

Standard Operating Procedure

Diatom taxonomic identification and enumeration

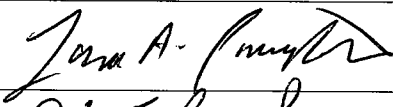
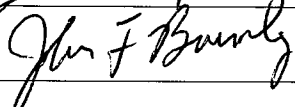
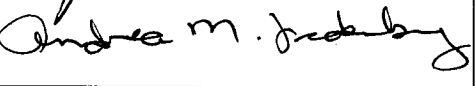



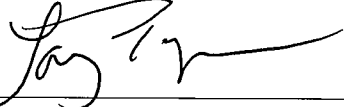
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| 3/1/2009 | All | Extracted from “Methods for Assessing Biological Integrity of Surface Waters in Kentucky, February 2008, Revision 3” ¹ , Section 6: Algae with reformatting and revisions to procedures |
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1. TITLE PAGE AND APPROVAL PAGE

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2. REVISION CONTROL PAGE

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3. TABLE OF CONTENTS

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4. PROCEDURES

4a. Scope and Applicability

This SOP describes methods for enumerating and identifying of diatoms in algae samples (periphyton or phytoplankton), as well as general operations of the Division of Water (DOW) Biology Laboratory as they pertain to diatom analyses. Procedures are performed by the Monitoring Section of the Water Quality Branch (WQB). Most samples come from bioassessment programs in WQB, and have been collected using the methods outlined in the SOP “Collection methods for benthic algae in wadeable streams”², but the procedures listed below are applicable to samples collected using any collection method. Samples should have been processed following the SOP “Preparing and processing algae samples for taxonomic analysis of diatoms”³ or another similar method that produces a high quality permanent mount of cleaned diatoms. Routine samples are usually not quantitative (i.e. there is not a known sample area to which sample results will be extrapolated), but procedures are given for quantitative samples. Finalized results of these procedure typically are entered in the WQB’s Ecological Data Application System (EDAS).

This SOP covers enumeration procedures, identification resources, vouchering guidelines, equipment requirements, QAQC procedures, and data/records management during the course of analysis up to the point where data are ready for entry into EDAS. The SOP “EDAS data entry and biological data management”⁴ details the procedures for entry of final results into EDAS, and the calculation of metrics and indices. The Diatom Bioassessment Index (DBI) is commonly derived from data results. This index, and its development and application are described in “Methods for Assessing Biological Integrity of Surface Waters in Kentucky, February 2008, Revision 3”¹, Section 6A3.1.

Analyses of non-diatom algae are not routinely performed, but procedures for analyzing samples for taxonomic identification of non-diatom algae can be found in the SOP “Methods for Assessing Biological Integrity of Surface Waters in Kentucky, February 2008, Revision 3”¹, Section 6A.2.4.2.1.

The general enumeration methods described here follow guidelines in the manual “Rapid bioassessment protocols for use in streams and wadeable rivers, section 6.1.3.2”⁵.

4b. Summary of Method

A library of taxonomic literature and documents is maintained in the laboratory, as well as a digital image voucher database of taxa. A taxa list is maintained and updated regularly. The taxa list and voucher images are reviewed regularly to ensure accuracy and consistency with current taxonomic concepts.

Specific analysis procedures will vary by project, but the most common type is a 1000 valve count with rare taxa scan. The permanent slide is viewed with a high quality compound microscope under 1000x magnification. Diatoms are identified at the lowest practical taxonomic level (species or variety). A scan for taxa is performed by recording all taxa observed until 5 minutes has passed with no new taxa encountered. Next, a defined count is performed by identifying and enumerating individual diatom valves until a 1000 valves have been recorded. Data are recorded onto a bench sheet, or into a computer based entry form. For quantitative periphyton samples, the scanned area of the fixed count is tracked for later extrapolation of diatom areal density.

4c. Definitions and Acronyms

Acronyms:

DEP Department for Environmental Protection

DOW Division of Water

MSDS Material Safety Data Sheets

WQB Water Quality Branch

4d. Health & Safety

Procedures are performed in a laboratory that contains hazardous chemicals. Material Safety Data Sheets (MSDS) for all chemicals are maintained in the DOW biological laboratory for reference. All accidents must be reported to the Monitoring Section Supervisor. For life threatening emergencies and chemical spills, call 9-911 from any phone in the DOW laboratory.

Specific Hazards:

Glass: Glassware, coverglass, and microscope slides should be handled with care. Broken glassware, used coverglass, and microscope slides do not go into the regular trash, but must be disposed of in a secure and sturdy container before taking to the dumpster.

Immersion oil: Immersion oil can irritate skin and eyes. Wash skin thoroughly. In case of eye contact, remove contact lenses and flush with plenty of water.

Toluene: Toluene is used to prepare the slide mounting medium (Naphrax™), but the toluene is vaporized during slide preparation. Finished slides may contain residual toluene if the mounting medium is sticky. Reheat on a hotplate to finish hardening.

4e. Cautions

Handle the microscope and camera with extreme care. Consult instructions in the microscope manual for proper operation and maintenance. Improper use can damage the microscope and lenses. Improper operation will result in reduced ability to properly identify specimens and capture effective voucher images.

Never clean microscope lenses or any surfaces of microscope optical parts with anything other than lens paper.

4f. Interferences

Uneven dispersal and clumping: Uneven dispersal and clumping of diatoms in the slide mount will reduce the accuracy of quantitative enumeration, and make identifications difficult. If dispersal is excessively uneven or there are numerous clumps, remake the slide. If there is an occasional small clump in a scan transect field, skip the field and move to the next field.

Excessively dense or sparse slides: Overly dense coverage of diatoms on the slide interferes with accurate counting. Overly sparse slides increase counting time and interfere with the rare species scan. A 1000x field of view should contain 5-20 diatom frustules. If the sample has large amounts of sediment, sparser density may be necessary in order to clearly see valves.

Taxonomic errors: Scan the slide before beginning, review taxonomic guides, past taxa lists from similar sites, and image archives, to resolve questions regarding the common taxa present.

4g. Personnel Qualifications / Responsibilities

Procedures must be performed by personnel with special expertise in diatom identification. Personnel should have a basic understanding of laboratory safety. Personnel performing these procedures are responsible for fully understanding safety and quality assurance procedures.

