, Noriko States: Unialgal Culture conditions: C; 15°C; 10-18μmol/m²/s; 2 M Habitat: Freshwater (Lake water) Characteristics: Cyanobacterial water bloom (aoko) Gene data: 16S rRNA (AF216956); cpcBA-IGS (AF223433) Other strain no.: B 3 Reference: 856 Remarks: Cryopreserved


969 History: < Tezuka, Naoaki Locality: East China Sea (1998-06-01) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Gene data: 16S rRNA (AF448060); rpoC1
(AF448082) Other strain no.: 1002 Remarks: Cryopreserved

970 History: < Tezuka, Naoaki Location: Tokunoshima Isl./Kagoshima (1998-08-28) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Tidal flat sand water) Gene data: 16S rRNA (AF448073) Other strain no.: T71 Remarks: Cryopreserved

971 History: < Tezuka, Naoaki Location: Tokunoshima Isl./Kagoshima (1998-08-28) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Tidal flat sand water) Characteristics: Euryhaline Gene data: 16S rRNA (AF448061); rpoC1 (AF448083) Other strain no.: IR11 Remarks: Cryopreserved

972 History: < Tezuka, Naoaki Location: Iriomote Isl./Okinawa/Japan (1998-11-05) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Tidal flat seawater) Characteristics: Euryhaline Gene data: 16S rRNA (AF448079); rpoC1 (AF448117) Other strain no.: IR11 Remarks: Cryopreserved

973 History: < Tezuka, Naoaki Location: Iriomote Isl., Urauchi River/Okinawa/Japan (1998-11-05) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: C + 10% Seawater; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Tidal flat sediment) Gene data: 16S rRNA (AF448062) Other strain no.: 48 Remarks: Cryopreserved

974 History: < Tezuka, Naoaki Location: Iriomote Isl., Funaura/Okinawa/Japan (1998-11-06) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Gene data: rpoC1 (AF448101) Other strain no.: 58E8 Remarks: Cryopreserved

975 History: < Tezuka, Naoaki Location: Iriomote Isl., Funaura/Okinawa/Japan (1998-11-06) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Gene data: rpoC1 (AF448099) Other strain no.: 58g6 Remarks: Cryopreserved

976 History: < Tezuka, Naoaki Location: Iriomote Isl., Funaura/Okinawa/Japan (1998-11-06) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Gene data: rpoC1 (AF448100) Other strain no.: 59 Remarks: Cryopreserved

977 History: < Tezuka, Naoaki Location: Taiyo/Ibaraki/Japan (1999-01-08) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Seawater) Gene data: rpoC1 (AF448105) Other strain no.: taiyo Remarks: Cryopreserved

978 History: < Tezuka, Naoaki Location: Iriomote Isl., Urauchi/Okinawa/Japan (1999-02-04) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: C + 10% Seawater; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Tidal flat sediment) Characteristics: Euryhaline Gene data: 16S rRNA (AF448063); rpoC1 (AF448084) Other strain no.: UBR Remarks: Cryopreserved

979 History: < Tezuka, Naoaki Location: Iriomote Isl., Urauchi/Okinawa/Japan (1999-02-04) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Tidal flat sediment) Gene data: 16S rRNA (AF448074); rpoC1 (AF448109) Other strain no.: UH7 Remarks: Cryopreserved

980 History: < Tezuka, Naoaki Location: Iriomote Isl., Kom/Okinawa/Japan (1999-06-30) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Tidal flat sediment) Gene data: rpoC1 (AF448097) Other strain no.: kom Remarks: Cryopreserved

981 History: < Tezuka, Naoaki Location: Iriomote Isl., Hoshidate/Okinawa/Japan (1999-07-01) Isolator: Tezuka, Naoaki Identified by: Tezuka, Naoaki States: Unialgal; Clonal; Axenic Culture conditions: ESM; 20°C; 40-50μmol/m²/s; 1 M Habitat: Marine (Tidal flat sediment) Gene data:
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<td>Lake Mondsee/Austria (2001-<strong>,</strong>*)</td>
<td>Isolator:</td>
<td>Crosbie, Nicholas D.</td>
<td>Identified by:</td>
<td>Crosbie, Nicholas D.</td>
<td>States:</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>Culture conditions:</td>
<td>CB; 15°C; 10-18μmol/m²/s; 1 M</td>
<td>Habitat:</td>
<td>Freshwater (Lake water)</td>
<td>Gene data:</td>
<td>16S rRNA (AY151232); cpcBA-IGS (AY151215)</td>
<td>Other strain no.:</td>
<td>MW15#2</td>
<td>References:</td>
<td>59, 60</td>
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<td>History</td>
<td>&lt; Crosbie, Nicholas D.</td>
<td>Locality:</td>
<td>Lake Hallstättersee/Austria (2001-<strong>,</strong>*)</td>
<td>Isolator:</td>
<td>Crosbie, Nicholas D.</td>
<td>Identified by:</td>
<td>Crosbie, Nicholas D.</td>
<td>States:</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>Culture conditions:</td>
<td>CB; 15°C; 10-18μmol/m²/s; 1 M</td>
<td>Habitat:</td>
<td>Freshwater (Lake water)</td>
<td>Gene data:</td>
<td>16S rRNA (AY151240)</td>
<td>Other strain no.:</td>
<td>MW72C6</td>
<td>References:</td>
<td>59, 60</td>
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<td>Lake Hallstättersee/Austria (2001-<strong>,</strong>*)</td>
<td>Isolator:</td>
<td>Crosbie, Nicholas D.</td>
<td>Identified by:</td>
<td>Crosbie, Nicholas D.</td>
<td>States:</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>Culture conditions:</td>
<td>CB; 15°C; 10-18μmol/m²/s; 1 M</td>
<td>Habitat:</td>
<td>Freshwater (Lake water)</td>
<td>Gene data:</td>
<td>16S rRNA (AY151250)</td>
<td>Other strain no.:</td>
<td>MW73B4</td>
<td>References:</td>
<td>59, 60</td>
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<td>Locality:</td>
<td>Lake Hallstättersee/Austria (2001-<strong>,</strong>*)</td>
<td>Isolator:</td>
<td>Crosbie, Nicholas D.</td>
<td>Identified by:</td>
<td>Crosbie, Nicholas D.</td>
<td>States:</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>Culture conditions:</td>
<td>CB; 15°C; 10-18μmol/m²/s; 1 M</td>
<td>Habitat:</td>
<td>Freshwater (Lake water)</td>
<td>Gene data:</td>
<td>16S rRNA (AY151250)</td>
<td>Other strain no.:</td>
<td>MW73B4</td>
<td>References:</td>
<td>59, 60</td>
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Culture conditions: CB; 15°C; 10-18μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Gene data: 16S rRNA (AY151245) Other strain no.: MW76B2 References: 59, 60 Remarks: Cryopreserved

1346 History: < Crosbie, Nicholas D. Locality: Lake Hallstättersee/Austria (2001-**,***) Isolator: Crosbie, Nicholas, D. Identified by: Crosbie, Nicholas D. States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 15°C; 10-18μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Gene data: 16S rRNA (AY151246); cpcBA-IGS (AY151217) Other strain no.: MW77D1 References: 59, 60 Remarks: Cryopreserved

1347 History: < Crosbie, Nicholas D. Locality: Lake Mondsee/Austria (2001-**,***) Isolator: Crosbie, Nicholas, D. Identified by: Crosbie, Nicholas D. States: Unialgal; Clonal; Non-axenic Culture conditions: CB; 15°C; 10-18μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Gene data: 16S rRNA (AY224199); cpcBA-IGS (AY224205) Other strain no.: MH301 References: 59, 60 Remarks: Cryopreserved

1348 History: < Crosbie, Nicholas D. Locality: Lake Mondsee/Austria (2001-**,***) Isolator: Crosbie, Nicholas, D. Identified by: Crosbie, Nicholas D. States: Unialgal; Clonal; Axenic Culture conditions: CB; 15°C; 10-18μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Gene data: 16S rRNA (AY224198); cpcBA-IGS (AY224206) Other strain no.: MH305 References: 59, 60 Remarks: Cryopreserved

SYNURA: Chrysophyceae

Synura petersenii Korshikov


1007 History: < Moriya, Mayumi Locality: Bibi River/Hokkaido/Japan (1999-11-**) Isolator: Moriya, Mayumi Identified by: Moriya, Mayumi States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 15°C; 15-22μmol/m²/s; 2 M Habitat: Freshwater (River water) Other strain no.: #73 Reference: 36

Synura sphagnicola (Korshikov) Korshikov


Synura spinosa Korshikov


TABELLARIA: Bacillariophyceae

Tabellaria flocculosa (Roth) Kützing

225 History: < Watanabe, Makoto M. Locality: Ozegahara/Fukushima/Japan (1983-08-30) Isolator: Watanabe, Makoto M. Identified by: Watanabe, Makoto M. States: Unialgal; Clonal; Non-axenic Culture conditions: C; 15°C; 20-30μmol/m²/s; 2 M Habitat: Freshwater (Bog water) Other strain no.: OZ-43-4 Reference: 838
TABRIS: Chlorophyceae

Tabris heimiï (Bourrelly) Nakada
Syn. Chlorogonium heimiï Bourrelly

2294 History: < Nakada, Takashi
Locality: Lake Okegaya-numa/Shizuoka/Japan (2004-07-23)
Isolator: Nakada, Takashi
Identified by: Nakada, Takashi (2007-12-**)
States: Unialgal; Clonal;
Non-axenic Culture conditions: mAC; 20 ℃; 32-40μmol/m²/s; 14 D
Habitat: Freshwater (Sediment)
Characteristics: Mixotrophic; Authentic strain
Gene data: 18S rRNA (AB451189);
psaB (AB451216); rbcL (B451194)
Other strain no.: IwCl-10
Reference: 609

TETRABAENA: Chlorophyceae

Tetrabaena socialis (Dujardin) Nozaki et Ito
Syn. Gonium sociale (Dujardin) Warming

691 History: < Nozaki, Hisayoshi
Locality: King George Isl./Antarctica (1990-12-**)
Isolator: Ohtani, Shuji
Identified by: Nozaki, Hisayoshi
States: Unialgal; Clonal; Axenic
Culture conditions: AF-6; 10 ℃; 15-20μmol/m²/s; 1 M
Habitat: Snow
Characteristics: Cryophilic
Other strain no.: KG-4-8th
References: 567, 739

1437 History: < TKB
Locality: Hyotaro-ike Pond/Ibaraki/Japan (2003-01-**)
Isolator: Nakayama, Takeshi
Identified by: Nakayama, Takeshi
Formerly identified as: Basiclammys sacculifera (Scherfél)
States: Unialgal; Non-clonal; Non-axenic
Culture conditions: AF-6; 15 ℃;
22-32μmol/m²/s; 2 M
Habitat: Freshwater (Pond water)
Characteristics: Benthic
Other strain no.: TKB-051 (nak-06)

Tetrabaena socialis (Dujardin) Nozaki et Ito var. socialis
Syn. Gonium sociale (Dujardin) Warming var. sociale

571 History: < Nozaki, Hisayoshi
Locality: Yokohama, Kohoku-ku/Kanagawa/Japan (1982-08-24)
Isolator: Nozaki, Hisayoshi
Identified by: Nozaki, Hisayoshi
States: Unialgal; Clonal;
Non-axenic Culture conditions: AF-6; 20 ℃; 22-27μmol/m²/s; 1 M
Habitat: Freshwater (Pond sediment)
Characteristics: Homothallic; Isogamy
Gene data: atpB (AB014014); psaA (AB044415);
psaB (AB044466); psbC (AB044525); rbcL (D63443)
Other strain no.: 21028-4
References: 567, 696, 714, 715, 733, 738, 739, 740

TETRACYSTIS: Chlorophyceae

Tetracystis chlorococcoides (Korshikov) S.Watanabe

155 History: < Watanabe, Shin
Locality: Mt. Eboshidake/Nagasaki/Japan (1975-08-15)
Isolator: Watanabe, Shin
Identified by: Watanabe, Shin
States: Unialgal; Clonal;
Axenic Culture conditions: C (agar);
20 ℃; 4-10μmol/m²/s; 3 M (25 ℃; 70-80μmol/m²/s)
Habitat: Terrestrial (Soil)
Other strain no.: 3-ERO-1
References: 567, 1186

TETRAHYMENA: Oligohymenophorea

Tetrahymena pyriformis Ehrenberg

403 History: < Sudo, Ryuichi
Locality: Lake Kasumigaura/Ibaraki/Japan (1976-08-**)
Isolator: Sudo, Ryuichi
Identified by: Sudo, Ryuichi
Culture conditions: LE; URO + Wheat; 10 ℃;
0μmol/m²/s; 20 D (20 ℃)
Habitat: Freshwater
Characteristics: Other water bloom
Other strain no.: Tetra-1
Reference: 293
Remarks: Fragile species to transportation stresses

TETRASELMIS: Prasinophyceae
Tetraselmis cordiformis (Carter) Stein

18  History: < Watanabe, Makoto M.  Locality: Shimokubo Dam/Gunma/Japan (1980-04-**)
    Isolator: Watanabe, Makoto M.  Identified by: Inouye, Isao  States: Unialgal; Clonal; Axenic[2012 Feb]  Culture conditions: C; 20°C; 32-40μmol/m²/s; 1 M  Habitat: Freshwater (Lake water)  Characteristics: Other water bloom  Other strain no.: SM-6-9  References: 138, 1159

Tetraselmis levis Butcher

1430  History: < TKB Localities: Ishigaki Isl./Okinawa/Japan (2003-12-**)  Isolator: Kai, Atsushi  Identified by: Kai, Atsushi  States: Unialgal; Clonal; Non-axenic  Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 1 M  Habitat: Marine (Seawater)  Other strain no.: TKB-121 (AK-14)

Tetraselmis sp.

1429  History: < TKB Localities: Ishigaki Harbor/Okinawa/Japan (2003-12-25)  Isolator: Okamoto, Noriko  Identified by: Okamoto, Noriko  States: Unialgal; Clonal; Non-axenic  Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 1 M  Habitat: Marine (Seawater)  Other strain no.: TKB-083 (nrc059)

1431  History: < TKB Localities: Amachi Beach/Okinawa/Japan (2003-12-**)  Isolator: Okamoto, Noriko  Identified by: Okamoto, Noriko  States: Unialgal; Clonal; Non-axenic  Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 20 D  Habitat: Marine (Seawater)  Characteristics: Benthic  Other strain no.: TKB-091 (nrc067)

1432  History: < TKB Localities: Wakayama/Japan (2002-07-**)  Isolator: Okamoto, Noriko  Identified by: Okamoto, Noriko  States: Unialgal; Clonal; Non-axenic  Culture conditions: ESM; 20°C; 20-30μmol/m²/s; 1 M  Habitat: Marine (Seawater)  Other strain no.: TKB-043 (nrc030-035)

1433  History: < TKB Localities: Isonoura Beach/Wakayama/Japan (2003-06-**)  Isolator: Okamoto, Noriko  Identified by: Okamoto, Noriko  States: Unialgal; Clonal; Non-axenic  Culture conditions: ESM; 20°C; 20-30μmol/m²/s; 20 D  Habitat: Marine (Sand and seawater)  Other strain no.: TKB-073 (nrc052*)

1434  History: < TKB Localities: Ishigaki Harbor/Okinawa/Japan (2003-12-**)  Isolator: Okamoto, Noriko  States: Unialgal; Clonal; Non-axenic  Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 20 D  Habitat: Marine (Seawater)  Other strain no.: TKB-095 (nrc)

Tetraselmis striata Butcher

1019  History: < Moriya, Mayumi  Locality: Nagahama/Hiroshima/Japan (2001-03-**)  Isolator: Moriya, Mayumi  Identified by: Moriya, Mayumi  States: Unialgal; Clonal; Non-axenic  Culture conditions: ESM; 20°C; 32-40μmol/m²/s; 1 M  Habitat: Marine (Seawater)  Other strain no.: #96

Tetraselmis verrucosa (Butcher) Parke

1836  History: < TKB Localities: Naha/Okinawa/Japan (2005-01-22)  Isolator: Yamaguchi, Haruyo  Identified by: Yamaguchi, Haruyo  States: Unialgal; Clonal; Non-axenic  Culture conditions: f/2; 20°C; 20-30μmol/m²/s; 1 M  Habitat: Marine (Seawater)  Other strain no.: TKB-276

THALASSIONEMA  Bacillariophyceae

Thalassionema nitzschioides (Grunow) Hustedt

534  History: < Sawaguchi, Tomohiro  Locality: Matoya Bay/Mie/Japan (1984-09-01)  Isolator: Sawaguchi, Tomohiro  Identified by: Sawaguchi, Tomohiro  States: Unialgal; Clonal; Non-axenic  Culture conditions: f/2; 15°C; 20-30μmol/m²/s; 1 M  Habitat: Marine (Seawater)  Other strain no.: MBB-6  Reference: 838
**THAUMATOMASTIX** : Imbricatea

*Thaumatomastix* sp.

1443 **History**: < TKB **Locality**: Hachijo Isl./Tokyo/Japan (2002-12-13) **Isolator**: Yubuki, Naoji **Identified by**: Yubuki, Naoji **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: BESM2; 15°C; 0μmol/m²/s; 20 D **Habitat**: Marine (Seawater) **Characteristics**: Heterotrophic **Other strain no.**: TKB-023 (NY0134) **Reference**: 137

2378 **History**: < TKB **Locality**: Tokyo Bay/Chiba/Japan (2007-02-25) **Isolator**: Yabuki, Akinori **Identified by**: Yabuki, Akinori (2007.**,**.*) **Culture conditions**: ESM; 20°C; 0μmol/m²/s; 14 D **Habitat**: Marine (Seawater) **Characteristics**: Phagotrophic; Benthic **Other strain no.**: TKB-345

**THERMOSynechoCoccus** : Cyanophyceae

*Thermosynechococcus elongatus* Katoh, Itoh, Shen et Ikeuchi

Syn. Synechococcus elongatus

1323 **History**: < IAM (2007) **Other collection strain no.**: IAM M-273 **Locality**: Beppu Hot Spring/Oita/Japan **States**: Unialgal; Clonal; Axenic[2012 Mar] **Culture conditions**: BG-11 (agar); 55°C; 8-15μmol/m²/s; 3 M **Habitat**: Hot spring **Characteristics**: Thermophilic (opt. 57°C) **Other strain no.**: BP-1 **Remarks**: Fragile species to temperature changes

*Thermosynechococcus vulcanus* Katoh, Itoh, Shen et Ikeuchi nom. nud.

Syn. Synechococcus vulcanus

2134 **History**: < IAM (2007) **Other collection strain no.**: IAM M-293 **Locality**: Yunomine Hot Spring/Wakayama/Japan **States**: Unialgal; Clonal; Axenic[2012 Mar] **Culture conditions**: BG-11 (agar); 55°C; 8-15μmol/m²/s; 3 M **Habitat**: Hot spring **Characteristics**: Thermophilic (opt. 57°C) **Remarks**: Fragile species to temperature changes

**THORACOSPHAERA** : Dinophyceae

*Thoracosphaera heimi* (Lohmann) Kamptner

1325 **History**: < Kawachi, Masanobu **Locality**: Hachijo Isl., Yaene Harbor/Tokyo/Japan (2002-01-23) **Isolator**: Noël, Mary-Hélène **Identified by**: Noël, Mary-Hélène **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: mLMR; MNK; 20°C; 25-40μmol/m²/s; 20 D **Habitat**: Marine (Seawater) **Other strain no.**: MH 36 **Remarks**: Fragile species to transportation stresses

1326 **History**: < Kawachi, Masanobu **Locality**: East China Sea (2003-08-06) **Isolator**: Noël, Mary-Hélène **Identified by**: Noël, Mary-Hélène **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: mLMR; MNK; 20°C; 25-40μmol/m²/s; 20 D **Habitat**: Marine (Seawater) **Other strain no.**: MH 78 **Remarks**: Fragile species to transportation stresses

**THOREA** : Florideophyceae

*Theorea gaudichaudii* C.Agardh

1473 **History**: < Higa, Atsushi **Locality**: Okinawa Isl./Okinawa/Japan (2002-03-16) **Isolator**: Higa, Atsushi **Identified by**: Kamura, Shintoku; Kumano, Shigeru (2002.**,**.*) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Characteristics**: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN **Other strain no.**: IK1 **Reference**: 142

1474 **History**: < Higa, Atsushi **Locality**: Nugusuku-ga/Okinawa/Japan (2002-03-17) **Isolator**: Higa, Atsushi **Identified by**: Kamura, Shintoku; Kumano, Shigeru (2002.**,**.*) **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Characteristics**: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN **Other strain no.**: NUG-I

1475 **History**: < Ishimoto, Miwa **Locality**: Nugusuku-ga/Okinawa/Japan (2002-07-10) **Isolator**: Ishimoto, Miwa **Identified by**: Kawachi, Masanobu **States**: Unialgal; Clonal; Non-axenic **Culture
conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Monocious; CR+EN Other strain no.: NUG-4

1476 History: < Ishimoto, Miwa Locality: Nugusuku-ga/Okinawa/Japan (2002-07-10) Isolator: Ishimoto, Miwa Identified by: Kawachi, Masanobu States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Monocious; CR+EN Other strain no.: NUG-5

1477 History: < Ishimoto, Miwa Locality: Nugusuku-ga/Okinawa/Japan (2002-07-10) Isolator: Ishimoto, Miwa Identified by: Kawachi, Masanobu States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Monocious; CR+EN Other strain no.: NUG-2

1478 History: < Ishimoto, Miwa Locality: Nugusuku-ga/Okinawa/Japan (2002-07-10) Isolator: Ishimoto, Miwa Identified by: Kawachi, Masanobu States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Monocious; CR+EN Other strain no.: NUG-3

1479 History: < Higa, Atsushi Locality: Nju-ga/Okinawa/Japan (2004-02-19) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2004-**,**)) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN Other strain no.: UUJ-1

1480 History: < Higa, Atsushi Locality: Nju-ga/Okinawa/Japan (2004-02-19) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2004-**,**)) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN Other strain no.: UUJ-2

1481 History: < Higa, Atsushi Locality: Nju-ga/Okinawa/Japan (2004-02-19) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2004-**,**)) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN Other strain no.: UUJ-3

1482 History: < Higa, Atsushi Locality: Nju-ga/Okinawa/Japan (2004-02-19) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2004-**,**)) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN Other strain no.: UUJ-4

1751 History: < Higa, Atsushi Locality: Nju-ga/Okinawa/Japan (2005-03-23) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2005-03-23) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN Other strain no.: 03nj22-1

1752 History: < Higa, Atsushi Locality: Nju-ga/Okinawa/Japan (2005-03-23) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2005-03-23) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN Other strain no.: 03nj221

1753 History: < Higa, Atsushi Locality: Nju-ga/Okinawa/Japan (2005-03-23) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2005-03-23) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20 °C; 3-12 μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN Other strain no.: 03nj6

Characteristics: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN
Other strain no.: 03nj10

History: < Higa, Atsushi
Locality: Nju-ga/Okinawa/Japan
(2005-03-23)
Isolator: Higa, Atsushi

Identified by: Kamura, Shintoku
(2005-03-23)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN
Other strain no.: 03nj91

History: < Higa, Atsushi
Locality: Kucha-ga/Okinawa/Japan
(2005-03-23)
Isolator: Higa, Atsushi

Identified by: Kamura, Shintoku
(2005-03-23)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN
Other strain no.: 03KC2

History: < Higa, Atsushi
Locality: Kucha-ga/Okinawa/Japan
(2005-03-23)
Isolator: Higa, Atsushi

Identified by: Kamura, Shintoku
(2005-03-23)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN
Other strain no.: 03KC3

History: < Higa, Atsushi
Locality: Kucha-ga/Okinawa/Japan
(2005-03-23)
Isolator: Higa, Atsushi

Identified by: Kamura, Shintoku
(2005-03-23)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN
Other strain no.: 03KC4

History: < Higa, Atsushi
Locality: Kucha-ga/Okinawa/Japan
(2005-03-23)
Isolator: Higa, Atsushi

Identified by: Kamura, Shintoku
(2005-03-23)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN
Other strain no.: 03si3

History: < Higa, Atsushi
Locality: Shikinaen, Ikutoku-sen Spring/Okinawa/Japan
(2005-03-23)
Isolator: Higa, Atsushi

Identified by: Kamura, Shintoku
(2005-03-23)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN
Other strain no.: 03si51

History: < Higa, Atsushi
Locality: Shikinaen, Ikutoku-sen Spring/Okinawa/Japan
(2005-03-23)
Isolator: Higa, Atsushi

Identified by: Kamura, Shintoku
(2005-03-23)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious; CR+EN
Other strain no.: 03si11

History: < Higa, Atsushi
Locality: Shikinaen, Ikutoku-sen Spring/Okinawa/Japan
(2005-03-23)
Isolator: Higa, Atsushi

Identified by: Kamura, Shintoku
(2005-03-23)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monocious;
CR+EN Other strain no.: 03si12

1765 History: < Higa, Atsushi Locality: Shikinaen, Ikutoku-sen Spring/Okinawa/Japan (2005-03-23) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2005-03-23) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: 03si13

1766 History: < Higa, Atsushi Locality: Shikinaen, Ikutoku-sen Spring/Okinawa/Japan (2005-03-23) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2005-03-23) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: 03si13

1767 History: < Higa, Atsushi Locality: Ohkubo-ga/Okinawa/Japan (2005-06-29) Isolator: Higa, Atsushi Identified by: Higa, Atsushi (2005-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: OB1

1768 History: < Higa, Atsushi Locality: Ohkubo-ga/Okinawa/Japan (2005-06-29) Isolator: Higa, Atsushi Identified by: Higa, Atsushi (2005-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: OB2

1769 History: < Higa, Atsushi Locality: Ohkubo-ga/Okinawa/Japan (2005-06-29) Isolator: Higa, Atsushi Identified by: Higa, Atsushi (2005-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: OB3

1770 History: < Higa, Atsushi Locality: Yafu-ga/Okinawa/Japan (2005-06-29) Isolator: Higa, Atsushi Identified by: Higa, Atsushi (2005-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: YF1

1771 History: < Higa, Atsushi Locality: Yafu-ga/Okinawa/Japan (2005-06-29) Isolator: Higa, Atsushi Identified by: Higa, Atsushi (2005-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: YF2

1772 History: < Higa, Atsushi Locality: Kucha-ga/Okinawa/Japan (2005-06-29) Isolator: Higa, Atsushi Identified by: Higa, Atsushi (2005-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: 06KCI

1773 History: < Higa, Atsushi Locality: Nugusuku-ga/Okinawa/Japan (2006-**,***) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2006-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: 06nu1

1774 History: < Higa, Atsushi Locality: Nugusuku-ga/Okinawa/Japan (2006-**,***) Isolator: Higa, Atsushi Identified by: Kamura, Shintoku (2006-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: 06nu2

1775 History: < Higa, Atsushi Locality: Nugusuku-ga/Okinawa/Japan (2006-**,***) Isolator: Higa,
Thorea hispida (Thore) Desvaux

1572 History: < Kawachi, Masanobu Locality: Inawashiro, Kawakami/Fukushima/Japan (2001-10-22) Isolator: Iwaki, Hiroyuki Identified by: Suzawa, Yuzuru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophytes differentiated from sporophytes in culture; Monoecious; CR+EN Other strain no.: KAW-1 Remarks: Cryopreserved

1573 History: < Higa, Atushi Locality: Sugao-numa/Ibaraki/Japan (2004-01-**) Isolator: Higa, Atushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s;...
1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; CR+EN Other strain no.: sg1 Remarks: Cryopreserved

1574 History: < Ishimoto, Miwa Locality: Inawashiro, Kawakami/Fukushima/Japan (2002-09-25) Isolator: Ishimoto, Miwa Identified by: Suzawa, Yuzu States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Monoecious; CR+EN Other strain no.: KAW-3 Remarks: Cryopreserved

1575 History: < Ishimoto, Miwa Locality: Inawashiro, Kawakami/Fukushima/Japan (2002-09-25) Isolator: Ishimoto, Miwa Identified by: Suzawa, Yuzu States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Monoecious; CR+EN Other strain no.: KAW-4 Remarks: Cryopreserved

1576 History: < Higa, Atsushi Locality: Higashinire River/Ibaraki/Japan (2004-05-16) Isolator: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; CR+EN Other strain no.: HN51

1577 History: < Higa, Atsushi Locality: Inawashiro, Kawakami/Fukushima/Japan (2004-05-10) Isolator: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Monoecious; CR+EN Other strain no.: kwu2 Remarks: Cryopreserved

1578 History: < Higa, Atsushi Locality: Inawashiro, Kawakami/Fukushima/Japan (2004-05-10) Isolator: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Monoecious; CR+EN Other strain no.: kwu3 Remarks: Cryopreserved

1579 History: < Higa, Atsushi Locality: Inawashiro, Kawakami/Fukushima/Japan (2004-05-10) Isolator: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Monoecious; CR+EN Other strain no.: kwu4 Remarks: Cryopreserved

1580 History: < Higa, Atsushi Locality: Inawashiro, Kawakami/Fukushima/Japan (2004-05-10) Isolator: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Monoecious; CR+EN Other strain no.: kwu5 Remarks: Cryopreserved

1581 History: < Higa, Atsushi Locality: Inawashiro, Kawakami/Fukushima/Japan (2004-05-10) Isolator: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Monoecious; CR+EN Other strain no.: kwu6 Remarks: Cryopreserved

1582 History: < Higa, Atsushi Locality: Inawashiro, Kawakami/Fukushima/Japan (2004-05-10) Isolator: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Monoecious; CR+EN Other strain no.: kwu7 Remarks: Cryopreserved

1583 History: < Higa, Atsushi Locality: Inawashiro, Kawakami/Fukushima/Japan (2004-05-10) Isolator: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Monoecious; CR+EN Other strain no.: kwu8 Remarks: Cryopreserved

1584 History: < Higa, Atsushi Locality: Sugao-numa/Ibaraki/Japan (2004-05-16) Isolator: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; CR+EN Other strain no.: sg3

2043 History: < Higa, Atsushi Locality: Sugao-numa/Ibaraki/Japan (2006-05-17) Isolator: Higa, Atsushi Identified by: Kumano, Shigeru (2006-05-17) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; CR+EN Other strain no.: 06sg3

Thorea okadae
Yamada

1483 History: < Kawachi, Masanobu Locality: Naka River/Ibaraki/Japan (2000-**,***) Isolator: Iwaki, Hiroyuki Identified by: Kumano, Shigeru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: NAK-8

1484 History: < Kawachi, Masanobu Locality: Naka River/Ibaraki/Japan (2000-**,***) Isolator: Iwaki, Hiroyuki Identified by: Kumano, Shigeru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: NAK-13 Remarks: Cryopreserved

1485 History: < Kawachi, Masanobu Locality: Naka River/Ibaraki/Japan (2001-04-28) Isolator: Iwaki, Hiroyuki Identified by: Miyashita, Mamoru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: NAK-21

1486 History: < Kawachi, Masanobu Locality: Naka River/Ibaraki/Japan (2001-04-28) Isolator: Iwaki, Hiroyuki Identified by: Miyashita, Mamoru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: NAK-23 Remarks: Cryopreserved

1487 History: < Kawachi, Masanobu Locality: Naka River/Ibaraki/Japan (2000-**,***) Isolator: Iwaki, Hiroyuki Identified by: Kumano, Shigeru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: NAK-6 Remarks: Cryopreserved

1488 History: < Kawachi, Masanobu Locality: Naka River/Ibaraki/Japan (2000-**,***) Isolator: Iwaki, Hiroyuki Identified by: Kumano, Shigeru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: NAK-7 Remarks: Cryopreserved

1489 History: < Kawachi, Masanobu Locality: Naka River/Ibaraki/Japan (2001-05-11) Isolator: Iwaki, Hiroyuki States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: NAK-31 Remarks: Cryopreserved

1490 History: < Kawachi, Masanobu Locality: Kikuchi River/Kumamoto/Japan (2001-11-***) Isolator: Iwaki, Hiroyuki Identified by: Suzawa, Yuzuru; Iwaki, Hiroyuki States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: KIK-1 Remarks: Cryopreserved

1491 History: < Ishimoto, Miwa Locality: Kikuchi River, Nakagawa Bridge/Kumamoto/Japan (2002-04-19) Isolator: Ishimoto, Miwa Identified by: Miyashita, Mamoru; Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: KIK-33

1492 History: < Ishimoto, Miwa Locality: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2002-04-19) Isolator: Ishimoto, Miwa Identified by: Miyashita, Mamoru; Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Dioecious; Female; VU Other strain no.: KIK-41 Remarks: Cryopreserved

1493 History: < Ishimoto, Miwa Locality: Yahagi River/Aichi/Japan (2002-05-19) Isolator: Ishimoto, Miwa Identified by: Suzawa, Yuzuru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15 °C ; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: YAH-5
1494 History: < Ishimoto, Miwa Locality: Yahagi River/Aichi/Japan (2002-05-19) Isolator: Ishimoto, Miwa Identified by: Suzawa, Yuzuru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: YAH-6 Remarks: Cryopreserved

1495 History: < Ishimoto, Miwa Locality: Kikuchi River, Nakagawa Bridge/Kumamoto/Japan (2002-04-19) Isolator: Ishimoto, Miwa Identified by: Miyashita, Mamoru; Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: KIK-25 Remarks: Cryopreserved

1496 History: < Ishimoto, Miwa Locality: Yahagi River/Aichi/Japan (2001-**..**) Isolator: Ishimoto, Miwa Identified by: Suzawa, Yuzuru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: YAH-1 Remarks: Cryopreserved

1497 History: < Ishimoto, Miwa Locality: Yahagi River/Aichi/Japan (2001-**..**) Isolator: Ishimoto, Miwa Identified by: Suzawa, Yuzuru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: YAH-2 Remarks: Cryopreserved

1498 History: < Ishimoto, Miwa Locality: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2002-04-19) Isolator: Ishimoto, Miwa Identified by: Miyashita, Mamoru; Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: KIK-35 Remarks: Cryopreserved

1499 History: < Ishimoto, Miwa Locality: Yahagi River/Aichi/Japan (2001-**..**) Isolator: Ishimoto, Miwa Identified by: Suzawa, Yuzuru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: YAH-3 Remarks: Cryopreserved

1500 History: < Ishimoto, Miwa Locality: Yahagi River/Aichi/Japan (2002-05-19) Isolator: Ishimoto, Miwa Identified by: Suzawa, Yuzuru States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: YAH-4

1501 History: < Ishimoto, Miwa Locality: Kikuchi River/Kumamoto/Japan (2002-04-19) Isolator: Ishimoto, Miwa Identified by: Miyashita, Mamoru; Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: KIK-21 Remarks: Cryopreserved

1502 History: < Ishimoto, Miwa Locality: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-23) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: KIK-48

1503 History: < Ishimoto, Miwa Locality: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: KIK-53 Remarks: Cryopreserved

1504 History: < Ishimoto, Miwa Locality: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: KIK-54 Remarks: Cryopreserved

Non-axenic **Culture conditions**: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Characteristics**: Epilithic; Gametophyte; Dioecious; Female; VU **Other strain no.**: KIK-57 **Remarks**: Cryopreserved

**History**: < Ishimoto, Miwa **Locality**: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) **Isolator**: Ishimoto, Miwa **Identified by**: Higa, Atsushi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Characteristics**: Epilithic; Gametophyte; Dioecious; Female; VU **Other strain no.**: KIK-58 **Remarks**: Cryopreserved

**History**: < Ishimoto, Miwa **Locality**: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) **Isolator**: Ishimoto, Miwa **Identified by**: Higa, Atsushi **States**: Unialgal; Clonal; Non-axenic **Culture conditions**: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M **Habitat**: Freshwater **Characteristics**: Epilithic; Gametophyte; Dioecious; VU **Other strain no.**: KIK-67 **Remarks**: Cryopreserved

**Remarks**:
1516 History: < Ishimoto, Miwa Localization: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Sporophyte; Dioecious; VU Other strain no.: KIK-76 Reference: 142

1517 History: < Ishimoto, Miwa Localization: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Sporophyte; Dioecious; VU Other strain no.: KIK-77 Remarks: Cryopreserved

1518 History: < Ishimoto, Miwa Localization: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Sporophyte; Dioecious; VU Other strain no.: KIK-78 Remarks: Cryopreserved

1519 History: < Ishimoto, Miwa Localization: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Sporophyte; Dioecious; VU Other strain no.: KIK-79 Remarks: Cryopreserved

1520 History: < Ishimoto, Miwa Localization: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Sporophyte; Dioecious; VU Other strain no.: KIK-80 Remarks: Cryopreserved

1521 History: < Ishimoto, Miwa Localization: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Sporophyte; Dioecious; VU Other strain no.: KIK-81 Remarks: Cryopreserved

1522 History: < Ishimoto, Miwa Localization: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Sporophyte; Dioecious; VU Other strain no.: KIK-82 Remarks: Cryopreserved

1523 History: < Ishimoto, Miwa Localization: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Sporophyte; Dioecious; VU Other strain no.: KIK-83 Remarks: Cryopreserved

1524 History: < Ishimoto, Miwa Localization: Kikuchi River, Bunda Bridge/Kumamoto/Japan (2003-04-24) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Sporophyte; Dioecious; VU Other strain no.: KIK-84 Remarks: Cryopreserved

1525 History: < Ishimoto, Miwa Localization: Kikuchi River, Kikuchigawa Bridge/Kumamoto/Japan (2003-04-23) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: KIK-49

1526 History: < Ishimoto, Miwa Localization: Kikuchi River, Takashima Bridge/Kumamoto/Japan (2003-04-23) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: KIK-50
1527 History: < Ishimoto, Miwa Locality: Kikuchi River, Takashima Bridge/Kumamoto/Japan (2003-04-23) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: k10
Remarks: Cryopreserved

1528 History: < Higa, Atsushi Locality: Kuma River, Meuba Bridge/Kumamoto/Japan (2004-01-24) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: k9 Remarks: Cryopreserved

1529 History: < Higa, Atsushi Locality: Kuma River, Meuba Bridge/Kumamoto/Japan (2004-01-24) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: k2 Remarks: Cryopreserved