4h. Equipment and Supplies

Laboratory facilities*

*laboratory facilities listed are present in the DOW Biological Laboratory; comparable facilities should be available when following this procedure in order to ensure comparable quality

Nikon Eclipse E600 research microscope, with the following features:

- Nomarski differential interference contrast (DIC) optics
- 20x and 40x lenses (for locating specimens and focusing condenser)
- 100x DIC oil immersion lens, with 1.3 NA (for identifications)
- stage vernier
- ocular micrometer (calibrated)

SPOT Insight 4MP Firewire Color Mosaic digital camera system
PC with firewire card and ethernet connection to DOW network servers and printers
stage micrometer (for calibrating ocular micrometer and camera view)
library of taxonomic literature and guides (Appendix A)
taxa list of accepted taxon names. (Appendix B)
voucher image database

Procedure equipment and supplies

laboratory wipes (e.g., Kimwipes™)
microscope lens paper
bench sheet (example, Appendix C) or computer-based counting application
permanent marker
timer
diatom sample tracking log⁴
project/study plan

4i. Step by Step Procedure

Note on counting procedures: The “1000 valves plus rare taxa scan” procedure is required for the calculation of the Diatom Bioassessment Index (DBI).

Note on data recording: use of a computer based counting application is preferred over recording by hand on a bench sheet. Use of a counting application minimizes transcription and summing errors, and eliminates manual data entry of the final results. Different counting applications are being tried by WQB. Full details will be including in future revisions of this SOP.

4i1. KYDOW diatom taxa list

(This section will be expanded to include a description of the KDOW diatom taxa list)

Diatom data entered into EDAS must use the KDOW diatom taxa list. New taxa to be added to the taxa list must be accompanied by the following information: Full taxonomic name, author, original reference, reference used for identification, voucher images, notes on how it differs from other similar taxa or the original author’s diagnosis.

4i2. Documenting taxa with digital images and marked specimens

(This section will be expanded with specific procedures related to documenting taxa with voucher images and marked specimens.)

Images are currently stored as greyscale TIFF files on the a DOW network server by genus, with filenames in the following form:
TaxonCode_StationID_CollectionDate_SequenceNumber

A catalog of marked specimens is planned.

4i3. Before beginning

- 1) Locate the sample on the sample tracking log, and verify against slide label.
- 2) Check project plan for analysis type.
- 3) Record sample information (Station, location, date, replicate number) on bench sheet or enter into count program.
- 4) Examine slide under 400x for even dispersal and density of diatom valves.

4i4. Performing the taxa scan

- 1) working in transects from the bottom of the coverglass toward the top, record each new taxon encountered on the bench sheet, but do not tally valves; set a 5 minute timer each time a new taxon is encountered
- 2) continue until 5 minutes are passed without a new being taxon encountered

4i5. Performing the fixed count

- 1) establish a starting transect by moving to the right edge of the coverglass (left side of view) and positioning the starting field along this edge in the upper third of the coverglass; record the vernier reading (vertical scale) on the bench sheet.
- 2) identify each valve in the field of view; record and tally on the bench sheet; then move to the next field of view to continue (see notes below in this section)
- 3) continue until 1000 valves have been tallied; start new transects as needed to reach 1000 valves
- 4) finish the count by completing a field of view

Notes

- broken valves: count the valve if there is more than 1/2 of the valve present and the central area is intact,
- valves that extend beyond the counting field: count if it extends more than 1/2 into the field
- clumps: for occasional small clumps where valves cannot be sorted out, continue to the next field of view; note the number of cases where fields were passed over due to clumps on the bench sheets
- unidentifiable specimens: if the genus can be determined, enter as one of “unidentified” taxon names (e.g. Achnanthis sp. (1) unidentified); when the count is complete transfer to the most likely taxon if possible, or leave as unidentified
- new taxa: clearly identify any taxa not already in the taxa list; these will have to be added before data can be uploaded to EDAS; new taxa must be well documented with voucher images
- unknown new taxa: the naming convention for new unknown taxa is Genus sp. x KYDOW YYY, where “x” is a unique sequence number for unknown species in that genus and “YYY” are the initials of the analyst; these must be well documented with voucher images

4i6. Verifying the analysis and updating the sample tracking log

- 1) Record total valves counted and the total number of taxa on the bench sheet.
- 2) Review taxa list for recording errors, tally summing errors, and legibility.
- 3) Initial and date the bench sheet (“Verified Complete”).
- 4) Mark the slide label with the completion date and the analyst initials
- 5) Open sample tracking log and record AnalysisMethod, AnalysisDate, AnalysisBy, and AnalysisComments.

4i7. Preparing counting program raw counts for EDAS upload.

Note: if a paper bench sheet is used to record counts, skip these steps. Scan bench sheet for multiple entries of the same taxon and sum the counts if necessary. Check for new taxa and add (see

(this section reserved for later use – instructions for preparing and formatting counting program output to be transferred to EDAS)

4j. Data and Records Management

All documents, electronic data, and slides are retained indefinitely. Storage, organization, and location are listed below. DOW network servers are backed up and archived regularly.

| Document, data, or item | storage and organization | location |
|---------------------------------|---------------------------------------|---|
| bench sheets | physical files, by program year | WQB program files |
| sample tracking logs | Site visit and sample tracking system | \epdatadep\Programmatic_data\Biological_Data\WQB_B VSTS |
| voucher images | electronic files, by genus name | \epdatadep\Programmatic_data\Biological_Data\Diatoms\DiatomImageArchive |
| counting program raw count data | electronic (.xml or .txt) files | \epdatadep\Programmatic_data\Biological_Data\Diatoms\DiatomCountProgramDataAchive |
| diatom slides | slide archive, by program year | DOW biology laboratory |
| finalized results | EDAS, by station, date, replicate | \epdatadep\Programmatic_data\Biological_Data\EDAS |

5. QUALITY CONTROL AND QUALITY ASSURANCE

Duplicate Counts

An estimate of error associated with the enumeration procedures can be derived from duplicate counts. Duplicate counts are recommended for 5% of project counts, or as otherwise specified in project plans. To perform the duplicate count, the entire count

procedure is repeated on another set of transects or fields and the results of the 2 counts are compared using percent community similarity PS_c ⁵:

$$PS_c = \sum_{i=1}^s \min(a_i, b_i)$$

where: a_i = percentage of species i in count A

b_i = percentage of species i in count B

If the same analysts performs the QC count, it serves as a measure of precision for the procedure itself, as well as a check on the consistency of the analyst. If there are multiple analysts, QC counts should be performed by another analyst, and the result also will incorporate analyst differences.

For both same-analyst and different-analyst QC counts, the percent similarity should be >75%. QC counts with <75% similarity should be investigated as to the source of the error by comparing taxa and abundances, and examining slide quality. If inconsistent identifications are the probable issue, resolve the disagreement, correct the error and examine other project counts for similar errors. If slide quality is the probable issue (e.g., uneven, too dense, too sparse), remake the slide and examine other project slides for similar quality problems. Document issues and their resolution in the sample tracking log.

Verification of Sample Taxa Lists

If there is only one analyst, and an outside expert reviewer can be arranged, project slides (5% in a project) should be sent for verification of the common taxa – those with relative abundance of 3% or more⁵. The bench sheet or counting program output, with common taxa marked, should be sent along with the slide. The reviewer will check off each identification that can be verified and will sign the bench sheet to document the verification. The analyst will resolve disagreements in taxonomic identifications with the reviewer, make any necessary corrections, and document the process on the sample tracking log.

Taxonomic voucher verification

At minimum, voucher images or marked specimens should periodically be reviewed by outside taxonomic experts, especially in regards to problematic taxa groups. Reviewers should submit a written verification of the identifications. WQB's diatom voucher image database and marked specimen catalog is under development, but will contain a place to record outside verifications.

Data Verification Summary

The table below summarizes data quality verification steps involved in this SOP. These steps are imbedded in the step-by-step procedures, section 4i. These steps ensure that the slide is of appropriate quality, that the sample's identity is maintained, and the results generated are accurate and complete. Problems and issues must be documented on tracking logs and unresolved issues must be entered into the sample tracking system. In addition to verification steps, all cautions and interferences listed in sections 4e and 4f of this SOP should be observed in order to ensure quality products.

| When | Inputs | Element Verified | Verification Records |
|------------------|--|--|---|
| before beginning | sample tracking log; study plan; slide | sample information; analysis type; slide quality | n/a |
| at completion | bench sheet or output | completeness | bench sheet; sample tracking log, slide label |

6. REFERENCES

1. Kentucky Division of Water, 2008. Methods for Assessing Biological Integrity of Surface Waters in Kentucky, February 2008, Revision 3. Energy and Environment Cabinet, Department for Environmental Protection, Division of Water. Frankfort, KY.
2. Kentucky Division of Water, 2009. Collection methods for benthic algae in wadeable streams, Revision 1.0. Energy and Environment Cabinet, Department for Environmental Protection, Division of Water. Frankfort, KY.
3. Kentucky Division of Water, 2009. Preparing and processing algae samples for taxonomic analysis of diatoms.doc, Revision 1.0. Energy and Environment Cabinet, Department for Environmental Protection, Division of Water. Frankfort, KY.
4. Kentucky Division of Water, 2009. EDAS data entry and biological data management, Revision 1.0. Energy and Environment Cabinet, Department for Environmental Protection, Division of Water. Frankfort, KY.
5. Barbour, M.T., J. Gerritsen, B.D. Snyder, and J. B. Stribling. 1999. Rapid bioassessment protocols for use in streams and wadeable rivers: periphyton, benthic macroinvertebrates, and fish, second edition. EPA 841-B-99-002. U.S. Environmental Protection Agency; Office of Water, Washington, D.C.

7. ATTACHMENTS/CHECKLISTS AND APPENDICES

Appendix A: diatom taxonomy reference library listing

Appendix B: diatom taxa list

Appendix C: diatom analysis bench sheet example

APPENDIX A: DIATOM TAXONOMY REFERENCE LIBRARY LISTING

Diatom Taxonomic References (currently in process of being updated 2/18/09)

Academy of Natural Sciences of Philadelphia. 1999-2005:. NAWQA workshops on harmonization of algae taxonomy. First through fifteenth workshop reports. Patrick Center fo Environmental Research, Academy of Natural Sciences of Philadelphia, Philadelphia, PA.

Camburn, K.E., R.L. Lowe, and D.L. Stoneburner. 1978. The haptobenthic diatom flora of Long Branch Creek, South Carolina. *Nova Hed.* 30:149-279.

Collins, G.B., and C.I. Weber. 1978. Phycoperiphyton (algae) as indicators of water quality. *Trans. Amer. Micros. Soc.*, 97:36-43.

Collins, G.B., and R.G. Kalinsky. 1977. Studies on Ohio diatoms: I. Diatoms of the Scioto River Basin. *Bull. Ohio Biol. Sur.* 5(3):1-45.

Cooper, J.M., and J.L. Wilhm. 1975. Spatial and temporal variability in productivity, species diversity, and pigment diversity of periphyton in a stream receiving domestic and oil refinery effluents. *SW Nat.* 19:413-428.

Czarnecki, D.B., and D.W. Blinn. 1978. Diatoms of the Colorado River in Grand Canyon National Park and vicinity. (Diatoms of Southwestern USA II). *Biblio. Phyc.* 38. J. Cramer. Berlin, Germany.

Hohn, M.H., and J. Hellerman. 1963. The taxonomy and structure of diatom populations from three North American rivers using three sampling methods. *Trans. Am. Microsc. Soc.* 82:250-329.

Hustedt, F. 1927-1966. Die kieselalgen in Rabenhorst's Kryptogamen-flora von Deutsch. Ost. Und der Schw. VII. Leipzig, W. Germany.

Hustedt, F. 1930. Bacillariophyta (Diatomeae) in Pascher, A. (ed). *Die suswasser flora Mitteleuropas.* (The freshwater flora of middle Europe). Gustav Fischer Verlag, Jena, Germany.

Jarrett, G.L., and J.M. King. 1989. The diatom flora (Bacillariophyceae) of Lake Barkley. U.S. Army Corps of Engineers; Nashville Dist.; #DACW62-84-C-0085.

Krammer, K., and H. Lange-Bertalot. 1986-1991. *Suswasserflora von Mitteleuropa.* Band 2. Parts 1-5. Bacillariophyceae. Gustav Fischer Verlag. Stuttgart, Germany.

Lange-Bertalot, H. 1980. New species, combinations and synonyms in the genus *Nitzschia*. *Bacillaria* 3:41-77.

Lange-Bertalot, H., and R. Simonsen. 1978. A taxonomic revision of the *Nitzschia lanceolatae* Grunow: 2. European and related extra-European freshwater and brackish water taxa. *Bacillaria* 1:11-111.

Patrick, R. 1975. The diatoms of the United States, exclusive of Alaska and Hawaii.