1530 History: < Higa, Atsushi Locality: Kuma River, Meuba Bridge/Kumamoto/Japan (2004-01-24) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: k10 Remarks: Cryopreserved

1532 History: < Higa, Atsushi Locality: Kuma River, Meuba Bridge/Kumamoto/Japan (2004-01-24) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: k22 Remarks: Cryopreserved

1533 History: < Ishimoto, Miwa Locality: Naka River/Ibaraki/Japan (2003-05-29) Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Female; VU Other strain no.: NAK-32 Remarks: Cryopreserved

1534 History: < Higa, Atsushi Locality: Ohyodo River, Dainomaru Bridge/Miyazaki/Japan (2004-01-22) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: oh8 Remarks: Cryopreserved

1535 History: < Higa, Atsushi Locality: Ohyodo River, Dainomaru Bridge/Miyazaki/Japan (2004-01-22) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: oh13

1536 History: < Higa, Atsushi Locality: Sendai River, Shimomasaki Bridge/Miyazaki/Japan (2004-01-20) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: s2 Remarks: Cryopreserved

1537 History: < Higa, Atsushi Locality: Sendai River, Shimomasaki Bridge/Miyazaki/Japan (2004-01-20) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain
no.: s6 Remarks: Cryopreserved

1538 History: < Higa, Atsushi Locality: Sendai River, Shimomasaki Bridge/Miyazaki/Japan (2004-01-20) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: s7 Remarks: Cryopreserved

1539 History: < Higa, Atsushi Locality: Sendai River, Shimomasaki Bridge/Miyazaki/Japan (2004-01-20) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: s11 Remarks: Cryopreserved

1540 History: < Higa, Atsushi Locality: Sendai River, Shimomasaki Bridge/Miyazaki/Japan (2004-01-20) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: s12

1541 History: < Higa, Atsushi Locality: Sendai River, Shimomasaki Bridge/Miyazaki/Japan (2004-01-20) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: s13 Remarks: Cryopreserved

1542 History: < Higa, Atsushi Locality: Sendai River, Shimomasaki Bridge/Miyazaki/Japan (2004-01-20) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: s14 Remarks: Cryopreserved

1543 History: < Higa, Atsushi Locality: Chikugo River, Chikugo Bridge/Fukuoka/Japan (2004-01-25) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: chh2 Remarks: Cryopreserved

1544 History: < Higa, Atsushi Locality: Chikugo River, Chikugo Bridge/Fukuoka/Japan (2004-01-25) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: ch2 Remarks: Cryopreserved

1545 History: < Higa, Atsushi Locality: Yakata River, Ukishima Bridge/Kumamoto/Japan (2004-01-24) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: yg1 Remarks: Cryopreserved

1546 History: < Higa, Atsushi Locality: Yakata River, Ukishima Bridge/Kumamoto/Japan (2004-01-24) Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,***) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: yg9

1547 History: < Ishimoto, Miwa Locality: Yabe River/Fukuoka/Japan (2002-11-15) Isolator: Ishimoto, Miwa Identified by: Miyashita, Mamoru; Kawachi, Masanobu; Higa, Atsushi States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: YBE-3 Remarks: Cryopreserved

Cryopreserved

History: < Ishimoto, Miwa 2003-04-22; 20°C; 3-12μmol/m²/s; 1-2 M
Locality: Kikuchi River, Takashima Bridge/Kumamoto/Japan
Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU
Other strain no.: KIK-52
Remarks: Cryopreserved

History: < Ishimoto, Miwa 2003-04-24; 20°C; 3-12μmol/m²/s; 1-2 M
Locality: Kikuchi River/Kumamoto/Japan
Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Dioecious; Female; VU
Other strain no.: KIK-59
Remarks: Cryopreserved

History: < Ishimoto, Miwa 2003-04-24; 20°C; 3-12μmol/m²/s; 1-2 M
Locality: Kikuchi River/Kumamoto/Japan
Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Dioecious; Female; VU
Other strain no.: KIK-60
Remarks: Cryopreserved

History: < Ishimoto, Miwa 2003-04-24; 20°C; 3-12μmol/m²/s; 1-2 M
Locality: Kikuchi River, Yamaga Weir/Kumamoto/Japan
Isolator: Ishimoto, Miwa Identified by: Higa, Atsushi
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Dioecious; Female; VU
Other strain no.: KIK-61
Remarks: Cryopreserved

History: < Ishimoto, Miwa 2004-01-23; 20°C; 3-12μmol/m²/s; 1-2 M
Locality: Amori River, Wakaayu Bridge/Kagoshima/Japan
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophyte; Dioecious; VU
Other strain no.: AM2

History: < Ishimoto, Miwa 2004-01-24; 20°C; 3-12μmol/m²/s; 1-2 M
Locality: Kuma River, Meuba Bridge/Kumamoto/Japan
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU
Other strain no.: k5
Remarks: Cryopreserved

History: < Ishimoto, Miwa 2004-01-24; 20°C; 3-12μmol/m²/s; 1-2 M
Locality: Kuma River, Meuba Bridge/Kumamoto/Japan
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU
Other strain no.: k8
Remarks: Cryopreserved

History: < Ishimoto, Miwa 2004-01-24; 20°C; 3-12μmol/m²/s; 1-2 M
Locality: Kuma River, Meuba Bridge/Kumamoto/Japan
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU
Other strain no.: k12
Remarks: Cryopreserved

History: < Ishimoto, Miwa 2004-01-24; 20°C; 3-12μmol/m²/s; 1-2 M
Locality: Kuma River, Meuba Bridge/Kumamoto/Japan
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU
Other strain no.: k18

History: < Ishimoto, Miwa 2004-01-24; 20°C; 3-12μmol/m²/s; 1-2 M
Locality: Kuma River, Meuba Bridge/Kumamoto/Japan
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**,**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU
Other strain no.: k20
Remarks: Cryopreserved
History: < Higa, Atsushi Location: Kuma River, Meuba Bridge/Kumamoto/Japan (2004-01-24) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 15°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: k23 Remarks: Cryopreserved

History: < Higa, Atsushi Location: Kuma River, Meuba Bridge/Kumamoto/Japan (2004-01-24) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: k25 Remarks: Cryopreserved

History: < Higa, Atsushi Location: Ohyodo River, Dainomaru Bridge/Miyazaki/Japan (2004-01-22) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: oh7 Remarks: Cryopreserved

History: < Higa, Atsushi Location: Ohyodo River, Dainomaru Bridge/Miyazaki/Japan (2004-01-22) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: oh7 Remarks: Cryopreserved

History: < Higa, Atsushi Location: Ohyodo River, Dainomaru Bridge/Miyazaki/Japan (2004-01-22) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: oh23 Remarks: Cryopreserved

History: < Higa, Atsushi Location: Sendai River, Shimomasaki Bridge/Miyazaki/Japan (2004-01-20) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: s5 Remarks: Cryopreserved

History: < Higa, Atsushi Location: Chikugo River, Chikugo Bridge/Fukuoka/Japan (2004-01-25) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: s5 Remarks: Cryopreserved

History: < Higa, Atsushi Location: Chikugo River, Chikugo Bridge/Fukuoka/Japan (2004-01-25) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: ch13 Remarks: Cryopreserved

History: < Higa, Atsushi Location: Chikugo River, Chikugo Bridge/Fukuoka/Japan (2004-01-25) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: ch15 Remarks: Cryopreserved

History: < Higa, Atsushi Location: Chikugo River, Chikugo Bridge/Fukuoka/Japan (2004-01-25) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: ch21 Remarks: Cryopreserved

History: < Higa, Atsushi Location: Yukata River, Ukishima Bridge/Kumamoto/Japan (2004-01-24) 
Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater Characteristics: Epilithic; Gametophyte; Dioecious; Male; VU Other strain no.: yg4 Remarks: Cryopreserved

Isolator: Higa, Atsushi Identified by: Suzawa, Yuzuru (2004-**.**) States: Unialgal; Clonal; Non-axenic Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M Habitat: Freshwater
Characteristics: Epilithic; Gametophyte; Dioecious; VU Other strain no.: AM1

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB1

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB2

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB3

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB4

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB5

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB6

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB7

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB8

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB9

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB10

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB11

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi
Identified by: Kumano, Shigeru (2003-**-**)
States: Unialgal; Clonal; Non-axenic
Culture conditions: Bold 3N; 20℃; 3-12μmol/m²/s; 1-2 M
Habitat: Freshwater
Characteristics: Epilithic; Sporophyte; Dioecious; VU

Other strain no.: IB12

Remarks: Cryopreserved

History: < Higa, Atsushi
Locality: Naka River/Ibaraki/Japan (2003-05-**)
Isolator: Higa, Atsushi

237
Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB13. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB14. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB15

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB16. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB17. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB18. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB19. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB20. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB21. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB22. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB23. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB24. Remarks: Cryopreserved

Identified by: Kumano, Shigeru (2003-**). States: Unialgal; Clonal; Non-axenic. Culture conditions: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M. Habitat: Freshwater. Characteristics: Epilithic; Sporophyte; Dioecious; VU. Other strain no.: IB25. Remarks: Cryopreserved

CONTENTS
1799 **History:** < Higa, Atsushi **Locality:** Naka River/Ibaraki/Japan (2003-05-***) **Isolator:** Higa, Atsushi **Identified by:** Kumano, Shigeru (2003-***) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Sporophyte; Dioecious; VU **Other strain no.:** IB26 **Remarks:** Cryopreserved

1800 **History:** < Higa, Atsushi **Locality:** Naka River/Ibaraki/Japan (2003-05-***) **Isolator:** Higa, Atsushi **Identified by:** Kumano, Shigeru (2003-***) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Sporophyte; Dioecious; VU **Other strain no.:** IB27 **Remarks:** Cryopreserved

1801 **History:** < Higa, Atsushi **Locality:** Naka River/Ibaraki/Japan (2003-05-***) **Isolator:** Higa, Atsushi **Identified by:** Kumano, Shigeru (2003-***) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Sporophyte; Dioecious; VU **Other strain no.:** IB28 **Remarks:** Cryopreserved

1802 **History:** < Higa, Atsushi **Locality:** Naka River/Ibaraki/Japan (2003-05-***) **Isolator:** Higa, Atsushi **Identified by:** Kumano, Shigeru (2003-***) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Sporophyte; Dioecious; VU **Other strain no.:** IB29 **Remarks:** Cryopreserved

1803 **History:** < Higa, Atsushi **Locality:** Naka River/Ibaraki/Japan (2003-05-***) **Isolator:** Higa, Atsushi **Identified by:** Kumano, Shigeru (2003-***) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Sporophyte; Dioecious; VU **Other strain no.:** IB30 **Remarks:** Cryopreserved

2045 **History:** < Higa, Atsushi **Locality:** Yasumuro River/Hyogo/Japan (2006-01-24) **Isolator:** Higa, Atsushi **Identified by:** Sugino, Nobuyoshi (2006-01-24) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Gametophyte; Dioecious; VU **Other strain no.:** ym1 **Remarks:** Cryopreserved

2046 **History:** < Higa, Atsushi **Locality:** Yasumuro River/Hyogo/Japan (2006-01-24) **Isolator:** Higa, Atsushi **Identified by:** Sugino, Nobuyoshi (2006-01-24) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Gametophyte; Dioecious; VU **Other strain no.:** ym2 **Remarks:** Cryopreserved

2047 **History:** < Higa, Atsushi **Locality:** Yasumuro River/Hyogo/Japan (2006-01-24) **Isolator:** Higa, Atsushi **Identified by:** Sugino, Nobuyoshi (2006-01-24) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Gametophyte; Dioecious; VU **Other strain no.:** ym3 **Remarks:** Cryopreserved

2048 **History:** < Higa, Atsushi **Locality:** Yasumuro River/Hyogo/Japan (2006-01-24) **Isolator:** Higa, Atsushi **Identified by:** Sugino, Nobuyoshi (2006-01-24) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Gametophyte; Dioecious; Male; VU **Other strain no.:** ym6 **Remarks:** Cryopreserved

2049 **History:** < Higa, Atsushi **Locality:** Yasumuro River/Hyogo/Japan (2006-01-24) **Isolator:** Higa, Atsushi **Identified by:** Sugino, Nobuyoshi (2006-01-24) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Gametophyte; Dioecious; VU **Other strain no.:** ym8 **Remarks:** Cryopreserved

2050 **History:** < Higa, Atsushi **Locality:** Yasumuro River/Hyogo/Japan (2006-01-24) **Isolator:** Higa, Atsushi **Identified by:** Sugino, Nobuyoshi (2006-01-24) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Gametophyte; Dioecious; VU **Other strain no.:** ym9 **Remarks:** Cryopreserved

2051 **History:** < Higa, Atsushi **Locality:** Kuma River, Meuba Bridge/Kumamoto/Japan (2006-03-30) **Isolator:** Higa, Atsushi **Identified by:** Kumano, Shigeru (2006-03-30) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater **Characteristics:** Epilithic; Gametophyte; Dioecious; Female; VU **Other strain no.:** 06k1

2052 **History:** < Higa, Atsushi **Locality:** Kuma River, Meuba Bridge/Kumamoto/Japan (2006-03-30) **Isolator:** Higa, Atsushi **Identified by:** Kumano, Shigeru (2006-03-30) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M **Habitat:** Freshwater
### CONTENTS

<table>
<thead>
<tr>
<th>Page</th>
<th>History:</th>
<th>Locality:</th>
<th>Isolator:</th>
<th>Identified by:</th>
<th>States:</th>
<th>Culture conditions:</th>
<th>Habitat:</th>
<th>Characteristics:</th>
<th>Remarks:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2053</td>
<td>Higa, Atsushi</td>
<td>Kuma River, Meuba Bridge/Kumamoto/Japan (2006-03-30)</td>
<td>Higa, Atsushi</td>
<td>Kumano, Shigeru (2006-03-30)</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M</td>
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<td>Epilithic; Gametophyte; Dioecious; Female; VU</td>
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<td>Higa, Atsushi</td>
<td>Kumano, Shigeru (2006-03-30)</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M</td>
<td>Freshwater</td>
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</tr>
<tr>
<td>2055</td>
<td>Higa, Atsushi</td>
<td>Sendai River, Aratatenjin Bridge/Kagoshima/Japan (2006-03-30)</td>
<td>Higa, Atsushi</td>
<td>Kumano, Shigeru (2006-03-29)</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M</td>
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<td>Higa, Atsushi</td>
<td>Kumano, Shigeru (2006-03-29)</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M</td>
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<td>Higa, Atsushi</td>
<td>Kumano, Shigeru (2006-03-29)</td>
<td>Unialgal; Clonal; Non-axenic</td>
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</tr>
<tr>
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<td>Sendai River, Aratatenjin Bridge/Kagoshima/Japan (2006-03-30)</td>
<td>Higa, Atsushi</td>
<td>Kumano, Shigeru (2006-03-29)</td>
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<td>Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M</td>
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</tr>
<tr>
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<td>Higa, Atsushi</td>
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<td>Higa, Atsushi</td>
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<td>Sugino, Nobuyoshi (2005-05-25)</td>
<td>Unialgal; Clonal; Non-axenic</td>
<td>Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M</td>
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<td>Yasumuro River/Hyogo/Japan (2006-05-25)</td>
<td>Higa, Atsushi</td>
<td>Sugino, Nobuyoshi (2005-05-25)</td>
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<td>Other strain no.: 06ym2</td>
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</table>
**CONTENTS**

**Identification**

Atsushi **Identified by**: Sugino, Nobuyoshi (2006-05-25) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; VU
**Other strain no.**: 06ym2 **Remarks**: Cryopreserved

2064

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-03-30) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; VU
**Other strain no.**: 06ym3 **Remarks**: Cryopreserved

2065

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-05-25) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; VU
**Other strain no.**: 06ym4 **Remarks**: Cryopreserved

2066

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-05-25) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; VU
**Other strain no.**: 06ym5 **Remarks**: Cryopreserved

2067

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-03-30) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; VU
**Other strain no.**: 06ym6 **Remarks**: Cryopreserved

2068

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-05-25) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; VU
**Other strain no.**: 06ym7 **Remarks**: Cryopreserved

2069

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-05-25) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; VU
**Other strain no.**: 06ym8 **Remarks**: Cryopreserved

2070

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-03-31) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; VU
**Other strain no.**: 06ym9 **Remarks**: Cryopreserved

2071

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-05-25) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; VU
**Other strain no.**: 06ym10 **Remarks**: Cryopreserved

2072

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-05-25) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; VU
**Other strain no.**: 06ym11 **Remarks**: Cryopreserved

2073

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-03-31) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Sporophyte; Dioecious; Male
**Other strain no.**: 06ym12 **Remarks**: Cryopreserved

2074

**History**: < Higa, Atsushi **Locality**: Yasumuro River/Hyogo/Japan (2006-05-25) **Isolator**: Higa, Atsushi
**Identified by**: Sugino, Nobuyoshi (2006-05-25) **States**: Unialgal; Clonal; Non-axenic
**Culture conditions**: Bold 3N; 20°C; 3-12μmol/m²/s; 1-2 M
**Habitat**: Freshwater
**Characteristics**: Epilithic; Gametophyte; Dioecious; Male
**Other strain no.**: 06ym13 **Remarks**: Cryopreserved

**TOGULA**: Dinophyceae

**Togula britannica** (Herdman) Jørgensen, Murray et Daugbjerg
**Syn. Amphidinium britannicum (Herdman) Lebour**

**405**  
**History:** < Sawaguchi, Tomohiro  
**Locality:** Hasaki/Ibaraki/Japan (1987-05-09)  
**Isolator:** Sawaguchi, Tomohiro  
**Identified by:** Sawaguchi, Tomohiro  
**States:** Unialgal; Clonal; Non-axenic  
**Culture conditions:** ESM; 20°C; 40-50μmol/m²/s; 1 M  
**Habitat:** Marine (Seawater)  
**Characteristics:** Benthic  
**Other strain no.:** HASS-1  
**Remarks:** Fragile species to transportation stresses

**TOLYPOTHRIX** : Cyanophyceae

**Tolypothrix distorta** Kützing ex Bornet et Flahault var. *symplocoides*  
**Hansgirg**

**2571**  
**History:** < IAM (2007) < BIU (UTEX; 1961)  
**Other collection strain no.:** IAM M- 98; UTEX 424; CCAP B 1482/2; SAG B 1482-2; UTCC B 80  
**Locality:** Netherland  
**Isolator:** Mainten, A.; Katayama, Mitsunori (Re-isolation)  
**States:** Unialgal; Clonal; Axenic[2012 Mar]  
**Culture conditions:** MDM (agar); 20°C; 4-6μmol/m²/s; 3 M  
**Remarks:** Cryopreserved

**Tolypothrix tenuis** Kützing ex Bornet et Flahault

**37**  
**History:** < IAM Other collection strain no.: IAM M-29; PCC 7101  
**Locality:** Borneo/Indonesia  
**Isolator:** Watanabe, Atsushi  
**Identified by:** Negoro, Ken-ichiro; Watanabe, Makoto M. (Reidentify)  
**States:** Unialgal; Non-clonal; Non-axenic  
**Culture conditions:** MDM (agar); 20°C; 4-10μmol/m²/s; 4 M (25°C; 70-80μmol/m²/s)  
**Characteristics:** Heterotrophic; Nitrogen fixation; Chromatic adaptation; Material for studying on phycobilin production  
**References:** 63, 97, 98, 99, 100, 101, 103, 104, 141, 181, 182, 183, 184, 205, 235, 407, 567, 589, 912, 1093, 1113, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1132, 1254  
**Remarks:** Cryopreserved

**Tolypothrix sp.**  
**2299**  
**History:** < Suda, Shoichiro  
**Locality:** Ozegahara/Gunma/Japan (1983-08-28)  
**Isolator:** Suda, Shoichiro  
**Identified by:** Suda, Shoichiro  
**States:** Unialgal  
**Culture conditions:** AF-6/2; 20°C; 15-22μmol/m²/s; 2 M  
**Habitat:** Freshwater (Bog water)  
**Other strain no.:** OZ-4 Eug8

**TREBOUXIA** : Trebouxiophyceae

**Trebouxia anticipta** Archibald

**1271**  
**History:** < Ohmura, Yoshihito  
**Locality:** Tsukuba-san Shrine/Ibaraki/Japan (2002-01-19)  
**Isolator:** Ohmura, Yoshihito  
**Identified by:** Takeshita, Shunji  
**States:** Unialgal; Clonal; Axenic  
**Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
**Habitat:** Terrestrial (The lichen Punctelia rudecta on a stone column)  
**Characteristics:** Symbiotic  
**Other strain no.:** AYO4776  
**Remarks:** Cryopreserved

**1272**  
**History:** < Ohmura, Yoshihito  
**Locality:** Tsukuba-san Shrine/Ibaraki/Japan (2002-01-19)  
**Isolator:** Ohmura, Yoshihito  
**Identified by:** Takeshita, Shunji  
**States:** Unialgal; Clonal; Axenic  
**Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
**Habitat:** Terrestrial (The lichen Punctelia rudecta on bark)  
**Characteristics:** Symbiotic  
**Other strain no.:** AYO4780  
**Remarks:** Cryopreserved

**1273**  
**History:** < Ohmura, Yoshihito  
**Locality:** Chikurin-ji Temple/Hiroshima/Japan (2002-03-24)  
**Isolator:** Ohmura, Yoshihito  
**Identified by:** Ohmura, Yoshihito  
**States:** Unialgal; Clonal; Axenic  
**Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
**Habitat:** Terrestrial (The lichen Flavoparmelia caperata on bark)  
**Characteristics:** Symbiotic  
**Other strain no.:** AYO4870  
**Remarks:** Cryopreserved

**Trebouxia arboricola** Puymaly
CONTENTS

Trebouxia corticola (Archibald) Gärtner

1274 History: < Ohmura, Yoshihito Locality: Tsukuba-san Shrine/Ibaraki/Japan (2002-01-19) Isolator: Ohmura, Yoshihito Identified by: Takeshita, Shunji States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Ramalina yasudae on a stone column) Characteristics: Symbiotic Other strain no.: AYO4775 Remarks: Cryopreserved

1275 History: < Ohmura, Yoshihito Locality: Tsukuba-san Shrine/Ibaraki/Japan (2002-01-19) Isolator: Ohmura, Yoshihito Identified by: Takeshita, Shunji States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Ramalina yasudae on a stone column) Characteristics: Symbiotic Other strain no.: AYO4777 Remarks: Cryopreserved

1276 History: < Ohmura, Yoshihito Locality: Mt.Fuji, Okuniwa/Yamanashi/Japan (2003-05-05) Isolator: Ohmura, Yoshihito Identified by: Ohmura, Yoshihito States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Usnea longissima on bark) Characteristics: Symbiotic Other strain no.: AYO5316 Remarks: Cryopreserved

1277 History: < Ohmura, Yoshihito Locality: Mt.Fuji, Ochudo/Yamanashi/Japan (2003-05-05) Isolator: Ohmura, Yoshihito Identified by: Ohmura, Yoshihito States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Usnea trichodeoides on bark) Characteristics: Symbiotic Other strain no.: AYO5321 Remarks: Cryopreserved

1278 History: < Ohmura, Yoshihito Locality: Tsukuba-san Shrine/Ibaraki/Japan (2002-01-19) Isolator: Ohmura, Yoshihito Identified by: Takeshita, Shunji States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Usnea bismolliuscula on a stone column) Characteristics: Symbiotic Other strain no.: AYO4774 Remarks: Cryopreserved

1279 History: < Ohmura, Yoshihito Locality: Tsukuba-san Shrine/Ibaraki/Japan (2002-01-19) Isolator: Ohmura, Yoshihito Identified by: Takeshita, Shunji States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Rimelia clavulifera on a stone column) Characteristics: Symbiotic Other strain no.: AYO4776 Remarks: Cryopreserved

1280 History: < Ohmura, Yoshihito Locality: Suki, Sakanoshiba/Miyazaki/Japan (2002-02-20) Isolator: Ohmura, Yoshihito Identified by: Takeshita, Shunji States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Ramalina peruviana on bark) Characteristics: Symbiotic Other strain no.: AYO4860 Remarks: Cryopreserved

1281 History: < Ohmura, Yoshihito Locality: Chikurin-ji Temple/Hiroshima/Japan (2002-03-24) Isolator: Ohmura, Yoshihito Identified by: Takeshita, Shunji States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Usnea baileyi on bark) Characteristics: Symbiotic Other strain no.: AYO4863 Remarks: Cryopreserved

1282 History: < Ohmura, Yoshihito Locality: Chikurin-ji Temple/Hiroshima/Japan (2002-03-24) Isolator: Ohmura, Yoshihito Identified by: Ohmura, Yoshihito States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Usnea rubicunda on bark) Characteristics: Symbiotic Other strain no.: AYO4864 Remarks: Cryopreserved

1283 History: < Ohmura, Yoshihito Locality: Chikurin-ji Temple/Hiroshima/Japan (2002-03-24) Isolator: Ohmura, Yoshihito Identified by: Ohmura, Yoshihito States: Unialgal; Clonal; Axenic Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (The lichen Usnea ceratina on bark) Characteristics: Symbiotic Other strain no.: AYO4865 Remarks: Cryopreserved

1284 History: < Ohmura, Yoshihito Locality: Chikurin-ji Temple/Hiroshima/Japan (2002-03-24)
Isolator: Ohmura, Yoshihito  
Identified by: Takeshita, Shunji  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen Usnea rubrotincta on bark)  
Characteristics: Symbiotic  
Other strain no.: AYO4887  
Remarks: Cryopreserved

History: < Ohmura, Yoshihito  
Locality: Hiroshima University/Hiroshima/Japan (2002-03-26)  
Isolator: Ohmura, Yoshihito  
Identified by: Ohmura, Yoshihito  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen Dirinaria applanata on bark)  
Characteristics: Symbiotic  
Other strain no.: AYO4882  
Remarks: Cryopreserved

History: < Ohmura, Yoshihito  
Locality: Hiroshima University/Hiroshima/Japan (2002-03-26)  
Isolator: Ohmura, Yoshihito  
Identified by: Ohmura, Yoshihito  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen Parmotrema tinctorum on a gravestone)  
Characteristics: Symbiotic  
Other strain no.: AYO4884  
Remarks: Cryopreserved

History: < Ohmura, Yoshihito  
Locality: Mt.Fuji, Aokigahara/Yamanashi/Japan (2003-05-04)  
Isolator: Ohmura, Yoshihito  
Identified by: Ohmura, Yoshihito  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen Parmotrema tinctorum on a gravestone)  
Characteristics: Symbiotic  
Other strain no.: AYO5330  
Remarks: Cryopreserved

History: < Ohmura, Yoshihito  
Locality: Shimizu/Shizuoka/Japan (2003-10-20)  
Isolator: Ohmura, Yoshihito  
Identified by: Ohmura, Yoshihito  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen Parmotrema tinctorum on a gravestone)  
Characteristics: Symbiotic  
Gene data: ITS rRNA (AB177821)  
Other strain no.: AYO5357A  
Reference: 789  
Remarks: Cryopreserved

History: < Ohmura, Yoshihito  
Isolator: Ohmura, Yoshihito  
Identified by: Ohmura, Yoshihito  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen Parmotrema tinctorum on a gravestone)  
Characteristics: Symbiotic  
Gene data: ITS rRNA (AB177822)  
Other strain no.: AYO5357B  
Reference: 789  
Remarks: Cryopreserved

History: < Ohmura, Yoshihito  
Locality: Shimizu/Shizuoka/Japan (2003-10-20)  
Isolator: Ohmura, Yoshihito  
Identified by: Ohmura, Yoshihito  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen Parmotrema tinctorum on a gravestone)  
Characteristics: Symbiotic  
Gene data: ITS rRNA (AB177823)  
Other strain no.: AYO5357C  
Reference: 789  
Remarks: Cryopreserved

History: < Ohmura, Yoshihito  
Locality: Shimizu/Shizuoka/Japan (2003-10-20)  
Isolator: Ohmura, Yoshihito  
Identified by: Ohmura, Yoshihito  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen Parmotrema tinctorum on a gravestone)  
Characteristics: Symbiotic  
Gene data: ITS rRNA (AB177825)  
Other strain no.: AYO5361A  
Reference: 789  
Remarks: Cryopreserved

History: < Ohmura, Yoshihito  
Locality: Shimizu/Shizuoka/Japan (2003-10-20)  
Isolator: Ohmura, Yoshihito  
Identified by: Ohmura, Yoshihito  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen Parmotrema tinctorum on a gravestone)  
Characteristics: Symbiotic  
Gene data: ITS rRNA (AB177826)  
Other strain no.: AYO5361B  
Reference: 789  
Remarks: Cryopreserved

History: < Ohmura, Yoshihito  
Locality: Shimizu/Shizuoka/Japan (2003-10-20)  
Isolator: Ohmura, Yoshihito  
Identified by: Ohmura, Yoshihito  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen Parmotrema tinctorum on a gravestone)  
Characteristics: Symbiotic  
Gene data: ITS rRNA (AB177828)  
Other strain no.: AYO5372  
Reference: 789  
Remarks: Cryopreserved

History: < Ohmura, Yoshihito  
Locality: Shimizu/Shizuoka/Japan (2003-10-21)  
Isolator: Ohmura, Yoshihito  
Identified by: Ohmura, Yoshihito  
States: Unialgal; Clonal; Axenic  
Culture conditions: C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s)  
Habitat: Terrestrial (The lichen
Treboxia erici

**History:** Ohmura, Yoshihito **Locality:** Shimizu/Shizuoka/Japan (2003-10-21) **Isolator:** Ohmura, Yoshihito **Identified by:** Ohmura, Yoshihito **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) **Habitat:** Terrestrial (The lichen Parmotrema tinctorum on a gravestone) **Characteristics:** Symbiotic **Gene data:** ITS rRNA (AB177830) **Other strain no.:** AYO5376B **Reference:** 789 **Remarks:** Cryopreserved

Treboxia glomerata

**History:** Ohmura, Yoshihito **Locality:** Shimizu/Shizuoka/Japan (2003-10-21) **Isolator:** Ohmura, Yoshihito **Identified by:** Ohmura, Yoshihito **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) **Habitat:** Terrestrial (The lichen Parmotrema tinctorum on a gravestone) **Characteristics:** Symbiotic **Gene data:** ITS rRNA (AB177831) **Other strain no.:** AYO5380 **Reference:** 789 **Remarks:** Cryopreserved

Treboxia higginsiae

**History:** Ohmura, Yoshihito **Locality:** Tsukuba-san Shrine/Ibaraki/Japan (2002-01-19) **Isolator:** Ohmura, Yoshihito **Identified by:** Takeshita, Shunji **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) **Habitat:** Terrestrial (The lichen Parmotrema tinctorum on bark) **Characteristics:** Symbiotic **Gene data:** ITS rRNA (AB177832) **Other strain no.:** AYO4781 **Remarks:** Cryopreserved

Treboxia higginsiae

**History:** Ohmura, Yoshihito **Locality:** Tsukuba-san Shrine/Ibaraki/Japan (2002-01-19) **Isolator:** Ohmura, Yoshihito **Identified by:** Takeshita, Shunji **States:** Unialgal; Clonal; Axenic **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 6 M (25°C; 70-80μmol/m²/s) **Habitat:** Terrestrial (The lichen Parmotrema tinctorum on bark) **Characteristics:** Symbiotic **Gene data:** ITS rRNA (AB177833) **Other strain no.:** AYO5375A **Reference:** 789 **Remarks:** Cryopreserved
Trebouxia showmanii (Hildreth et Ahmadjian) Gärtner

Trebouxia sp.

TRENTEOPOHLIA : Ulvophyceae

Trepomohlia sp.

TREPOMONAS : Trepomonadida
| **394** | **History:** < Kasai, Fumie **Locality:** Lake Kasumigaura/Ibaraki/Japan (1983-10-04) **Isolator:** Kasai, Fumie **Identified by:** Niiyama, Yuko **States:** Unialgal; Clonal; Axenic **Culture conditions:** C: 20°C; 4-10μmol/m²/s; 2 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Lake water) **Other strain no.:** F67-5 **Reference:** 567 |

| **556** | **History:** < Ono, Sachiko **Locality:** Okinawa/Japan (1990-**.**.) **Isolator:** Ono, Sachiko **Identified by:** Ono, Sachiko **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** f/2; 20°C; 40-50μmol/m²/s; 1 M **Habitat:** Marine (Seawater) **Other strain no.:** No.20 **Reference:** 877 |

| **839** | **History:** < Kasai, Fumie **Locality:** 2 km east of Melaka/Malaysia (1985-08-19) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Homothallic **Other strain no.:** 85-28-1 **Reference:** 240 |

| **879** | **History:** < Kasai, Fumie **Locality:** 2 km east of Melaka/Malaysia (1985-08-19) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Homothallic **Other strain no.:** 85-28-2 **Reference:** 240 |

| **899** | **History:** < Kasai, Fumie **Locality:** 2 km east of Melaka/Malaysia (1985-08-19) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Homothallic **Other strain no.:** 85-28-3 **Reference:** 240 |

| **919** | **History:** < Kasai, Fumie **Locality:** 2 km east of Melaka/Malaysia (1985-08-19) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Paddy soil) **Characteristics:** Homothallic **Other strain no.:** 85-28-4 **Reference:** 240 |

| **939** | **History:** < Kasai, Fumie **Locality:** Higashihiroshima/Hiroshima/Japan (1983-10-19) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Pond water) **Characteristics:** Heterothallic; Mating type(+) **Other strain no.:** 83-24-2 **Reference:** 240 |

| **949** | **History:** < Kasai, Fumie **Locality:** Higashihiroshima/Hiroshima/Japan (1983-10-19) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Pond water) **Characteristics:** Heterothallic; Mating type(+) **Other strain no.:** 83-24-7 **Reference:** 240 |

| **959** | **History:** < Kasai, Fumie **Locality:** Higashihiroshima/Hiroshima/Japan (1983-10-19) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Pond water) **Characteristics:** Heterothallic; Mating type(−) **Other strain no.:** 83-24-3 **Reference:** 240 |

| **969** | **History:** < Kasai, Fumie **Locality:** Higashihiroshima/Hiroshima/Japan (1983-10-19) **Isolator:** Ichimura, Terunobu **Identified by:** Ichimura, Terunobu **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** MG; 22°C; 55-70μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) **Habitat:** Freshwater (Pond water) **Characteristics:** Heterothallic; Mating type(−) **Other strain no.:** 83-24-3 **Reference:** 240 |
Ichimura, Terunobu Identified by: Ichimura, Terunobu States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 22℃; 55-70μmol/m²/s; 3 M (25℃; 70-80μmol/m²/s) Habitat: Freshwater (Pond water) Characteristics: Heterothallic; Mating type(−) Other strain no.: 83-24-6 Reference: 240

**TYCHONEMA** : Cyanophyceae

*Tychnema bourrelyi* Anagnostidis et Komárek

846 History: < Suda, Shoichiro < CCAP Other collection strain no.: CCAP 1459/11B Locality: Loughgall/Northern Ireland/U.K. Isolator: Fitzsimons Identified by: Suda, Shoichiro (Reidentify) Formerly identified as: Oscillatoria bourrelyi J.W. G. Lund f. tenuis Skuja States: Unialgal; Clonal; Axenic Culture conditions: CT; 20℃; 15-25μmol/m²/s; 1 M Habitat: Freshwater Characteristics: Cyanobacterial water bloom (aoko); Type strain Gene data: 16S rRNA (AB045897) References: 221, 991 Remarks: Cryopreserved

**ULOTHRIX** : Ulvophyceae

*Ulothrix variabilis* Kützing


*Ulothrix zonata* (Weber et Mohr) Kützing

536 History: < Kasai, Fumie Locality: Hitachi/Ibaraki/Japan (1987-05-22) Isolator: Kasai, Fumie Identified by: Kasai, Fumie States: Unialgal; Non-clonal; Non-axenic Culture conditions: C; 10℃; 6-12μmol/m²/s; 3 M (10℃; 10-15μmol/m²/s) Habitat: Freshwater (Water) Other strain no.: 4st-1'-24 References: 138, 567, 1018

537 History: < Kasai, Fumie Locality: Shirai River/Hokkaido/Japan (1987-10-***) Isolator: Kasai, Fumie Identified by: Kasai, Fumie States: Unialgal; Non-clonal; Non-axenic Culture conditions: C; 10℃; 10-15μmol/m²/s; 2 M Habitat: Freshwater (River water) Other strain no.: 2Tst-1-1 References: 567, 1018

**UMBILICOSPHAERA** : Prymnesiophyceae

*Prymnesiophyceae sibogae* (Weber-van Bosse) Gaarder var. sibogae

1324 History: < Kawachi, Masanobu Locality: East China Sea (2003-08-06) Isolator: Noël, Mary-Hélène Identified by: Noël, Mary-Hélène States: Unialgal; Clonal; Non-axenic; Coccolith(−)[2013 Jan] Culture conditions: MNK; 20℃; 25-40μmol/m²/s; 14-20 D Habitat: Marine (Seawater) Other strain no.: MH 67

**UNIDENTIFIED CHLORARACHNIOPHYTE** : Chlorarachniophyceae

Unidentified chlorarachniophyte

2502 History: < Inouye, Isao Locality: Katsurahama Beach/Kochi/Japan (2008-09-28) Isolator: Chikuni, Tomoko Identified by: Chikuni, Tomoko States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20℃; 10-15μmol/m²/s; 1 M Habitat: Marine (Seawater) Characteristics: Benthic Other strain no.: TKB-352

**UNIDENTIFIED COCCOID PRASINOphyte** : Prasinophyceae

Unidentified coccosid prasinophyte

1435 History: < TKB Locality: Amami Isl., Sani/Kagoshima/Japan (2000-06-***) Isolator: Yoshii, Yukie Identified by: Yoshii, Yukie States: Unialgal; Clonal; Non-axenic Culture conditions: ESM; 20℃; 20-30μmol/m²/s; 2 M Habitat: Marine (Seawater) Other strain no.: TKB-025
UNIDENTIFIED METAMONAD : Metamonada incertae sedis
Unidentified metamonad
Identified by: Yubuki, Naoji (2006-***-***) States: Unialgal; Clonal; Non-axenic Culture conditions:
ESM + mTYGM-9 + Rice; SUY 1/10 + mTYGM-9 + Rice; 15°C; 0μmol/m²/s; 14 D
Habitat: Marine (Seawater) Characteristics: Heterotrophic; Benthic Other strain no.: TKB-336