Monograph No. 13. Volume 2, part 1. Acad. Nat. Sci. Phila., Philadelphia, PA.

Patrick, R., and C. W. Reimer. 1966. The Diatoms of the United States, exclusive of Alaska and Hawaii. Monograph No. 13. Acad. Nat. Sci. Phila., Philadelphia, PA.

Patrick, R., and C. W. Reimer. 1975. The Diatoms of the United States. Vol. 2, Part 1. Monograph No. 13. Acad. Nat. Sci. Phila., Philadelphia, PA.

Round, F.E., R.M. Crawford, and D.G. Mann. 1990. The diatoms: the biology and morphology of the genera. Cambridge Univ. Press, Cambridge, England.

Simonsen, R. 1987. Atlas and catalogue of the diatom types of Friedrich Hustedt. Vol. 1-3. J. Cramer. Berlin, Germany.

Wujek, D.E., and R.F. Rupp. 1980. Diatoms of the Tittabawassee River, MI. Biblio. Phyc. 50:1-100.

APPENDIX B: DIATOM TAXA LIST

KDOW Diatom Taxa List Update 2/18/09

| Genus | Species | Authority | Code | FormerNameinEDAS |
|---------------|----------------------------|--|---------------|---|
| Achnanthes | coarctata | (Brébisson) Grunow | ACHCOA | Achnanthes coarctata |
| Achnanthes | curtissima | Carter | ACHCUR | Achnanthes curtissima |
| Achnanthes | exigua var. elliptica | Hustedt | ACHEXIE LL | Achnanthes exigua var. elliptica |
| Achnanthes | inflata | (Kützing) Grunow | ACHINF | Achnanthes inflata |
| Achnanthes | pinnata | Hustedt | ACHPIN | Achnanthes pinnata |
| Achnanthes | sp. (1) unidentified | n/a | ACHSP1 | Achnanthes sp. (1) unidentified |
| Achnanthes | sp. (2) unidentified | n/a | ACHSP2 | Achnanthes sp. (2) unidentified |
| Achnanthes | spp. (undifferentiated) | n/a | ACHSPP | Achnanthes spp. (undifferentiated) |
| Achnanthes | subhudsonis var. krauselli | (Cholnoky) Cholnoky | ACHSUB KRA | Achnanthes subhudsonis v. krauselli |
| Achnanthes | wellsiae | Reimer | ACHWEL | Achnanthes wellsiae |
| Achnanthes | ziegleri | Lange-Bertalot | ACHZIE | Achnanthes ziegleri |
| Achnanthidium | Achnanthidium | (Grunow) Czarnecki | ACDAFF | Achnanthidium affine |
| Achnanthidium | alpestre | (Lowe et Kociolek) Lowe et Kociolek | ACDALP | Achnanthidium alpestre |
| Achnanthidium | atomus | (Hustedt) Monnier, Lange-Bertalot & Ector | ACDATO | Achnanthidium atomus |
| Achnanthidium | cf. gracillimum NAWQA | n/a | ACDGRC | Achnanthidium cf. gracillimum NAWQA |
| Achnanthidium | deflexum | (Reimer) Kingston | ACDDEF | Achnanthidium deflexum |
| Achnanthidium | eutrophilum | (Lange-Bertalot) Lange-Bertalot | ACDEUT | Achnanthidium eutrophilum |
| Achnanthidium | exiguum | (Grunow) Czarnecki | ACDEXI | Achnanthidium exiguum |
| Achnanthidium | exiguum var. constrictum | (Grunow) Andresen, Stoermer et Kreis | ACDEXIC ON | Achnanthidium exiguum var. constrictum |
| Achnanthidium | microcephalum | Kützing | ACDMIC | Achnanthidium microcephalum |
| Achnanthidium | minutissimum | (Kützing) Czarnecki | ACDMIN | Achnanthidium minutissimum |
| Achnanthidium | reimeri | (Camburn) Potapova et Ponader | ACDREI | Achnanthidium reimeri |
| Achnanthidium | rivulare | Potapova et Ponader | ACDRIV | Achnanthidium rivulare |
| Achnanthidium | saprophila | (Kobayasi et Mayama) Round et Bukhtiyarova | ACDSAP | Achnanthidium saprophila |
| Achnanthidium | sp. (1) unidentified | n/a | ACDSP1 | Achnanthidium sp. (1) unidentified |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|----------------|-----------------------------|---------------------------------|---------------|---|
| Achnantheidium | sp. 1 KYDOW LAP | | ACDSP1L AP | Achnantheidium sp. 1 KYDOW LAP |
| Achnantheidium | sp. 2 KYDOW LAP | | ACDSP2L AP | Achnantheidium sp. 2 KYDOW LAP |
| Actinocyclus | normanii | (Gregory) Hustedt | ACTNOR | Actinocyclus normanii |
| Adlafia | bryophila | (Petersen) Lange-Bertalot | ADLBRY | Adlafia bryophila |
| Adlafia | minuscula | (Grunow) Lange-Bertalot | ADLMIN | Adlafia minuscula |
| Adlafia | minuscula var. muralis | (Grunow) Lange-Bertalot | ADLMINM UR | Adlafia minuscula var. muralis |
| Amphipleura | pellucida | (Kützing) Kützing | APLPEL | Amphipleura pellucida |
| Amphora | bullatoides | Hohn et Hellermann | AMPBUL | Amphora bullatoides |
| Amphora | copulata | (Kützing) Schoeman et Archibald | AMPCOP | Amphora copulata |
| Amphora | montana | Krasske | AMPMON | Amphora montana |
| Amphora | normanii | Rabenhorst | AMPNOR | Amphora normanii |
| Amphora | ovalis | (Kützing) Kützing | AMPOVA | Amphora ovalis |
| Amphora | pediculus | (Kützing) Grunow | AMPPED | Amphora pediculus |
| Amphora | sabiniana | Reimer | AMPSAB | Amphora sabiniana |
| Amphora | sp. (1) unidentified | n/a | AMPSP | Amphora sp. (1) unidentified |
| Amphora | veneta | Kützing | AMPVEN | Amphora veneta |
| Aneumastus | tusculus | (Ehrenberg) Mann et Stickle | ANETUS | Aneumastus tusculus |
| Asterionella | formosa | Hassal | ASTFOR | Asterionella formosa |
| Aulacoseira | alpigena | (Grunow) Krammer | AULALP | Aulacoseira alpigena |
| Aulacoseira | ambigua | (Grunow) Simonsen | AULAMB | Aulacoseira ambigua |
| Aulacoseira | distans | (Ehrenberg) Simonsen | AULDIS | Aulacoseira distans |
| Aulacoseira | granulata | (Ehrenberg) Simonsen | AULGRA | Aulacoseira granulata |
| Aulacoseira | granulata var. angustissima | (Müller) Simonsen | AULGRA ANG | Aulacoseira granulata var. angustissima |
| Aulacoseira | italica | (Ehrenberg) Simonsen | AULITA | Aulacoseira italica |
| Aulacoseira | sp. (1) unidentified | n/a | AULSP1 | Aulacoseira sp. (1) unidentified |
| Bacillaria | paradoxa | Gmelin | BACPAR | Bacillaria paradoxa |
| Brachysira | brebissonii | Ross | BRABRE | Brachysira brebissonii |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|---------------|--------------------------------|---------------------------------------|---------------|--|
| Brachysira | microcephala | (Grunow) Compère | BRAMIC | Brachysira microcephala |
| Brachysira | serians var. acuta | (Hustedt) Hamilton | BRASER ACU | Brachysira serians var. acuta |
| Brachysira | vitrea | (Grunow) Ross | BRAVIT | Brachysira vitrea + Brachysira microcephala |
| Caloneis | amphisbaena | (Bory) Cleve | CALAMP | Caloneis amphisbaena |
| Caloneis | bacillaris var. thermalis | (Grunow) Cleve | CALBACT HE | Caloneis bacillaris var. thermalis |
| Caloneis | bacillum | (Grunow) Cleve | CALBAC | Caloneis bacillum |
| Caloneis | branderi | (Hustedt) Krammer | CALBRA | Caloneis branderi |
| Caloneis | budensis | (Grunow) Krammer | CALBUD | Caloneis budensis |
| Caloneis | hyalina | Hustedt | CALHYA | Caloneis hyalina |
| Caloneis | lewisii | Patrick | CALLEW | Caloneis lewisii |
| Caloneis | lewisii var. inflata | (Schulz) Patrick | CALLEWI NF | Caloneis lewisii var. inflata |
| Caloneis | limosa | (Kützing) Patrick | CALLIM | Caloneis limosa |
| Caloneis | silicula | (Ehrenberg) Cleve | CALSIL | Caloneis silicula |
| Caloneis | sp. (1) unidentified | n/a | CALSP1 | Caloneis sp. (1) unidentified |
| Caloneis | spp. | n/a | CALSP1 | Caloneis spp. |
| Caloneis | undulata | (Gregory) Krammer | CALUND | Caloneis undulata |
| Caloneis | ventricosa var. alpina | Patrick | CALVEN ALP | Caloneis ventricosa var. alpina |
| Caloneis | ventricosa var. minuta | (Grunow) Mills | CALVEN MIN | Caloneis ventricosa var. minuta |
| Caloneis | ventricosa var. subundulata | (Grunow) Patrick | CALVEN SUB | Caloneis ventricosa var. subundulata |
| Caloneis | ventricosa var. truncatula | (Grunow) Meister | CALVENT RU | Caloneis ventricosa var. truncatula |
| Campylodiscus | hibernicus | Ehrenberg | CAMHIB | Campylodiscus hibernicus |
| Capartogramma | crucicula | (Grunow ex Cleve) Ross | CAPCRU | Capartogramma crucicula |
| Cavinula | cocconeiformis | (Gregory ex Greville) Mann et Stickle | CAVCOC | Cavinula cocconeiformis |
| Cavinula | lacustris | (Gregory) Mann et Stickle | CAVLAC | Cavinula lacustris |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|------------------|-----------------------------|---|---------------|--|
| Cavinula | lapidosa | (Krasske) Lange-Bertalot | CAVLAP | Cavinula lapidosa |
| Cavinula | scutelloides | (Smith) Lange-Bertalot et Metzeltin | CAVSCU | Cavinula scutelloides |
| Chamaepinnularia | evanida | (Hustedt) Lange-Bertalot | CHMEVA | Chamaepinnularia evanida |
| Chamaepinnularia | mediocris | (Krasske) Lange-Bertalot | CHMMED | Chamaepinnularia mediocris |
| Chamaepinnularia | soehrensis | (Krasske) Lange-Bertalot et Krammer | CHMSOE | Chamaepinnularia soehrensis |
| Chamaepinnularia | soehrensis var. hassiaca | (Krasske) Lange-Bertalot | CHMSOE HAS | Chamaepinnularia soehrensis var. hassiaca |
| Cocconeis | pediculus | Ehrenberg | COCPED | Cocconeis pediculus |
| Cocconeis | placentula | Ehrenberg | COCPLA | Cocconeis placentula + varieties |
| Cocconeis | placentula var. euglypta | (Ehrenberg) Grunow | COCPLA EUG | Cocconeis placentula + varieties |
| Cocconeis | placentula var. lineata | (Ehrenberg) Van Heurck | COCPLA LIN | Cocconeis placentula + varieties |
| Craticula | accomoda | (Hustedt) Mann | CRAACC | Craticula accomoda |
| Craticula | citrus | (Krasske) Reichardt | CRACIT | Craticula citrus |
| Craticula | cuspidata | (Kützing) Mann | CRACUS | Craticula cuspidata |
| Craticula | halophila | (Grunow) Mann | CRAHAL | Craticula halophila |
| Craticula | halophiliodes | (Hustedt) Lange-Bertalot | CRAHLD | Craticula halophiliodes |
| Craticula | minusculoides | (Hustedt) Lange-Bertalot | CRAMIN | Craticula minusculoides |
| Craticula | molestiformis | (Hustedt) Lange-Bertalot | CRAMOL | Craticula molestiformis |
| Craticula | submolesta | (Hustedt) Lange-Bertalot | CRASML | Craticula submolesta |
| Craticula | vixvisibilis | (Hustedt) Lange-Bertalot | CRAVIX | Craticula vixvisibilis |
| Ctenophora | pulchella | (Ralfs ex Kützing) Williams et Round | CTEPUL | Ctenophora pulchella |
| Ctenophora | pulchella var. lacerata | (Hustedt) Bukhtiyarova | CTEPULL AC | Ctenophora pulchella var. lacerata |
| Cyclostephanos | dubius | (Frick) Round | CYCDUB | Cyclostephanos dubius |
| Cyclostephanos | invisitatus | (Hohn et Hellerman) Theriot, Stoermer et Häkansson | CSTINV | Cyclostephanos invisitatus |