UNIDENTIFIED PELAGOPHYTE : Pelagophyceae
Unidentified pelagophyte
States: Unialgal; Clonal; Non-axenic Culture conditions: f/2; 20°C; 40-50μmol/m²/s; 20 D
Habitat: Marine (Seawater) Other strain no.: TKB-085 (nrc061)

Identified by: Yoshida, Masaki (2003-***-***) States: Unialgal; Clonal; Non-axenic Culture conditions:
mIMR; 20°C; 40-50μmol/m²/s; 20 D Habitat: Marine (Seawater) Other strain no.: TKB-102 (ym-10)

UNIDENTIFIED PRASINOPHYTE : Prasinophyceae
Unidentified prasinophyte
1428 History: < TKB Locality: Tokyo Bay/Japan States: Unialgal; Clonal; Non-axenic Culture conditions:
MNK; 20°C; 20-30μmol/m²/s; 1 M Habitat: Marine Other strain no.: TKB-104 (CH03A)

UNIDENTIFIED YELLOW HETEROKONTOPHYTE : Heterokontophyta incertae sedis
Unidentified yellow heterokontophyte
1389 History: < TKB Locality: Yonehara/Okinawa/Japan (2003-12-***) Isolator: Okamoto, Noriko
States: Unialgal; Clonal; Non-axenic Culture conditions: IMK; 20°C; 40-50μmol/m²/s; 2 M
Habitat: Marine (Seawater) Other strain no.: TKB-092 (nrc068)

URNELLA : Chlorophyceae
Urnella terrestris Playfair
156 History: < Watanabe, Shin Locality: Pokhara/Nepal (1975-10-**) Isolator: Watanabe, Shin
Identified by: Watanabe, Shin States: Unialgal; Clonal; Non-axenic Culture conditions: C (agar);
20°C; 4-10μmol/m²/s; 3 M (25°C; 70-80μmol/m²/s) Habitat: Terrestrial (Soil) Other strain no.: NPL-111
References: 567, 1185 Remarks: Cryopreserved

UROGLENA : Chrysophyceae
Uroglena americana Calkins
Identified by: Ishida, Yuzaburo States: Unialgal; Clonal; Non-axenic Culture conditions: URO;
15°C; 20-30μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Characteristics: Other water bloom; Phagotrophic Other strain no.: Strain 78 References: 266, 399, 400
Remarks: Poor growth; Fragile species to transportation stresses

URONEMA : Chlorophyceae
Uronema confervicolum Lagerheim
Uronema gigas Vischer

**History:** < Kasai, Fumie **Locality:** Miyata River/Ibaraki/Japan (1987-05-22) **Isolator:** Kasai, Fumie **Identified by:** Kasai, Fumie **States:** Unialgal; Non-clonal; Non-axenic **Culture conditions:** C; 20°C; 8-15 μmol/m²/s; 3 M **Habitat:** Freshwater (River water) **Other strain no.:** 4st-2-10 **References:** 567, 1017, 1018

**Remarks:** Cryopreserved

**VAUCHERIA:** Xanthophyceae

_Vaucheria frigida_ (Roth) C.Agardh sensu Christensen

**History:** < Kataoka, Hironao **Locality:** New York/U.S.A. (1970-**,**,**)) **Isolator:** Kataoka, Hironao **Identified by:** Takahashi, Fumio (2006-09-05) **States:** Unialgal; Clonal; Axenic **Culture conditions:** C; 20°C; 4-10 μmol/m²/s; 6 M **Habitat:** Freshwater (Stream water) **Characteristics:** Homothallic **Gene data:** rbcL (AB266740) **Other strain no.:** bb1

**History:** < Kataoka, Hironao **Locality:** New York/U.S.A. (1970-**,**,**)) **Isolator:** Kataoka, Hironao **Identified by:** Takahashi, Fumio (2006-09-05) **States:** Unialgal; Clonal; Axenic **Culture conditions:** C; 20°C; 4-10 μmol/m²/s; 6 M **Habitat:** Freshwater (Stream water) **Characteristics:** Homothallic **Gene data:** rbcL (AB266740) **Other strain no.:** bb2

**History:** < Kataoka, Hironao **Locality:** New York/U.S.A. (1970-**,**,**)) **Isolator:** Kataoka, Hironao **Identified by:** Takahashi, Fumio (2006-09-05) **States:** Unialgal; Clonal; Axenic **Culture conditions:** C; 20°C; 4-10 μmol/m²/s; 6 M **Habitat:** Freshwater (Stream water) **Characteristics:** Homothallic **Gene data:** rbcL (AB266740) **Other strain no.:** bf

**VISCHERIA:** Eustigmatophyceae

_Vischeria punctata_ Vischer

**History:** < IAM (2007) < UTEX (1996) **Other collection strain no.:** IAM X-36 (=X-4); ATCC 30441; CCAP 887/1; SAG 887-1; UTEX 153 **Locality:** Unterengadin/Switzerland **Isolator:** Vischer, W. **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** C (agar); 20°C; 40-50 μmol/m²/s; 3 M **Habitat:** Terrestrial (Soil)

_Vischeria stellata_ Pascher

**History:** < IAM (2007) < BIU (UTEX) **Other collection strain no.:** IAM X-5; CCAP 887/2B; SAG 887-2; UTEX 312 **Locality:** Switzerland **Isolator:** Chodat, R. **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** C (agar); 20°C; 40-50 μmol/m²/s; 3 M **Habitat:** Terrestrial (Soil)

**VITREOCHLAMYX:** Chlorophyceae

_Vitreochlamys aulata_ (Pascher) Batko

**History:** < Nakazawa, Atsushi **Locality:** Atsugi/Kanagawa/Japan (1998-02-19) **Isolator:** Nakazawa, Atsushi **Identified by:** Nakazawa, Atsushi **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 22-32 μmol/m²/s; 2 M **Habitat:** Freshwater (Paddy soil) **Gene data:** atpB (AB076121); psaA (AB076143); psaB (AB076158); psbC (AB076175); psbC (AB076176); psbC (AB076177); rbcL (AB050486); rbcL (AB050487); rbcL-462 intron (AB076097) **Other strain no.:** Spha-5/1998-3-9 **References:** 661, 663, 740, 743

**History:** < Nakazawa, Atsushi **Locality:** Habikino/Osaka/Japan (1998-03-14) **Isolator:** Nakazawa,
877 History: < Nakazawa, Atsushi < SAG Other collection strain no.: SAG 69.72 Locality: South Bohemia/Czech States: Unialgal; Clonal; Non-axenic 
Culture conditions: AF-6; 20°C; 22-32 μmol/m²/s; 2 M Habitat: Freshwater (Ditch water) 
Gene data: rbcL (AB050488); rbcL (AB050489) 
Other strain no.: Sph-8/1998-7-14 Reference: 661

878 History: < Nakazawa, Atsushi < SAG Other collection strain no.: SAG 80.81 
Locality: Zool/Slovakia Formerly identified as: Sphaerellopsis aulata Pascher States: Unialgal; Clonal; 
Non-axenic 
Culture conditions: AF-6; 20°C; 22-32 μmol/m²/s; 2 M Habitat: Freshwater (Pond water) 
Gene data: rbcL (AB050492) 
References: 661, 662

879 History: < Nakazawa, Atsushi < SAG Other collection strain no.: SAG 82.14 
Locality: Nerima-ku/Tokyo/Japan (1997-11-13) 
Isolator: Nakazawa, Atsushi 
Identified by: Nakazawa, Atsushi States: Unialgal; Clonal; Non-axenic 
Culture conditions: AF-6; 20°C; 22-32 μmol/m²/s; 2 M Habitat: Freshwater (Lake water) 
Gene data: rbcL (AB050485) 
Other strain no.: Sph-1/1997-12-5 Reference: 661

880 History: < Nozaki, Hisayoshi Locality: Lake Altglobsow/Brandenburg/Germany (1997-08-04) 
Isolator: Nozaki, Hisayoshi 
Identified by: Nakazawa, Atsushi States: Unialgal; Clonal; 
Non-axenic 
Culture conditions: AF-6; 20°C; 22-32 μmol/m²/s; 2 M Habitat: Freshwater (Lake water) 
Gene data: atpB (AB014036); psaA (AB044420); psaB (AB044471); psbC (AB044529); rbcL (AB014041) 
Other strain no.: 970805-U-4 Reference: 661

881 History: < Nakazawa, Atsushi < SAG Other collection strain no.: SAG 10-14 
Locality: Shore of River Elbe, near Celakovice/Czech States: Unialgal; Clonal; Non-axenic 
Culture conditions: AF-6; 20°C; 22-32 μmol/m²/s; 2 M Habitat: Freshwater (River water) 
Gene data: rbcL (AB050494) Reference: 661

882 History: < Nozaki, Hisayoshi Locality: Lake Altglobsow/Brandenburg/Germany (1997-08-04) 
Isolator: Nozaki, Hisayoshi 
Identified by: Nakazawa, Atsushi States: Unialgal; Clonal; 
Non-axenic 
Culture conditions: AF-6; 20°C; 22-32 μmol/m²/s; 2 M Habitat: Freshwater (Lake water) 
Gene data: atpB (AB014036); psaA (AB044420); psaB (AB044471); psbC (AB044529); rbcL (AB014041) 
Other strain no.: 970804-4 (= Nozaki S-4) References: 661, 733, 738, 740

883 History: < Nakazawa, Atsushi Locality: Shakuji Park/Tokyo/Japan (1998-06-02) 
Isolator: Nakazawa, Atsushi 
Identified by: Nakazawa, Atsushi States: Unialgal; Clonal; Non-axenic 
Culture conditions: AF-6; 20°C; 22-32 μmol/m²/s; 2 M Habitat: Freshwater (Pond water) 
Characteristics: Authentic strain Gene data: atpB (AB076120); psaA (AB076142); psaB (AB076157); psbC (AB076174); rbcL (AB050490); rbcL (AB050491) 
Other strain no.: Sph-12/1998-7-16 References: 661, 740, 743

VOLVOX : Chlorophyceae

Volvox africanaus G.S. West

863 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1891 
Isolator: Starr, R. C. 
Identified by: Starr, R. C. States: Unialgal; Clonal; Non-axenic 
Culture conditions: AF-6/2; 23°C; 180-200 μmol/m²/s; 20 D Characteristics: Heterothallic; Dioecious; Oogamy; Female Remarks: Fragile species to transportation stresses

Volvox aureus Ehrenberg
<table>
<thead>
<tr>
<th>Page</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>241</td>
<td>History: &lt; IAM (1983) Other collection strain no.: IAM C-419 Locality: Nagatoro/Saitama/Japan (1969-11-13) <strong>Isolator:</strong> Ichimura, Terunobu <strong>Identified by:</strong> Ichimura, Terunobu <strong>States:</strong> Unialgal; Clonal; Axenic <strong>Culture conditions:</strong> VT; 25°C; 100-120μmol/m²/s; 20 D <strong>Habitat:</strong> Freshwater (Pond sediment) <strong>Characteristics:</strong> Fertility lost <strong>Other strain no.:</strong> S-9-8 <strong>References:</strong> 235, 567 <strong>Remarks:</strong> Fragile species to transportation stresses</td>
</tr>
<tr>
<td>396</td>
<td>History: &lt; Ogasawara, Yoshikazu <strong>Locality:</strong> Nagano/Japan (1983-08-27) <strong>Isolator:</strong> Ogasawara, Yoshikazu <strong>Identified by:</strong> Ogasawara, Yoshikazu <strong>States:</strong> Unialgal; Clonal; Axenic <strong>Culture conditions:</strong> VT; 23°C; 180-200μmol/m²/s; 20 D <strong>Habitat:</strong> Freshwater (Paddy water) <strong>Characteristics:</strong> Homoalthalic <strong>Reference:</strong> 567 <strong>Remarks:</strong> Fragile species to transportation stresses</td>
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<tr>
<td>693</td>
<td>History: &lt; Nozaki, Hisayoshi <strong>Locality:</strong> Tokyo/Japan (1977-06-22) <strong>Isolator:</strong> Nozaki, Hisayoshi <strong>Identified by:</strong> Nozaki, Hisayoshi <strong>States:</strong> Unialgal; Clonal; Axenic[2013 Jan] <strong>Culture conditions:</strong> VT; 20°C; 180-200μmol/m²/s; 1 M <strong>Habitat:</strong> Freshwater (Stream water) <strong>Characteristics:</strong> Other water bloom; Homoalthalic; Dioecious; Oogamy <strong>Other strain no.:</strong> k-5 <strong>Reference:</strong> 567 <strong>Remarks:</strong> Fragile species to transportation stresses</td>
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<tr>
<td>864</td>
<td>History: &lt; Nozaki, Hisayoshi <strong>Locality:</strong> Neuglobsow/Brandenburg/Germany (1997-07-17) <strong>Isolator:</strong> Nozaki, Hisayoshi <strong>Identified by:</strong> Nozaki, Hisayoshi <strong>States:</strong> Unialgal; Clonal; Non-axenic <strong>Culture conditions:</strong> AF-6; 15°C; 35-50μmol/m²/s; 2 M <strong>Habitat:</strong> (Freshwater) <strong>Other strain no.:</strong> 970717-1 <strong>Remarks:</strong> Fragile species to transportation stresses</td>
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<tr>
<td>891</td>
<td>History: &lt; Nozaki, Hisayoshi <strong>Locality:</strong> Neuglobsow/Brandenburg/Germany (1997-07-17) <strong>Isolator:</strong> Nozaki, Hisayoshi <strong>Identified by:</strong> Nozaki, Hisayoshi <strong>States:</strong> Unialgal; Clonal; Non-axenic <strong>Culture conditions:</strong> AF-6; 15°C; 35-50μmol/m²/s; 2 M <strong>Habitat:</strong> (Freshwater) <strong>Gene data:</strong> atpB (AB076104); psaA (AB076123); psbA (AB076145); psbC (AB076160); rbcL (AB076096) <strong>Other strain no.:</strong> 970717-2 <strong>Reference:</strong> 743 <strong>Remarks:</strong> Fragile species to transportation stresses</td>
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<td>982</td>
<td>History: &lt; Nozaki, Hisayoshi <strong>Locality:</strong> Lake Sagami/Kanagawa/Japan (1999-06-01) <strong>Isolator:</strong> Nozaki, Hisayoshi <strong>Identified by:</strong> Nozaki, Hisayoshi <strong>States:</strong> Unialgal; Clonal; Non-axenic <strong>Culture conditions:</strong> MG; 15°C; 35-50μmol/m²/s; 1 M <strong>Habitat:</strong> Freshwater (Lake water) <strong>Characteristics:</strong> Other water bloom; Homoalthalic; Dioecious; Oogamy <strong>Gene data:</strong> atpB (AB076105); psaA (AB076124); psbA (AB076146); psbC (AB076161); rbcL (AB076086) <strong>Other strain no.:</strong> 990601-IV-9 <strong>Reference:</strong> 743 <strong>Remarks:</strong> Fragile species to transportation stresses</td>
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*Volvox aureus* Ehrenberg var. *aureus*

541 History: < Nozaki, Hisayoshi **Locality:** Lake Yamanaka/Yamanashi/Japan (1981.**, **) **Isolator:** Nozaki, Hisayoshi **Identified by:** Nozaki, Hisayoshi **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** VT; 23°C; 180-200μmol/m²/s; 1 M **Habitat:** Freshwater (Sediment) **Gene data:** atpB (AB013998); psaA (AB044182); psbA (AB044424); psbC (AB044474) **Other strain no.:** 1706-2 **References:** 567, 692, 706, 714, 715, 733, 738 **Remarks:** Fragile species to transportation stresses

542 History: < Nozaki, Hisayoshi **Locality:** Lake Yamanaka/Yamanashi/Japan (1981.**, **) **Isolator:** Nozaki, Hisayoshi **Identified by:** Nozaki, Hisayoshi **States:** Unialgal; Clonal; Axenic **Culture conditions:** VT; 23°C; 180-200μmol/m²/s; 1 M **Habitat:** Freshwater (Sediment) **Other strain no.:** 1706-4 **References:** 567, 692 **Remarks:** Fragile species to transportation stresses

*Volvox barberi* Shaw

730 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 804; IAM C-601 **Locality:** Lemoncove/California/U.S.A. **Isolator:** Stein, J. **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** C; 23°C; 180-200μmol/m²/s; 20 D **Habitat:** Freshwater (Soil) **Gene data:** atpB (AB014001); psaA (AB044186); psbA (AB044427); psbC (AB044477); rbcL (D86835)
References: 662, 716, 733, 738 Remarks: Fragile species to transportation stresses

Volvox carteri Stein

397 History: < Ogasawara, Yoshikazu Locality: Ichinomiya, Asai/Aichi/Japan (1983-06-12) Isolator: Ogasawara, Yoshikazu States: Unialgal; Clonal; Axenic[2013 Jan] Culture conditions: VT; 25 ℃; 100-120 μmol/m²/s; 20 D Habitat: Freshwater (Paddy water) Characteristics: Heterothallic; Female; Crosses with NIES-398 Other strain no.: V-4 Reference: 567 Remarks: Fragile species to transportation stresses

Volvox carteri Stein f. kawasakiensis Nozaki

580 History: < Nozaki, Hisayoshi Locality: Kawasaki/Kanagawa/Japan (1984-01-30) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Axenic Culture conditions: VTAC; 20 ℃; 22-27 μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Dioecious; Oogamy; Female; Crosses with NIES-581 Other strain no.: 6823-4-2 References: 567, 699 Remarks: Fragile species to transportation stresses

732 History: < Nozaki, Hisayoshi Locality: Kawasaki/Kanagawa/Japan (1984-01-***) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Axenic Culture conditions: VT; 23 ℃; 180-200 μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Authentic strain; Heterothallic; Dioecious; Oogamy; Female; Crosses with NIES-733 Gene data: atpB (AB013999); psaA (AB044184); psaA (AB044185); psaB (AB044425); psbC (AB044475); rbcL (D63446) Other strain no.: KK-3 References: 699, 706, 715, 733, 738, 740 Remarks: Fragile species to transportation stresses

Volvox carteri Stein f. nagariensis Iyengar

865 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1885 Locality: Kobe/Hyogo/Japan Isolator: Starr, R. C. Identified by: Starr, R. C. States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 23 ℃; 180-200 μmol/m²/s; 20 D Characteristics: Heterothallic; Dioecious; Oogamy; Female Remarks: Fragile species to transportation stresses

Volvox carteri Stein f. weissmannia (Powers) Iyengar

866 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1875 Locality: Waterford/Australia Isolator: Starr, R. C. Identified by: Starr, R. C. States: Unialgal; Clonal; Non-axenic Culture conditions: VTAC; 23 ℃; 180-200 μmol/m²/s; 20 D Characteristics: Heterothallic; Dioecious; Oogamy; Male Remarks: Fragile species to transportation stresses