| Cyclostephanos | tholiformis | Stoermer, Häkansson et Theriot | CSTTHO | Cyclostephanos tholiformis |
| Cyclotella | atomus | Hustedt | CYCATO | Cyclotella atomus |
| Cyclotella | meneghiniana | Kützing | CYCMEN | Cyclotella meneghiniana |
| Cyclotella | ocellata | Pantocsek | CYCOCE | Cyclotella ocellata |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|---------------|------------------------------|-----------------------|---------------|---------------------------------------|
| Cyclotella | sp. (1) unidentified | n/a | CYCSP1 | Cyclotella sp. (1) unidentified |
| Cyclotella | spp. | n/a | CYCSP | Cyclotella spp. |
| Cyclotella | striata | (Kützing) Grunow | CYCSTR | Cyclotella striata |
| Cyclotella | striata var. ambigua | (Grunow) Grunow | CYCSTR AMB | Cyclotella striata var. ambigua |
| Cylindrotheca | gracilis | (Brébisson) Grunow | CYLGRA | Cylindrotheca gracilis |
| Cymatopleura | elliptica | (Brébisson) Smith | CYPELL | Cymatopleura elliptica |
| Cymatopleura | elliptica var. hibernica | (Smith) Van Heurck | CYPELLH IB | Cymatopleura elliptica var. hibernica |
| Cymatopleura | elliptica var. nobilis | (Hantzsch) Hustedt | CYPELLN OB | Cymatopleura elliptica var. nobilis |
| Cymatopleura | solea | (Brébisson) Smith | CYPSOL | Cymatopleura solea |
| Cymatopleura | solea var. apiculata | (Smith) Ralfs | CYPSOL API | Cymatopleura solea var. apiculata |
| Cymbella | aequalis | Smith | CYMAEQ | Cymbella aequalis |
| Cymbella | affinis | Kützing | CYMAFF | Cymbella affinis |
| Cymbella | amphicephala | Nägeli ex Kützing | CYMAMP | Cymbella amphicephala |
| Cymbella | amphioxys | (Kützing) Cleve | CYMAMX | Cymbella amphioxys |
| Cymbella | aspera | (Ehrenberg) Peragallo | CYMASP | Cymbella aspera |
| Cymbella | cistula | (Ehrenberg) Kirchner | CYMCIS | Cymbella cistula |
| Cymbella | cuspidata | Kützing | CYMCUS | Cymbella cuspidata |
| Cymbella | cymbiformis | Agardh | CYMCYM | Cymbella cymbiformis |
| Cymbella | cymbiformis var. nonpunctata | Fontell | CYMCYM NON | Cymbella cymbiformis var. nonpunctata |
| Cymbella | delicatula | Kützing | CYMDEL | Cymbella delicatula |
| Cymbella | ehrenbergii | Kützing | CYMEHR | Cymbella ehrenbergii |
| Cymbella | hauckii | Van Heurck | CYMHAU | Cymbella hauckii |
| Cymbella | hustedtii | Krasske | CYMHUS | Cymbella hustedtii |
| Cymbella | hybrida | Grunow ex Cleve | CYMHYB | Cymbella hybrida |
| Cymbella | incerta | (Grunow) Cleve | CYMINC | Cymbella incerta |
| Cymbella | laevis | Nägeli ex Kützing | CYMLAE | Cymbella laevis |
| Cymbella | lanceolata | (Agardh) Agardh | CYMLAN | Cymbella lanceolata |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|--------------|-------------------------------|---|---------------|-------------------------------------|
| Cymbella | leptoceros | (Ehrenberg) Kützing | CYMLEP | Cymbella leptoceros |
| Cymbella | mesiana | Cholnoky | CYMMES | Cymbella mesiana |
| Cymbella | mexicana | (Ehrenberg) Cleve | CYMMEX | Cymbella mexicana |
| Cymbella | minuta var. pseudogracilis | (Cholnoky) Reimer | CYMMIN PSE | Cymbella minuta var. pseudogracilis |
| Cymbella | naviculiformis | Auerswald ex Héribaud | CYMNAV | Cymbella naviculiformis |
| Cymbella | pusilla | Grunow | CYMPUS | Cymbella pusilla |
| Cymbella | simonsenii | Krammer | CYMSIM | Cymbella simonsenii |
| Cymbella | sp. (1) unidentified | n/a | CYMSP1 | Cymbella sp. (1) unidentified |
| Cymbella | spp. | n/a | CYMSP1 | Cymbella spp. |
| Cymbella | subaequalis | Grunow | CYMSUB | Cymbella subaequalis |
| Cymbella | subcuspidata | Krammer | CYMSBC | Cymbella subcuspidata |
| Cymbella | tumida | (Brébisson ex Kützing) Van Heurck | CYMTUM | Cymbella tumida |
| Cymbella | tumidula | Grunow ex Schmidt | CYMTMD | Cymbella tumidula |
| Cymbella | turgidula | Grunow | CYMTUR | Cymbella turgidula |
| Decussata | placenta | (Ehrenberg) Lange-Bertalot et Metzeltin | DECPLA | Decussata placenta |
| Denticula | elegans | Kützing | DENELE | Denticula elegans |
| Denticula | kuetzingii | Grunow | DENKUE | Denticula kuetzingii |
| Denticula | spp. | n/a | DENSPP | Denticula spp. |
| Denticula | tenuis | Kützing | DENTEN | Denticula tenuis |
| Diadismis | confervacea | Kützing | DDSCON | Diadismis confervacea |
| Diadismis | contenta | (Grunow ex Van Heurck) Mann | DDSCNT | Diadismis contenta |
| Diadismis | peregrina | W. Smith | DDSPER | Diadismis peregrina |
| Diatoma | hyemalis | (Roth) Heiberg | DIAHYE | Diatoma hyemalis |
| Diatoma | mesodon | (Ehrenberg) Kützing | DIAMES | Diatoma mesodon |
| Diatoma | moniliformis | Kützing | DIAMON | Diatoma moniliformis |
| Diatoma | tenuis | Agardh | DIATEN | Diatoma tenuis |
| Diatoma | vulgaris | Bory | DIAVUL | Diatoma vulgaris |
| Diploneis | boldtiana | Cleve | DIPBOL | Diploneis boldtiana |
| Diploneis | elliptica | (Kützing) Cleve | DIPELL | Diploneis elliptica |
| Diploneis | finnica | (Ehrenberg) Cleve | DIPFIN | Diploneis finnica |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|--------------|-----------------------|---------------------------|---------------|---------------------------------|
| Diploneis | marginestriata | Hustedt | DIPMAR | Diploneis marginestriata |
| Diploneis | oblongella | (Näegeli ex Kützing) Ross | DIPOBL | Diploneis oblongella |
| Diploneis | oculata | (Brébisson) Cleve | DIPOCU | Diploneis oculata |
| Diploneis | parma | Cleve | DIPPAR | Diploneis parma |
| Diploneis | petersenii | Hustedt | DIPPET | Diploneis petersenii |
| Diploneis | pseudovalis | Hustedt | DIPPSO | Diploneis pseudovalis |
| Diploneis | puella | (Schumann) Cleve | DIPPUE | Diploneis puella |
| Diploneis | smithii var. dilatata | (Peragallo) Boyer | DIPSMIDI L | Diploneis smithii var. dilatata |
| Diploneis | smithii var. pumila | (Grunow) Hustedt | DIPSMIP UM | Diploneis smithii v. pumila |
| Diploneis | sp. (1) unidentified | n/a | DIPSP1 | Diploneis sp. (1) unidentified |
| Diploneis | spp. | n/a | DIPSP | Diploneis spp. |
| Diploneis | subovalis | Cleve | DIPSUB | Diploneis subovalis |
| Discostella | pseudostelligera | (Hustedt) Houk et Klee | DSCPST | Discostella pseudostelligera |
| Discostella | stelligera | (Hustedt) Houk et Klee | DSCSTE | Discostella stelligera |
| Encyonema | auerswaldii | Rabenhorst | ENCAUE | Encyonema auerswaldii |
| Encyonema | hebridicum | Grunow ex Cleve | ENCHEB | Encyonema hebridicum |
| Encyonema | lunatum | (Smith) Van Heurck | ENCLUN | Encyonema lunatum |
| Encyonema | minutum | (Hilse) Mann | ENCMIN | Encyonema minutum |
| Encyonema | muelleri | (Hustedt) Mann | ENCMUE | Encyonema muelleri |
| Encyonema | perpussilum | (Cleve) Mann | ENCPER | Encyonema perpussilum |
| Encyonema | prostratum | (Berkeley) Kützing | ENCPRO | Encyonema prostratum |
| Encyonema | reichardtii | (Krammer) Mann | ENCREI | Encyonema reichardtii |
| Encyonema | silesiacum | (Bleisch) Mann | ENCSIL | Encyonema silesiacum |
| Encyonema | triangulum | (Ehrenberg) Kützing | ENCTRI | Encyonema triangulum |
| Encyonopsis | cesatii | (Rabhenhorst) Krammer | ENPCES | Encyonopsis cesatii |
| Encyonopsis | falaisensis | (Grunow) Krammer | ENPFAL | Encyonopsis falaisensis |
| Encyonopsis | krammeri | Reichardt | ENPKRA | Encyonopsis krammeri |
| Encyonopsis | microcephala | (Grunow) Krammer | ENPMIC | Encyonopsis microcephala |
| Encyonopsis | minuta | Krammer et Reichardt | ENPMIN | Encyonopsis minuta |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|-------------|------------------------|------------------------------------|---------------|----------------------------------|
| Encyonopsis | subminuta | Krammer et Reichardt | ENPSUB | Encyonopsis subminuta |
| Entomoneis | alata | (Ehrenberg) Ehrenberg | ENTALA | Entomoneis alata |
| Entomoneis | ornata | (Bailey) Reimer | ENTORN | Entomoneis ornata |
| Entomoneis | paludosa | (Smith) Reimer | ENTPAL | Entomoneis paludosa |
| Epithemia | adnata | (Kützing) Brébisson | EPIADN | Epithemia adnata |
| Epithemia | adnata var. saxonica | (Kützing) R.M. Patrick | EPIADNS AX | Epithemia adnata var. saxonica |
| Epithemia | argus | (Ehrenberg) Kützing | EPIARG | Epithemia argus |
| Epithemia | argus var. protracta | Mayer | EPIARGP RO | Epithemia argus var. protracta |
| Epithemia | frickei | Krammer | EPIFRI | Epithemia frickei |
| Epithemia | goeppertiana | Hilse | EPIGOE | Epithemia goeppertiana |
| Epithemia | sorex | Kützing | EPISOR | Epithemia sorex |
| Epithemia | sp. (1) unidentified | n/a | EPISP1 | Epithemia sp. (1) unidentified |
| Epithemia | spp. | n/a | EPISPP | Epithemia spp. |
| Epithemia | turgida | (Ehrenberg) Kützing | EPITUR | Epithemia turgida |
| Epithemia | turgida var. granulata | (Ehrenberg) Hustedt | EPITURG RA | Epithemia turgida var. granulata |
| Eucoconeis | flexella | (Kützing) Cleve | EUCFLE | Eucoconeis flexella |
| Eucoconeis | lapponica var. ninckei | (Guermeur et Manguin) M. B. Edlund | EUCLAP NIN | Eucoconeis lapponica v. ninckei |
| Eunotia | arculus | Lange-Bertalot et Nörpel | EUNARL | Eunotia arculus |
| Eunotia | arcus | Ehrenberg | EUNARC | Eunotia arcus |
| Eunotia | arcus var. bidens | Grunow | EUNARC BID | Eunotia arcus var. bidens |
| Eunotia | bilunaris | Smith | EUNBIL | Eunotia bilunaris |
| Eunotia | elegans | Östrup | EUNELE | Eunotia elegans |
| Eunotia | exigua | (Brébisson ex Kützing) Rabenhorst | EUNEXI | Eunotia exigua |
| Eunotia | exigua var. tridentula | Östrup | EUNEXIT RI | Eunotia exigua var. tridentula |
| Eunotia | flexuosa | Brébisson ex Kützing | EUNFLE | Eunotia flexuosa |
| Eunotia | formica | Ehrenberg | EUNFOR | Eunotia formica |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|--------------|--------------------------|---|---------------|----------------------------------|
| Eunotia | glacialis | Meister | EUNGLA | Eunotia glacialis |
| Eunotia | implicata | Nörpel, Lange-Bertalot et Alles | EUNIMP | Eunotia implicata |
| Eunotia | incisa | Smith ex Gregory | EUNINC | Eunotia incisa |
| Eunotia | intermedia | (Krasske ex Hustedt) Nörpel et Lange-Bertalot | EUNINT | Eunotia intermedia |