Volvox dissipatrix (Shaw) Printz

731 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 2184 Isolator: Starr, R. C. States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 23 ℃; 180-200 μmol/m²/s; 14 D Habitat: Freshwater Gene data: atpB (AB014000); psaA (AB044183); psaB (AB044426); psbC (AB044476); rbcL (D63447) References: 662, 715, 733, 738 Remarks: Fragile species to transportation stresses
**Volvox ferrisii** Isaka, Matsuzaki et Nozaki

2736 **History:** < Nozaki, Hisayoshi **Locality:** Kanagawa/Japan (1984-01-31) **Isolator:** Nozaki, Hisayoshi **Identified by:** Isaka, Nanako; Matsuzaki, Ryo; Nozaki, Hisayoshi (2011-07-06) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** VTAC; 20°C; 15-27μmol/m²/s; 1 M **Habitat:** Freshwater (Soil) **Characteristics:** Phototaxis; Mixotrophic; Homothallic; Oogamy; Resting zygote forming **Gene data:** ITS1-5.8S-ITS2 (AB663336); psbC (AB663335); rbcL (AB663334) **Other strain no.:** 40225-VG-17 **Reference:** 264 **Remarks:** Fragile species to transportation stresses

2737 **History:** < Nozaki, Hisayoshi **Locality:** Ibaraki/Japan (2004-07-06) **Isolator:** Nozaki, Hisayoshi **Identified by:** Isaka, Nanako; Matsuzaki, Ryo; Nozaki, Hisayoshi (2011-07-06) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** VTAC; 20°C; 15-27μmol/m²/s; 1 M **Habitat:** Freshwater **Characteristics:** Phototaxis; Mixotrophic; Homothallic; Oogamy; Resting zygote forming **Gene data:** ITS1-5.8S-ITS2 (AB663339); psbC (AB663338); rbcL (AB663337) **Other strain no.:** 2004-706-Vx2 **Reference:** 264 **Remarks:** Fragile species to transportation stresses

2738 **History:** < Nozaki, Hisayoshi **Other collection strain no.:** UTEX 2967 **Locality:** Lake Isanuma/Saitama/Japan (2009-04-23) **Isolator:** Nozaki, Hisayoshi **Identified by:** Isaka, Nanako; Matsuzaki, Ryo; Nozaki, Hisayoshi (2011-07-06) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 20°C; 15-27μmol/m²/s; 1 M **Habitat:** Freshwater (Pond water) **Characteristics:** Phototaxis; Mixotrophic; Homothallic; Oogamy; Resting zygote forming **Gene data:** ITS1-5.8S-ITS2 (AB663333); psbC (AB663332); rbcL (AB663331) **Other strain no.:** I-he **Reference:** 264 **Remarks:** Fragile species to transportation stresses

2739 **History:** < Nozaki, Hisayoshi **Locality:** Lake Isanuma/Saitama/Japan (2009-04-23) **Isolator:** Nozaki, Hisayoshi **Identified by:** Isaka, Nanako; Matsuzaki, Ryo; Nozaki, Hisayoshi (2011-07-06) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** VTAC; 20°C; 15-27μmol/m²/s; 1 M **Habitat:** Freshwater (Pond water) **Characteristics:** Phototaxis; Authentic strain; Homothallic; Oogamy; Resting zygote forming **Gene data:** ITS1-5.8S-ITS2 (AB663330); psbC (AB663329); rbcL (AB663328) **Other strain no.:** 1-ro **Reference:** 264 **Remarks:** Fragile species to transportation stresses

**Volvox gigas** Pocock

867 **History:** < Nozaki, Hisayoshi < UTEX **Other collection strain no.:** UTEX 1895 **Isolator:** Starr, R. C. **Identified by:** Starr, R. C. **States:** Unialgal; Clonal; Non-axenic; Remarkable large colonies[2012 Oct] **Culture conditions:** MG; 23°C; 180-200μmol/m²/s; 14 D **Characteristics:** Heterothallic; Dioecious; Oogamy; Female **Remarks:** Fragile species to transportation stresses

**Volvox kirkiorum** Nozaki, Kawai-Toyooka et Isaka

543 **History:** < Ogasawara, Yoshikazu **Locality:** Japan **Isolator:** Ogasawara, Yoshikazu **Identified by:** Isaka, Matsuzaki, Nozaki; Former Suda **Formerly identified as:** Volvox prolificus Iyengar **States:** Unialgal; Clonal; Axenic[2013 Jan] **Culture conditions:** VT; 23°C; 180-200μmol/m²/s; 1 M **Habitat:** Freshwater **Gene data:** ITS1-5.8S-ITS2 (AB663327); psbC (AB663326); rbcL (AB663325) **Other strain no.:** V-sp **References:** 264, 567 **Remarks:** Fragile species to transportation stresses

2740 **History:** < Nozaki, Hisayoshi **Other collection strain no.:** UTEX 2966 **Locality:** Gifu/Japan (2006-07-27) **Isolator:** Nozaki, Hisayoshi **Identified by:** Isaka, Nanako; Matsuzaki, Ryo; Nozaki, Hisayoshi (2011-07-06) **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; VTAC; 20°C; 15-27μmol/m²/s; 1 M **Habitat:** Freshwater **Characteristics:** Phototaxis; Authentic strain; Homothallic; Oogamy; Resting zygote forming **Gene data:** ITS1-5.8S-ITS2 (AB663324); psbC (AB663323); rbcL (AB663322) **Other strain no.:** 2006-728-2-B8 **Reference:** 264 **Remarks:** Fragile species to transportation stresses

**Volvox obversus** (Shaw) Printz

868 **History:** < Nozaki, Hisayoshi < UTEX **Other collection strain no.:** UTEX 1865 **Isolator:** Starr, R. C. **Identified by:** Starr, R. C. **States:** Unialgal; Clonal; Non-axenic **Culture conditions:** AF-6; 23°C; 180-200μmol/m²/s; 14 D **Characteristics:** Heterothallic; Dioecious; Oogamy; Male **Remarks:** Fragile species to transportation stresses
Volvox ovalis  Pocock ex Nozaki et Coleman


Volvox rousseletii G.S. West

734  History:  < Nozaki, Hisayoshi < UTEX  Other collection strain no.: UTEX 1862  Isolator: Starr, R. C.  States: Unialgal; Clonal; Non-axenic  Culture conditions: AF-6; 23°C; 180-200μmol/m²/s; 1 M  Habitat: Freshwater  Gene data: atpB (AB014003); psaA (AB044188); psaB (AB044429); psbC (AB044479); rbcL (D63448)  References: 715, 733, 738  Remarks: Fragile species to transportation stresses

Volvox sp.


Volvox tertius Meyer

544  History:  < Ogasawara, Yoshikazu  Locality: Kisofukushima/Nagano/Japan (1986-08-27) Isolator: Ogasawara, Yoshikazu  Identified by: Ogasawara, Yoshikazu  States: Unialgal; Clonal; Axenic[2013 Jan]  Culture conditions: MG; 23°C; 180-200μmol/m²/s; 20 D  Habitat: Freshwater (Paddy water)  Characteristics: Homothallic  Gene data: atpB (AB086173); psaA (AB086175); psaB (AB086176); psbB (AB086177); psbC (AB086178); rbcL (AB086174)  References: 567, 707  Remarks: Fragile species to transportation stresses


VOLVULINA : Chlorophyceae

Volvulina boldii O'Neil et Starr nom. nud.

893  History:  < Nozaki, Hisayoshi < UTEX  Other collection strain no.: UTEX 2185  Locality: Peurith/North Carolina/U.S.A.  Isolator: Starr, R. C.  Identified by: Starr, R. C.  States: Unialgal; Clonal; Non-axenic  Culture conditions: MG; 20°C; 22-32μmol/m²/s; 1 M  Characteristics: Heterothallic; Isogamy; Mating type(+)  Gene data: atpB (AB0444176); psaA (AB044225); psbB (AB044451); psbC (AB044504); rbcL (AB044162)  Reference: 733

894  History:  < Nozaki, Hisayoshi < UTEX  Other collection strain no.: UTEX 2186  Locality: Peurith/North Carolina/U.S.A.  Isolator: Starr, R. C.  Identified by: Starr, R. C.  States: Unialgal; Clonal; Non-axenic  Culture conditions: MG; 20°C; 22-32μmol/m²/s; 1 M  Characteristics: Heterothallic; Isogamy; Mating type(−)

Volvulina compacta Nozaki

582  History:  < Nozaki, Hisayoshi  Locality: Birtamod/Nepal (1988-10-07) Isolator: Nozaki, Hisayoshi  Identified by: Nozaki, Hisayoshi  States: Unialgal; Clonal; Axenic  Culture conditions: VT; 20°C; 15-27μmol/m²/s; 1 M  Habitat: Freshwater (Paddy soil)  Characteristics: Heterothallic; Mating type(±); Crosses with NIES-583  Gene data: atpB (AB014029); psaA (AB044217); psaB (AB044218); psaA (AB044219); psbB (AB044446); psbC (AB044498); rbcL-462 intron (AB076089)  Other strain no.: 89-804-4  References: 567, 716, 725, 733, 738, 740, 743

583  History:  < Nozaki, Hisayoshi  Locality: Birtamod/Nepal (1988-10-07) Isolator: Nozaki, Hisayoshi  Identified by: Nozaki, Hisayoshi  States: Unialgal; Clonal; Axenic  Culture conditions:
VT; 20°C; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Mating type(−); Crosses with NIES-582 Other strain no.: 89-804-7 References: 567, 725

2567 History: < Nakada, Takashi Locality: Lake Tsukui/Kanagawa/Japan (2002-05-30) Isolator: Nakada, Takashi Identified by: Nakada, Takashi (2002-06 **) States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Lake water) Other strain no.: TN-0205-2-Pn-1 Reference: 617

Volvulina pringsheimii Starr

895 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1020 Locality: Fredricksburg/Texas/U.S.A. Isolator: Starr, R. C. Identified by: Starr, R. C. States: Unialgal; Clonal; Non-axenic Culture conditions: MG; 20°C; 22-32μmol/m²/s; 1 M Habitat: Terrestrial (Rock) Characteristics: Heterothallic; Isogamy Gene data: atpB (AB044174); psaA (AB044220); psaB (AB044447); psbC (AB044499); rbcL (D63444) References: 715, 733, 738

Volvulina steinii Playfair

545 History: < Nozaki, Hisayoshi Locality: Hayama/Kanagawa/Japan (1980-12 **) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Axenic Culture conditions: VTAC; 20 °C ; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Mating type(−); Crosses with NIES-546 Gene data: atpB (AB044713); psaA (AB044221); psaA (AB044222); psaB (AB044448); psbC (AB044450); rbcL (AB044159) Other strain no.: 1107-5 (-) References: 567, 662, 689, 712, 733

546 History: < Nozaki, Hisayoshi Locality: Hayama/Kanagawa/Japan (1980-12 **) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Axenic Culture conditions: VTAC; 20 °C ; 15-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Mating type(+); Crosses with NIES-545 Other strain no.: 1107-8 (+) References: 374, 567, 689

584 History: < Nozaki, Hisayoshi Locality: Baharabise/Nepal (1988-09-01) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: VTAC; 20 °C ; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Isogamy; Mating type(+); Crosses with NIES-585 Other strain no.: 89-306-1 References: 567, 701

585 History: < Nozaki, Hisayoshi Locality: Baharabise/Nepal (1988-09-01) Isolator: Nozaki, Hisayoshi Identified by: Nozaki, Hisayoshi States: Unialgal; Clonal; Non-axenic Culture conditions: VTAC; 20 °C ; 22-27μmol/m²/s; 1 M Habitat: Freshwater (Paddy soil) Characteristics: Heterothallic; Isogamy; Mating type(−); Crosses with NIES-584 Other strain no.: 89-423-1 References: 567, 701

896 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1525 Locality: Farmington/California/U.S.A. Isolator: Carefoot, J. R. Identified by: Carefoot, J. R. States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Ditch mud) Characteristics: Mixotrophic; Heterothallic; Isogamy Gene data: atpB (AB044174); psaA (AB044223); psaB (AB044449); psbC (AB044501); rbcL (AB044160) References: 45, 689, 712, 733

897 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1527 Locality: Bloomington/Indiana/U.S.A. Isolator: Carefoot, J. R. Identified by: Carefoot, J. R. States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 1 M Habitat: Salt water (Salt creek mud) Characteristics: Mixotrophic; Heterothallic; Isogamy References: 45, 689, 712

898 History: < Nozaki, Hisayoshi < UTEX Other collection strain no.: UTEX 1531 Locality: Wilson County/Texas/U.S.A. Isolator: Carefoot, J. R. Identified by: Carefoot, J. R. States: Unialgal; Clonal; Non-axenic Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 1 M Habitat: Freshwater (Soil or Mud) Characteristics: Mixotrophic; Heterothallic; Isogamy Gene data: atpB (AB044175); psaA (AB044224); psaB (AB044450); psbC (AB044502); rbcL (AB044161) References: 45, 689, 712, 733
**WATANABEA** : Trebouxia phycaceae

*Watanabea reniformis* Hanagata, Karube, Chihara et Silva

2189  **History:** < IAM (2007) < Soeder, C. J. (1966) < CCAP Other collection strain no.: IAM C-211; CCAP 211/9b  **Isolator:** Pringsheim, E. G.  **Formerly identified as:** Chlorella saccharophila (Krüger) Migula  **States:** Unialgal; Clonal; Axenic[2013 Jan]  **Culture conditions:** C (agar); 20°C; 8-15μmol/m²/s; 3 M  **Other strain no.:** Cambridge Univ. 211-9b  **References:** 144, 190, 424, 425, 1211, 1212

**WOBBLIA** : Placididea

*Wobblia lunata* Moriya, Nakayama et Inouye

1015  **History:** < Moriya, Mayumi  **Locality:** Osabe Harbor/Iwate/Japan (1996-08-**)  **Isolator:** Moriya, Mayumi  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** SUY; 15°C; 0μmol/m²/s; 1 M  **Habitat:** Marine (Seawater)  **Characteristics:** Phagotrophic; Heterotropic; Authentic strain  **Gene data:** 18S rRNA (AB032606)  **Other strain no.:** #1  **Reference:** 573

**YAMAGISHIELLA** : Chlorophyceae

*Yamagishiella unicocca* (Rayburn et Starr) Nozaki

Syn. Pandora unicocca Rayburn et Starr

578  **History:** < Nozaki, Hisayoshi  **Locality:** Kamogawa/Chiba/Japan (1980-10-19)  **Isolator:** Nozaki, Hisayoshi  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** VTAC; 20°C; 22-27μmol/m²/s; 1 M  **Habitat:** Freshwater (Pond sediment)  **Characteristics:** Heterothallic; Isogamy; Mating type(+) Crosses with NIES-579  **Other strain no.:** 01209-1  **References:** 567, 742, 1208

579  **History:** < Nozaki, Hisayoshi  **Locality:** Kamogawa/Chiba/Japan (1980-10-19)  **Isolator:** Nozaki, Hisayoshi  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** VTAC; 20°C; 22-27μmol/m²/s; 1 M  **Habitat:** Freshwater (Pond sediment)  **Characteristics:** Heterothallic; Isogamy; Mating type(−) Crosses with NIES-578  **Other strain no.:** 01209-7  **Reference:** 567

666  **History:** < Nozaki, Hisayoshi  **Other collection strain no.:** UTEX 2428  **Locality:** Nobi/Kanagawa/Japan (1979-05-**)  **Isolator:** Kato, Sueo  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** VT; 20°C; 22-27μmol/m²/s; 1 M  **Habitat:** Freshwater (Pond water)  **Characteristics:** Heterothallic; Isogamy; Mating type(+) Crosses with NIES-667  **Gene data:** atpB (AB014030); psaA (AB044213); psaB (AB044443); psbC (AB044495); rbcL (D86823)  **Other strain no.:** X-441  **References:** 396, 567, 688, 716, 728, 733, 738, 1208

667  **History:** < Nozaki, Hisayoshi  **Other collection strain no.:** UTEX 2429  **Locality:** Nobi/Kanagawa/Japan (1979-05-**)  **Isolator:** Kato, Sueo  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** VT; 20°C; 22-27μmol/m²/s; 1 M  **Habitat:** Freshwater (Pond water)  **Characteristics:** Heterothallic; Isogamy; Mating type(−) Crosses with NIES-666  **Other strain no.:** X-443  **References:** 567, 688

870  **History:** < Nozaki, Hisayoshi  **Locality:** Lake Röblin/Fürstenberg/Germany (1997-07-29)  **Isolator:** Nozaki, Hisayoshi  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** AF-6; 15°C; 20-30μmol/m²/s; 2 M  **Habitat:** Freshwater (Lake water)  **Characteristics:** Heterothallic; Isogamy; Mating type(+)  **Other strain no.:** 970730-E-1  **Reference:** 1208

871  **History:** < Nozaki, Hisayoshi  **Locality:** Lake Röblin/Fürstenberg/Germany (1997-07-29)  **Isolator:** Nozaki, Hisayoshi  **States:** Unialgal; Clonal; Non-axenic  **Culture conditions:** AF-6; 15°C; 20-30μmol/m²/s; 2 M  **Habitat:** Freshwater (Lake water)  **Characteristics:** Heterothallic; Isogamy; Mating type(−)  **Other strain no.:** 970730-E-7
872 History: < Nozaki, Hisayoshi  
Locality: Brandenburg/Germany (1997-07-31)  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: AF-6; 15 °C; 20-30μmol/m²/s; 2 M  
Habitat: (Freshwater)  
Characteristics: Heterothallic; Isogamy; Mating type(+)
Gene data: atpB (AB044172); psaA (AB044216); psaB (AB044445); psbC (AB044497); rbcL (AB044168)  
Other strain no.: 970801-E-5 (= Nozaki E-5)  
References: 733, 1208

873 History: < Nozaki, Hisayoshi  
Locality: Brandenburg/Germany (1997-07-31)  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: AF-6; 15 °C; 20-30μmol/m²/s; 2 M  
Habitat: (Freshwater)  
Characteristics: Heterothallic; Isogamy; Mating type(−)  
Other strain no.: 970801-E-9

874 History: < Nozaki, Hisayoshi  
Locality: Brandenburg/Germany (1997-07-31)  
Isolator: Nozaki, Hisayoshi  
Identified by: Nozaki, Hisayoshi  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: AF-6; 15 °C; 20-30μmol/m²/s; 2 M  
Habitat: (Freshwater)  
Characteristics: Heterothallic; Dioecious; Isogamy; Mating type(−)  
Other strain no.: 970801-E-10

1859 History: < Nozaki, Hisayoshi  
Locality: Noumi Isl./Hiroshima/Japan (2004-08-18)  
Isolator: Yamada, Toshihiro  
Identified by: Yamada, Toshihiro (2005-06-17)  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 1 M  
Habitat: Freshwater (Soil)  
Characteristics: Heterothallic; Dioecious; Isogamy; Mating type(−); Crosses with NIES-1861  
Other strain no.: Hasu-1  
Reference: 1208

1860 History: < Nozaki, Hisayoshi  
Locality: Noumi Isl./Hiroshima/Japan (2004-08-18)  
Isolator: Yamada, Toshihiro  
Identified by: Yamada, Toshihiro (2005-06-17)  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 1 M  
Habitat: Freshwater (Soil)  
Characteristics: Heterothallic; Dioecious; Isogamy; Mating type(−); Crosses with NIES-1861  
Other strain no.: Hasu-2

1861 History: < Nozaki, Hisayoshi  
Locality: Noumi Isl./Hiroshima/Japan (2004-08-18)  
Isolator: Yamada, Toshihiro  
Identified by: Yamada, Toshihiro (2005-06-17)  
States: Unialgal; Clonal; Non-axenic  
Culture conditions: AF-6; 20°C; 22-32μmol/m²/s; 1 M  
Habitat: Freshwater (Soil)  
Characteristics: Heterothallic; Dioecious; Isogamy; Mating type(+); Crosses with NIES-1859, 1860  
Other strain no.: Hasu-4
3. List of type specimens

Specimen ID: NIES-50001
Scientific name: Chlorogonium capillatum Nozaki, M. M. Watanabe et Aizawa
Class name: Chlorophyceae
Deposition date: 2007-3-31
Depositor(s): Nakada, T. & Nozaki, H. (University of Tokyo)
Type status: Epitype
Specimen status: Cryopreserved
Corresponding active culture strain: NIES-692
Reference: See section VIII Nakada et al. 2008

Specimen ID: NIES-50002
Scientific name: Chlorogonium elongatum (P. A. Dangeard) Francé
Class name: Chlorophyceae
Basionym: Cercidium elongatum P. A. Dangeard
Deposition date: 2007-3-31
Depositor(s): Nakada, T. & Nozaki, H. (University of Tokyo)
Type status: Epitype
Specimen status: Cryopreserved
Corresponding active culture strain: NIES-751 (IAM C-293, CCAP 12/1, UTEX 204)
Reference: See section VIII Nakada et al. 2008

Specimen ID: NIES-50003
Scientific name: Chlorogonium euchlorum (Ehrenberg) Ehrenberg
Class name: Chlorophyceae
Basionym: Astasia euchlora Ehrenberg
Deposition date: 2007-3-31
Depositor(s): Nakada, T. & Nozaki, H. (University of Tokyo)
Type status: Epitype
Specimen status: Cryopreserved
Corresponding active culture strain: NIES-755 (UTEX 2010)
Reference: See section VIII Nakada et al. 2008

Specimen ID: NIES-50005
Scientific name: Gungnir kasakii (Nozaki) Nakada
Class name: Chlorophyceae
Basionym: Chlorogonium kasakii Nozaki
Deposition date: 2007-3-31
Depositor(s): Nakada, T. & Nozaki, H. (University of Tokyo)
Type status: Epitype
Specimen status: Cryopreserved
Corresponding active culture strain: NIES-761 (CCAP 12/8)
Reference: See section VIII Nakada et al. 2008

Specimen ID: NIES-50006
Scientific name: Gungnir neglectum (Pascher) Nakada
Class name: Chlorophyceae
Basionym: Chlorogonium neglectum Pascher
Synonym: Chlamydomonas neglecta (Pascher) Korshikov
Deposition date: 2007-3-31
Depositor(s): Nakada, T. & Nozaki, H. (University of Tokyo)
Type status: Epitype
Specimen status: Cryopreserved
Corresponding active culture strain: NIES-439
Reference: See section VIII Nakada et al. 2008

Specimen ID: NIES-50007
Scientific name: Rusalka fusiformis (Matvienko) Nakada
Class name: Chlorophyceae
Basionym: Chlorogonium fusiforme Matvienko
Deposition date: 2007-3-31
Depositor(s): Nakada, T. & Nozaki, H. (University of Tokyo)
Type status: Epitype
Specimen status: Cryopreserved
Corresponding active culture strain: NIES-123 (IAM C-349)
Reference: See section VIII References 731.
List of synonyms

<table>
<thead>
<tr>
<th>Synonym</th>
<th>Current name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achnanthes minutissima Kützing</td>
<td><em>Achnanthidium minutissimum</em> (Kützing) Czarnecki</td>
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<tr>
<td>Achnanthes minutissima Kützing var. saprophila Kobayasi et Mayama</td>
<td><em>Achnanthidium minutissimum</em> (Kützing) Czarnecki var. saprophila Kobayasi et Mayama</td>
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<tr>
<td>Amphisidium britannicum (Herdmann) Lebour</td>
<td><em>Togula britannica</em> (Herdmann) Jørgensen, Murray et Daugbjerg</td>
</tr>
<tr>
<td>Anabaena flos-aquae Brébisson ex Bornet et Flahault f. flos-aquae</td>
<td><em>Anabaena flos-aquae</em> Brébisson ex Bornet et Flahault</td>
</tr>
<tr>
<td>Anabaena raciborskii Woloszynska</td>
<td><em>Cylindropernopsis raciborskii</em> (Woloszynska) Seenayya et S.Raju</td>
</tr>
<tr>
<td>Anabaena spiroides Klebahn f. crassa (Lemmermann) Elenkin</td>
<td><em>Anabaena crassa</em> Lemmermann-Komárova-Legnerová et Cronberg</td>
</tr>
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<td><em>Anabaena spiroides</em> Klebahn var. crassa Klebahn</td>
<td><em>Anabaena crassa</em> Klebahn</td>
</tr>
<tr>
<td>Ankistrodesmus subcapitata Korshikov</td>
<td><em>Pseudokirchneriella subcapitata</em> (Korshikov) Hindák</td>
</tr>
<tr>
<td>Arthrospira platensis Gomont</td>
<td><em>Arthrospira platensis</em> (Nordstedt) Gomont</td>
</tr>
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<td>Asterionella glacialis Castracane</td>
<td><em>Asterionellopsis glacialis</em> (Castracane) Round</td>
</tr>
<tr>
<td>Asterocystis ramosa (Thwaites) Gobi</td>
<td><em>Chroodactylon ornatum</em> (C.Agardh) Basson</td>
</tr>
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<td>Asterocystis smarginada Reinsch</td>
<td><em>Chroodactylon ornatum</em> (C.Agardh) Basson</td>
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<td>Batrachospermum vagum (Roth) Agardh</td>
<td><em>Batrachospermum turfosum</em> Bory</td>
</tr>
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<td>Cachonina niei Loeblich III</td>
<td><em>Heterocapsa niei</em> (Loeblich III) Morrill et Loeblich III</td>
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<td>Cercidium elongatum Dangeard</td>
<td><em>Chlorogonium elongatum</em> (Dangeard) Francé</td>
</tr>
<tr>
<td>Chattonella verruculosa Hara et Chihara</td>
<td><em>Pseudochattonella verruculosa</em> (Hara et Chihara) Tanabe-Hosoi <em>et al</em>.</td>
</tr>
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<td>Chilomonas paramaecium Ehrenberg</td>
<td><em>Cryptomonas paraphaeicum</em> (Ehrenberg) Hoef-Emden et Melkonian</td>
</tr>
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<td>Chlamydomonas elongata Wille</td>
<td><em>Chlorogonium elongatum</em> (Dangeard) Francé</td>
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<td>Chlamydomonas macroplastida J.W.G Lund f. macrostigma Bourrelly</td>
<td><em>Chlamydomonas pseudomacrostigma</em> L.Ş. Péterfi ex H.Ettl</td>
</tr>
<tr>
<td>Chlamydomonas media var. eustigma Gerloff</td>
<td><em>Chlamydomonas media</em> Klebs</td>
</tr>
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<td><em>Chlamydomonas perpusilla</em> (Korshikov) Gerloff var. perpusilla</td>
</tr>
<tr>
<td>Chlamydomonas monadina F.Stein var. charkoviensis Korshikov</td>
<td><em>Chlamydomonas pseudomacrostigma</em> L.Ş. Péterfi ex H.Ettl</td>
</tr>
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<td>Chlamydomonas neglecta Korshikov ex Pascher</td>
<td><em>Gungnir neglectum</em> (Pascher) Nakada</td>
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<td>Chlamydomonas planonconvexa <em>Iyengar non Lund</em></td>
<td><em>Chlamydomonas neoplanonconvexa</em> (Iyengar) Nakada</td>
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<td>Chlamydomonas platyrhyncha Pascher</td>
<td><em>Chloromonas pseudoplatyirhyncha</em> (Pascher) Silva</td>
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<tr>
<td>Chlamydomonas polychloris Korshikov non Pascher</td>
<td><em>Chloromonas pseudoplatyirhyncha</em> (Pascher) Silva</td>
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<td>Chlorella emersonii Shihira et Krauss</td>
<td><em>Graesiella emersonii</em> (Shihira et Krauss) Nozaki <em>et al.</em></td>
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<td>Chlorella fusca Shihira et Krauss var. vacuolata</td>
<td><em>Graesiella emersonii</em> (Shihira et Krauss) Nozaki <em>et al.</em></td>
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<td>Chlorella kessleri Fott et Novákův</td>
<td><em>Parachlorella kessleri</em> (Fott et Novákův) Krienitz <em>et al.</em></td>
</tr>
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<td>Chlorella protothecoides Krüger</td>
<td><em>Auchenochlorella protothecoides</em> (Krüger) Kalina et Puncochárová</td>
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<tr>
<td>Chlorella zofingiensis Dönz</td>
<td><em>Muriella zofingiensis</em> (Dönz) Hindák</td>
</tr>
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<td><em>Chlorogonium acus</em> (Author unknown)</td>
<td><em>Chlorogonium elongatum</em> (Dangeard) Francé</td>
</tr>
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<td>Chlorogonium fusiforme Matvienko</td>
<td><em>Rusalka fusiformis</em> (Matvienko) Nakada</td>
</tr>
<tr>
<td>Chlorogonium heinii Bourrelly</td>
<td><em>Tabris heinii</em> (Bourrelly) Nakada</td>
</tr>
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<td>Chlorogonium kasakii Nozaki</td>
<td><em>Gungnir kasakii</em> (Nozaki) Nakada</td>
</tr>
<tr>
<td>Chlorogonium neglectum Pascher</td>
<td><em>Gungnir neglectum</em> (Pascher) Nakada</td>
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</table>
Nitella translucens (Persoon) C.Agardh f. axilliformis (Imahori) R.D. Wood → Nitella axilliformis Imahori

Ochromonas malhamensis Pringsheim → Poterioochromonas malhamensis (Pringsheim) Peterfi

Oscillatoria agardhii Gomont → Planktothrix agardhii (Gomont) Anagnostidis et Komárek

Oscillatoria raciborskii Woloszynska → Plankthricoides raciborskii Suda et M.M. Watanabe

Oscillatoria redekei Van Goor → Limnothrix redekei (Van Goor) Meffert

Oscillatoria rubescens DC. ex Gomont → Planktothrix rubescens (DC. ex Gomont) Anagnostidis et Komárek

Pandorina unicoeca Rayburn et Starr → Yamagishiella unicoeca (Rayburn et Starr) Nozaki

Phacus agilis Skuja → Cryptoglena skujae Marin et Melkonian

Pinnularia braunii (Grunow) Cleve var. amphioccephala sensu Mayama → Pinnularia valdetolerans Mayama et H.Kobayasi

Pleodorina illinoisensis Kofoid → Eudorina illinoisensis (Kofoid) Pascher

Porphyridium cruentum (Agardh) Nägeli → Porphyridium purpureum (Bory) Drew et Ross

Protogonyaulax affinis Inouye et Fukuyo → Alexandrium affine (Inoue et Fukuyo) Balech

Pyramidonas reticulata Korshikov → Hafniomonas reticulata (Korshikov) Ettl et Moestrup

Pyramidonas reticulata Korshikov var. conica Ettl → Hafniomonas conica (Ettl) Nakada et Nozaki

Raphidocelis subcapitata (Korshikov) Nygaard → Pseudokirchneriella subcapitata (Korshikov) Hindák

Scenedesmus abundans (Kirchner) Chodat → Desmodesmus abundans (Kirchner) Hegewald

Scenedesmus gutwinkskii Chodat var. heterospina Bodrogközy

→ Desmodesmus subspicatus (Chodat) Hegewald et Schmidt

Scenedesmus serratus (Corda) Bohlin → Desmodesmus serratus (Corda) Friedl et Hegewald

Selenastrum minutum (Nägeli) Collins → Monoraphidium minutum (Nägeli) Komárková-Legnerová

Sphaerellopsis gloeocystiformis (Dill) Gerloff → Vitreochlamys gloeocystiformis (Dill) Nakazawa

Sphaerellopsis nekrassovii (Korshikov) Ettl → Vitreochlamys nekrassovii (Korshikov) Nakazawa

Sphaerellopsis ordinata Skuja → Vitreochlamys ordinata (Skuja) Nakazawa

Staurastrum dejectum Brébisson ex Ralfs → Staurodesmus dejectum (Brébisson ex Ralfs) Teiling

Synechococcus elongatus → Thermosynechococcus elongatus Katoh, Itoh, Shen et Ikeuchi

Synechococcus vulgaris → Thermosynechococcus vulgaris Katoh, Itoh, Shen et Ikeuchi nom. nud.

Tetraëdron incus (Teiling) G.M. Smith → Chlorotetraedron incus (Teiling) MacEntee et al.

Tetraselmis subcordiformis (Wille) Butcher → Platymonas subcordiformis (Wille) Hazen

Uva squamata (Korshikov) Fott → Pyrobotrys squarrosa (Korshikov) Korshikov

Verrucophora verruculosa (Hara et Chihara) Eikrem

→ Pseudochattonella verruculosa (Hara et Chihara) Tanabe-Hosoi et al.
5. List of former (previously used) names

**Former name and NIES No. → Current name**

- Chlamydomonas longipes Agardh NIES-330 → Chlamydomonas subconstricta (Meister) Toyoda
- Anabaena circinalis Rabenhorst ex Bornet et Flahault NIES-833 → Anabaena lemmernannii Richter
- Anabaena flos-aquae Brébisson ex Bornet et Flahault f. flos-aquae NIES-74 → Anabaena kisseleviana Elenkin
- Anabaena mendotae Trelease NIES-808 → Anabaena lemmernanni Richter
- Anabaena solitaria Klebahn NIES-815, NIES-816 → Anabaena planctonica Brunthaler
- Anabaena solitaria Klebahn f. planktonica (Brunthaler) Komárek NIES-834 → Anabaena planctonica Brunthaler
- Anabaena solitaria Klebahn f. solitaria NIES-80 → Anabaena planctonica Brunthaler
- Anabaena spiroides Klebahn NIES-806, NIES-835 → Anabaena compacta (Nygaard) Hickel
- Anabaena spiroides Klebahn f. spiroides NIES-77
  → Anabaena crassa (Lemmernann) Komárová-Legnerová et Cronberg
- Anabaena spiroides Klebahn f. spiroides NIES-79 → Anabaena pseudocompacta M.Watanabe
- Anabaena spiroides Klebahn f. spiroides NIES-263 → Anabaena ucrainica (Schkorbatow) M.Watanabe
- Ankistrodesmus falcatus (Corda) Ralfs NIES-2190 → Ankistrodesmus angustus Bernard
- Ankistrodesmus falcatus (Corda) Ralfs var. duplex (Kützing) G.S. West NIES-2193
  → Ankistrodesmus braunii (Nägeli) Brunthaler
- Ankistrodesmus falcatus (Corda) Ralfs var. mirabilis W. et G.S. West NIES-2191 → Ankistrodesmus angustus Bernard
- Aulosira fertilissima Ghose (in IAM) NIES-50 → Aulosira laxa Kirchner ex Bornet et Flahault
- Auxenochlorella sp. NIES-2342 → Choricystis sp.
- Basiclamps sacculifera (Schereffl) Skuja NIES-1437 → Tetraheca socialis (Dujardin) Nozaki et Ito
- Cachonina niei Loeblich III NIES-614 → Heterocapsa horiguchii Iwataki, Takayama et Matsuoka
- Carteria inversa (Korshikov) Bourtrelly NIES-424, NIES-425 → Carteria cerasiformis Nozaki, Aizawa et M.M. Watanabe
- Carteria olivieri G.S. West NIES-636 → Carteria eugametos Mitra
- Characium maximum S.Watanabe NIES-154 → Kentrosphaera sp.
- Chattonella antiqua (Hada) Ono NIES-1, NIES-2, NIES-83, NIES-84, NIES-85, NIES-86, NIES-113, NIES-114, NIES-161, NIES-558, NIES-1973 (Lost)
  → Chattonella marina (Subrahmanyan) Y.Hara et Chihara var. antiqua (Hada) Demura et Kawachi
- Chattonella antiqua (Hada) Ono NIES-557 → Chattonella marina (Subrahmanyan) Y.Hara et Chihara var. marina
- Chattonella marina (Subrahmanyan) Y.Hara et Chihara NIES-3, NIES-14, NIES-115, NIES-116, NIES-117 (Lost), NIES-118, NIES-121, NIES-557, NIES-559
  → Chattonella marina (Subrahmanyan) Y.Hara et Chihara var. marina
- Chattonella ovata Y.Hara et Chihara NIES-603, NIES-671, NIES-849, NIES-1872, NIES-1873, NIES-1979 (Lost)
  → Chattonella marina (Subrahmanyan) Y.Hara et Chihara var. ovata (Y.Hara et Chihara) Demura et Kawachi
- Chlamydomonas actinochloris Deason et Bold NIES-2201
  → Chloromonas actinochloris (Deason et Bold) Pröschold, Marin, Schlösser et Melkonian
- Chlamydomonas aggregata Deason et Bold NIES-2202 → Chlamydomonas applanata Pringsheim
- Chlamydomonas agloeiformis Pascher NIES-2211 → Chlamydomonas sp.
- Chlamydomonas akinetos Deason et Bold NIES-2203 → Chlormonas sp.
- Chlamydomonas anguulosa Dil NIES-2212 → Chlamydomonas debaryana Goroschankin
- Chlamydomonas applanata Pringsheim NIES-2203 → Chlormonas sp.
- Chlamydomonas augustae Skuja var. ellipsioidea S.Watanabe NIES-158
  → Chloromonas augustae (Skuja) Pröschold, Marin, Schlösser et Melkonian
- Chlamydomonas brannonii Pringsheim NIES-2248 → Chlamydomonas zebra Korshikov ex Pascher
- Chlamydomonas chlorococcoides Ettl et Schwarz NIES-2575
CONTENTS

→ Chlamydomonas ac tinocloris (Deason et Bold) Pröschold, Marin, Schlösser et Melkonian
Chlamydomonas coccooides Butcher NIES-1021 → Chlamydomonas kuwadae Gerloff
Chlamydomonas conferta Korshikov NIES-2225 → Chlamydomonas nasuta Korshikov
Chlamydomonas culleus Ettl NIES-2209, NIES-2210
→ Lobochlamys culleus (Ettl) Pröschold, Marin, Schlösser et Melkonian
Chlamydomonas debaryana Goroshchkin NIES-2211 → Chlamydomonas sp.
Chlamydomonas dorsoventralis Pascher NIES-2213 → Chlamydomonas noctigama Korshikov
Chlamydomonas fimbriata Ettl NIES-2214
→ Lobochlamys culleus (Ettl) Pröschold, Marin, Schlösser et Melkonian
Chlamydomonas frankii Pascher NIES-2209, NIES-2210
→ Lobochlamys culleus (Ettl) Pröschold, Marin, Schlösser et Melkonian
Chlamydomonas gloeopara Rodhe et Skuja NIES-2208 → Chlamydomonas asymmetrica Korshikov
Chlamydomonas hunicola Luckesch NIES-2206 → Chlamydomonas applanata Pringsheim
Chlamydomonas intermedia Chodat NIES-2240
→ Lobochlamys culleus (Ettl) Pröschold, Marin, Schlösser et Melkonian
Chlamydomonas iyengari Mitra NIES-2242 → Chlamydomonas sphaeroides Gerloff
Chlamydomonas monoca Strehlov NIES-2229 → Chlamydomonas noctigama Korshikov
Chlamydomonas monicola S. Watanabe NIES-157 → Heterochlamydomonas sp.
Chlamydomonas mutabilis Gerloff NIES-2224
→ Chloromonas actinocloris (Deason et Bold) Pröschold, Marin, Schlösser et Melkonian
Chlamydomonas parkeae Ettl NIES-1022, NIES-1733 → Chlamydomonas sp.
Chlamydomonas pinicola Ettl NIES-2228 → Chlamydomonas noctigama Korshikov
Chlamydomonas segnis Ettl NIES-2240
→ Lobochlamys culleus (Ettl) Pröschold, Marin, Schlösser et Melkonian
Chlamydomonas simplex Pascher NIES-2241 → Chlamydomonas moewusii Gerloff
Chlamydomonas spha nophila Pascher NIES-2250 → Chlorococcum elkhartiiense Archibald et Bold
Chlorella ellipsoidea Gerneck NIES-2170 → Chlorella vulgaris Beijerinck
Chlorella emersonii Shihira et Krauss NIES-690 → Graesiella emersonii (Shihira et Krauss) Nozaki et al.
Chlorella fusca Shihira et Krauss var. fusca NIES-685 → Desmodesmus abundans (Kirchner) Hegewald
Chlorella fusca Shihira et Krauss var. vacuolata Shihira et Krauss NIES-687
→ Graesiella emersonii (Shihira et Krauss) Nozaki et al.
Chlorella ovalis Butcher NIES-2172 → Chlorella vulgaris Beijerinck
Chlorella protothecoides Krüger var. mannophila Shihira et Krauss NIES-2165
→ Auxenochlorella protothecoides (Krüger) Kalina et Puncchárová
Chlorella pyrenoidosa Chick NIES-2169 → Chlorella sorokiniana Shihira et Krauss
Chlorella pyrenoidosa Chick NIES-226, NIES-2151 → Graesiella emersonii (Shihira et Krauss) Nozaki et al.
Chlorella saccharophila (Krüger) Migula NIES-2189 → Watanabea reniformis Hanagata, Karube, Chihara et Silva
‘Chlorella’ saccharophila (Krüger) Migula NIES-2166 → Coccomyxa sp.
Chlorella sp. NIES-2176 → Auxenochlorella protothecoides (Krüger) Kalina et Puncchárová
Chlorella sp. NIES-1269 → Chlorella vulgaris Beijerinck
Chlorella sp. NIES-2177, NIES-2178, NIES-2179
→ Parachlorella kessleri (Fott et Novákova) Krienitz, Hegewald, Hepperle, Huss, Rohr et Wolf
Chlorella vulgaris Beijerinck NIES-2163 → Auxenochlorella protothecoides (Krüger) Kalina et Puncchárová
Chlorella vulgaris Beijerinck NIES-2167, NIES-2168 → Chlorella sorokiniana Shihira et Krauss
Chlorella vulgaris Beijerinck NIES-2171 → Chlorella sp.
Chlorella vulgaris Beijerinck NIES-2166 → Coccomyxa sp.

265
**Chlorella vulgaris** Beijerinck NIES-2161, NIES-2162

→ Parachlorella kessleri (Fott et Nováková) Krienitz, Hegewald, Hepperle, Huss, Rohr et Wolf

**Chlorogonium acus** NIES-751 → Chlorogonium elongatum (Dangeard) Francé

**Chlorogonium elongatum** Dangeard NIES-742 → Chlorogonium capillatum Nozaki, M.M. Watanabe et Aizawa

**Chlorogonium elongatum** (Dangeard) Dangeard NIES-745, NIES-746, NIES-748

→ Chlorogonium capillatum Nozaki, M.M. Watanabe et Aizawa

**Chlorogonium elongatum** (Dangeard) Dangeard NIES-754, NIES-757, NIES-760

→ Chlorogonium euchlorum (Ehrenberg) Ehrenberg

**Chlorogonium euchlorum** Ehrenberg NIES-749 → Chlorogonium capillatum Nozaki, M.M. Watanabe et Aizawa

**Chlorogonium euchlorum** Ehrenberg NIES-758 → Chlorogonium euchlorum (Ehrenberg) Ehrenberg

**Chlorogonium metamorphum** Skuja NIES-446 → Chlamydomonas tetragama (Bohlin) Ettl

**Chlorogonium metamorphum** Skuja NIES-123 → Rusalka fusiformis (Matvienko) Nakada

**Chlorogonium sp.** NIES-744, NIES-747 → Chlorogonium capillatum Nozaki, M.M. Watanabe et Aizawa

**Chlorogonium sp.** NIES-752, NIES-753 → Chlorogonium elongatum (Dangeard) Francé

**Chlorogonium sp.** NIES-755, NIES-756, NIES-759 → Chlorogonium euchlorum (Ehrenberg) Ehrenberg

**Chlorogonium sp.** NIES-761 → Gungnir kasakii (Nozaki) Nakada

**Chlorogonium tetragurmus** Bohlin NIES-743, NIES-750, NIES-742

→ Chlorogonium capillatum Nozaki, M.M. Watanabe et Aizawa

**Chlorosarcinopsis acus** S.Watanabe NIES-160 → Chlorokybus sp.

**Draparnaldia plumosa** (Vaucher) Agardh NIES-454 → Stigeoclonium sp.

**Eudorina unicoeca** G.M. Smith var. unicoeca NIES-724 → Eudorina unicoeca G.M. Smith

Eudorina unicoeca G.M. Smith var. unicoeca NIES-725 → Eudorina unicoeca G.M. Smith

**Hafniomonas montana** (Geitler) Ettl et Moestrup NIES-257 → Hafniomonas laevis Nakada, Suda et Nozaki

**Heterocapsa pygmaea** Lobelich III, Schmidt et Sherley NIES-472 → Heterocapsa ovata Iwataki et Fukuyo

**Heterocapsa pygmaea** Lobelich III, Schmidt et Sherley NIES-473

→ Heterocapsa pseudotriquetra Iwataki, Hansen et Fukuyo

**Hormidium barlowi** NIES-2285 → Klebsormidium flaccidum (Kützing) Silva, Mattox et Blackwell

**Hormidium flaccidum** (Kützing) A.Braun NIES-2286 → Klebsormidium flaccidum (Kützing) Silva, Mattox et Blackwell

**Melosira granulata** (Ehrenberg) Ralls var. angustissima O.Müller f. spiralis O.Müller NIES-333

→ Aulacoseira granulata (Ehrenberg) Simonsen

**Microcystis aeruginosa** (Kützing) Lemmermann f. aeruginosa

NIES-44, NIES-87, NIES-88, NIES-89, NIES-90, NIES-91, NIES-100, NIES-101, NIES-298, NIES-299

→ Microcystis aeruginosa (Kützing) Lemmermann

**Microcystis aeruginosa** (Kützing) Lemmermann f. flos-aquae (Wittrock) Elenkin NIES-98, NIES-478

→ Microcystis aeruginosa (Kützing) Lemmermann

**Microcystis ichthyoblabe** Kützing

NIES-1026, NIES-1061, NIES-1070, NIES-1079, NIES-1090, NIES-1105, NIES-1122, NIES-1182

→ Microcystis aeruginosa (Kützing) Lemmermann

**Microcystis ichthyoblabe** Kützing NIES-1183 → Microcystis aeruginosa (Kützing) Lemmermann

**Microcystis novacekii** (Komárek) Cômeière NIES-901, NIES-1053, NIES-1068, NIES-1143

→ Microcystis aeruginosa (Kützing) Lemmermann

**Microcystis viridis** (A.Brown) Lemmermann

NIES-102, NIES-103, NIES-1058, NIES-1059, NIES-1091, NIES-1102, NIES-1103, NIES-1104, NIES-1114, NIES-1118, NIES-1136, NIES-1180, NIES-1354, NIES-1355

→ Microcystis aeruginosa (Kützing) Lemmermann
CONTENTS

Microcystis wesenbergii Komárek


→ Microcystis aeruginosa (Kützing) Lemmermann

Mychonastes sp. NIES-2333, NIES-2335, NIES-2337, NIES-2338 → Choricystis sp.

Nanochlorum sp. NIES-1270 → Picochlorum sp.

Nitella furcata (Roxburgh ex Bruzelius) C.Agardh NIES-1616 → Nitella moriokae R.D. Wood

Oscillatoria agardhii Gomont NIES-610 → Planktothrix rubescens (DC. ex Gomont) Anagnostidis et Komárek

Oscillatoria bourrelyi J.W. G. Lund f. tenuis Skuja NIES-846 → Tychonema bourrelyi Anagnostidis et Komárek

Phaeocystis pouchetii (Hariot) Lagerheim NIES-388 → Phaeocystis globosa Scherffel

Phaeocystis sp. NIES-1396 → Phaeocystis globosa Scherffel

Phormidium tenue (C.Agardh ex Gomont) Anagnostidis et Komárek NIES-30 → Leptolyngbya sp.

Phormidium tenue (C.Agardh ex Gomont) Anagnostidis et Komárek NIES-512 → Pseudanabaena galeata Bücher

Prototheca cifferrii Negroni et Blaisten NIES-2182

→ Prototheca portoricensis Cifferi, Ashford et Dalmau var. ciferrii (Negroni et Blaistin) Cifferi, Ashford et Dalmau

Rhodomonas chrysoidea Butcher ex Hill et Wetherbee NIES-1005 → Rhodomonas sp.

Scenedesmus acutus Meyen NIES-2158

→ Parachlorella kessleri (Fott et Nováková) Krienitz, Hegewald, Hepperle, Huss, Rohr et Wolf

Scenedesmus nanus Chodat NIES-2277, NIES-2278 → Desmodesmus sp.

Scenedesmus quadricauda (Turpin) Brébisson sensu Chodat NIES-96 → Desmodesmus sp.

Selenastrum capricornutum (Printz) Nygaard NIES-35 → Pseudokirchneriella subcapitata (Korshikov) Hindák

Skeletonema costatum (Greville) Cleve NIES-16, NIES-17, NIES-223, NIES-323, NIES-324 → Skeletonema marinoi-dohrnii complex

Sphaerellopsis aulata Pascher NIES-878 → Vitreochlamys aulata (Pascher) Batko

Spirulina platensis (Gomont) Geitler NIES-39, NIES-45, NIES-46, NIES-597

→ Arthrospira platensis (Nordstedt) Gomont

Treboxia arboricola Puymaly NIES-2183 → Pseudotreboxia corticola Archibald

Tribonema marinum J.Feldmann NIES-548 → Acinetospora crinita (Carmichael) Sauvageau

Volvox prolificus Iyengar NIES-543 → Volvox kirkiorum Nozaki, Kawai-Toyooka et Isaka

267
## 6. List of lost strains

<table>
<thead>
<tr>
<th>Strain No. (NIES-)</th>
<th>Scientific Name</th>
<th>Locality (Date of collection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Gymnodinium sanguineum</td>
<td>Japan Harima-Nada (1979-01**)</td>
</tr>
<tr>
<td>13</td>
<td>Proorocentrum triestinum</td>
<td>Japan Osaka Osaka Bay (1982-08-03)</td>
</tr>
<tr>
<td>20</td>
<td>Melosira ambiguа</td>
<td>Japan Ibaraki Tsuchiura (1983-10-03)</td>
</tr>
<tr>
<td>117</td>
<td>Chattonella marina var. marina</td>
<td>Japan Kagawa Naoshima (1982-07-30)</td>
</tr>
<tr>
<td>126</td>
<td>Closterium acerosum</td>
<td>Nepal Muna (1965-11-12)</td>
</tr>
<tr>
<td>140</td>
<td>Gymnodinium breve</td>
<td>Japan Harima-Nada (1979-06-09)</td>
</tr>
<tr>
<td>141</td>
<td>Gymnodinium sanguineum</td>
<td>Japan Kagawa Uchinomi Bay (1979-05-30)</td>
</tr>
<tr>
<td>142</td>
<td>Gyrodinium falcatus</td>
<td>Japan Harima-Nada (1981-10-14)</td>
</tr>
<tr>
<td>143</td>
<td>Gyrodinium instriatum</td>
<td>Japan Kagawa Shodoshima Shodo Isl. (1978-06-25)</td>
</tr>
<tr>
<td>149</td>
<td>Hyalotheca dissiliens</td>
<td>Japan Ibaraki Lake Kasumigaura (1975-12-16)</td>
</tr>
<tr>
<td>219</td>
<td>Proorocentrum triestinum</td>
<td>Japan Kochi Nomi Bay (1980-04-30)</td>
</tr>
<tr>
<td>220</td>
<td>Alexandrium catenella</td>
<td>Japan Kagawa Tsuda Bay (1980-06-17)</td>
</tr>
<tr>
<td>222</td>
<td>Pyrophacus steinii</td>
<td>Japan Harima-Nada (1981-07-04)</td>
</tr>
<tr>
<td>239</td>
<td>Alexandrium tamarense</td>
<td>Japan Harima-Nada (1982-03-25)</td>
</tr>
<tr>
<td>249</td>
<td>Gymnodinium nagasakianiense</td>
<td>Japan Harima-Nada (1980-08-21)</td>
</tr>
<tr>
<td>260</td>
<td>Closterium aciculare var. subpronum</td>
<td>Japan Ibaraki Lake Kasumigaura (1983-11-28)</td>
</tr>
<tr>
<td>270</td>
<td>Chaetoceros debile</td>
<td>Japan Aomori Hachinohe Harbor (1985-01-06)</td>
</tr>
<tr>
<td>272</td>
<td>Coscinodiscus asteromphalus</td>
<td>Japan Mie Matoya Bay (1984-09-01)</td>
</tr>
<tr>
<td>273</td>
<td>Coscinodiscus granii</td>
<td>Japan Aomori Hachinohe Harbor (1985-01-06)</td>
</tr>
<tr>
<td>307</td>
<td>Pleurotensium ehrenbergii var. curton</td>
<td>Japan Wakayama Naka-gun (1969-10-***)</td>
</tr>
<tr>
<td>314</td>
<td>Proorocentrum dentatum</td>
<td>Japan Hiuchi-Nada (1979-12-13)</td>
</tr>
<tr>
<td>317</td>
<td>Proorocentrum mexicanum</td>
<td>Japan Harima-nada (-----)</td>
</tr>
<tr>
<td>318</td>
<td>Proorocentrum reticulatum</td>
<td>Japan Mie Matoya Bay (1984-09-01)</td>
</tr>
<tr>
<td>321</td>
<td>Pyrophacus steinii</td>
<td>Japan Mie Matoya Bay (1984-09-01)</td>
</tr>
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<td>327</td>
<td>Stephanopxis palmeriana</td>
<td>Japan Tokyo Hachijo Isl. (1984-04-19)</td>
</tr>
<tr>
<td>332</td>
<td>Melosira granulata var. angustissima</td>
<td>Japan Ibaraki Lake Kasumigaura (1983-10-04)</td>
</tr>
<tr>
<td>352</td>
<td>Eunotia serra var. serra</td>
<td>Japan Gunma Tsukiyono Lake Ominenuma (1985-07-18)</td>
</tr>
<tr>
<td>354</td>
<td>Gyrodinium instriatum</td>
<td>Japan Shizuoka Shimoda Harbor (1985-05-23)</td>
</tr>
<tr>
<td>358</td>
<td>Nitzschia longissima var. reverse</td>
<td>Japan Shizuoka Kawazu Imahama (1985-05-22)</td>
</tr>
<tr>
<td>364</td>
<td>Peridinium bipes t. occultatum</td>
<td>Japan Kagoshima Lake Unagiike (1985-02-20)</td>
</tr>
<tr>
<td>367</td>
<td>Pinnularia acrophaeria var. acrophaeria</td>
<td>Japan Gunma Tsukiyono (1984-06-01)</td>
</tr>
<tr>
<td>368</td>
<td>Pinnularia gentilis</td>
<td>Japan Gunma Tsukiyono (1985-07-17)</td>
</tr>
<tr>
<td>370</td>
<td>Synedra ulna var. ulna</td>
<td>Japan Ibaraki Edosaki Lake Kasumigaura (1985-04-25)</td>
</tr>
<tr>
<td>371</td>
<td>Tabellaria flocculosa</td>
<td>Japan Ibaraki Tsuchiura (1985-04-13)</td>
</tr>
<tr>
<td>376</td>
<td>Ceratium hirundinella</td>
<td>Japan Ibaraki Lake Hinuma (1986-06-27)</td>
</tr>
<tr>
<td>383</td>
<td>Leptocylindrus danicus</td>
<td>Japan Shizuoka Minamiizu Mera Harbor (1985-05-23)</td>
</tr>
<tr>
<td>386</td>
<td>Peridinium penardiforme</td>
<td>Japan Kochi Kochi (1982-02-09)</td>
</tr>
<tr>
<td>399</td>
<td>Aspidisca costata</td>
<td>Japan Ibaraki Tsukuba (1986-04-09)</td>
</tr>
<tr>
<td>400</td>
<td>Oxytricha fallax</td>
<td>Japan Ibaraki Tsukuba (1986-06-27)</td>
</tr>
<tr>
<td>401</td>
<td>Paramecium bursaria</td>
<td>Japan Ibaraki Tsukuba (1986-04-09)</td>
</tr>
<tr>
<td>404</td>
<td>Vorticella convallaria</td>
<td>Japan Ibaraki Tsukuba (1986-04-11)</td>
</tr>
<tr>
<td>406</td>
<td>Achnanthes lanceolata</td>
<td>Japan Ibaraki Miyata River (1987-04-21)</td>
</tr>
<tr>
<td>441</td>
<td>Chlamydomonas parkeae</td>
<td>Japan Aomori Hachinohe Harbor (1985-01-06)</td>
</tr>
<tr>
<td>470</td>
<td>Gymnodinium fuscum</td>
<td>Japan Ibaraki Tsuchiura (1986-02-***)</td>
</tr>
<tr>
<td>482</td>
<td>Nephroselmis aff. rotunda</td>
<td>Japan Hyogo Ieshima Isls. (1984-08-10)</td>
</tr>
<tr>
<td>Strain No. (NIES-)</td>
<td>Scientific Name</td>
<td>Locality (Date of collection)</td>
</tr>
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<td>---------------------------------</td>
<td>--------------------------------------------</td>
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<tr>
<td>488</td>
<td>Nitzchia palea</td>
<td>Japan Ibaraki Miyata River (1987-02-25)</td>
</tr>
<tr>
<td>496</td>
<td>Peridinium bipes f. occultatum</td>
<td>Japan Mie Isobe (1986-10-25)</td>
</tr>
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