| Eunotia | maior | (Smith) Rabenhorst | EUNMAI | Eunotia maior |
| Eunotia | minor | (Kützing) Grunow | EUNMIN | Eunotia minor |
| Eunotia | musciola var. perminuta | (Grunow) Patrick | EUNPRM | Eunotia perminuta |
| Eunotia | musciola var. tridentula | Nörpel et Lange-Bertalot | EUNMUS TRI | Eunotia musciola var. tridentula |
| Eunotia | naegeli | Migula | EUNNAE | Eunotia naegeli |
| Eunotia | paludosa var. trinacria | (Krasske) Nörpel | EUNPALT RI | Eunotia paludosa var. trinacria |
| Eunotia | pectinalis | (Müller) Rabenhorst | EUNPEC | Eunotia pectinalis |
| Eunotia | pectinalis var. undulata | (Ralfs) Rabenhorst | EUNPEC UND | Eunotia pectinalis var. undulata |
| Eunotia | perpusilla | Grunow | EUNPER | Eunotia perpusilla |
| Eunotia | praerupta | Ehrenberg | EUNPRA | Eunotia praerupta |
| Eunotia | rhomboidea | Hustedt | EUNRHO | Eunotia rhomboidea |
| Eunotia | septentrionalis | Östrup | EUNSEP | Eunotia septentrionalis |
| Eunotia | serra var. diadema | (Ehrenberg) Patrick | EUNSER DIA | Eunotia serra var. diadema |
| Eunotia | serra var. tetraodon | Nörpel | EUNSER TET | Eunotia serra var. tetraodon |
| Eunotia | sp. (1) unidentified | n/a | EUNSP1 | Eunotia sp. (1) unidentified |
| Eunotia | sp. (2) unidentified | n/a | EUNSP2 | Eunotia sp. (2) unidentified |
| Eunotia | spp. | n/a | EUNSP | Eunotia spp. |
| Eunotia | subarcuatoides | Aller, Nörpel et Lange-Bertalot | EUNSUB | Eunotia subarcuatoides |
| Eunotia | sudetica | Müller | EUNSUD | Eunotia sudetica |
| Eunotia | tenella | (Grunow) Cleve | EUNTEN | Eunotia tenella |
| Eunotia | triodon | Ehrenberg | EUNTRI | Eunotia triodon |
| Eunotia | valida | Hustedt | EUNVAL | Eunotia valida |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|----------------|------------------------------|--|---------------|---------------------------------------|
| Eunotia | vanheurckii | Patrick | EUNVAN | Eunotia vanheurckii |
| Fallacia | auriculata | (Hustedt) Mann | FALAUT | Fallacia auriculata |
| Fallacia | insociabilis | (Krasske) Stickle et Mann | FALINS | Fallacia insociabilis |
| Fallacia | lenzii | (Hustedt) Lange-Bertalot | FALLEN | Fallacia lenzii |
| Fallacia | monoculata | (Hustedt) Mann | FALMON | Fallacia monoculata |
| Fallacia | omissa | (Hustedt) Mann | FALOMI | Fallacia omissa |
| Fallacia | pygmaea | (Kützing) Stickle et Mann | FALPYG | Fallacia pygmaea |
| Fallacia | subhamulata | (Grunow) Mann | FALSUB | Fallacia subhamulata |
| Fallacia | tenera | (Hustedt) Mann | FALTEN | Fallacia tenera |
| Fistulifera | pelliculosa | (Brébisson ex Kützing) Lange-Bertalot | FISPEL | Fistulifera pelliculosa |
| Fistulifera | saprophila | (Lange-Bertalot et Bonik) Lange-Bertalot | FISSAP | Fistulifera saprophila |
| Fragilaria | amphicephala | (Kützing) Lange-Bertalot | FRAAMP | Fragilaria amphicephala |
| Fragilaria | capucina | Desmazières | FRACAP | Fragilaria capucina |
| Fragilaria | capucina var. fragilarioides | (Grunow) Ludwig et Flores | FRACAP FRA | Fragilaria capucina v. fragilarioides |
| Fragilaria | capucina var. gracilis | (Östrup) Hustedt | FRACAP GRA | Fragilaria capucina var. gracilis |
| Fragilaria | capucina var. mesolepta | Rabenhorst | FRACAP MES | Fragilaria capucina var. mesolepta |
| Fragilaria | capucina var. perminuta | (Grunow) Lange-Bertalot | FRACAP PER | Fragilaria capucina var. perminuta |
| Fragilaria | crotonensis | Kitton | FRACRO | Fragilaria crotonensis |
| Fragilaria | famelica | (Kützing) Lange-Bertalot | FRAFAM | Fragilaria famelica |
| Fragilaria | radians | (Kützing) Petersen | FRARAD | Fragilaria radians |
| Fragilaria | sepes | Ehrenberg | FRASEP | Fragilaria sepes |
| Fragilaria | sp. (1) unidentified | n/a | FRASP1 | Fragilaria sp. (1) unidentified |
| Fragilaria | spp. | n/a | FRASPP | Fragilaria spp. |
| Fragilaria | vaucheriae | (Kützing) Petersen | FRAVAU | Fragilaria vaucheriae |
| Fragilariforma | virescens | (Ralfs) Williams et Round | FRAVIR | Fragilariforma virescens |
| Frustulia | amphipleuroides | (Grunow) Cleve-Euler | FRUAMP | Frustulia amphipleuroides |
| Frustulia | asymmetrica | (Cleve) Hustedt | FRUASS | Frustulia asymmetrica |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|--------------|---------------------------|---------------------------------------|---------------|---|
| Frustulia | crassinervia | (Brebisson) Lange-Bertalot et Krammer | FRUCRA | Frustulia crassinervia |
| Frustulia | krammeri | Lange-Bertalot et Metzeltin | FRUKRA | Frustulia krammeri |
| Frustulia | rhomboides var. capitata | (Mayer) Patrick | FRURHO CAP | Frustulia rhomboides var. capitata |
| Frustulia | saxonica | Rabenhorst | FRUSAX | Frustulia saxonica |
| Frustulia | vulgaris | (Thwaites) deToni | FRUVUL | Frustulia vulgaris |
| Frustulia | weinholdii | Hustedt | FRUWEI | Frustulia weinholdii |
| Geissleria | acceptata | (Hustedt) Lange-Bertalot et Metzeltin | GEIACC | Geissleria acceptata |
| Geissleria | aikenensis | (Patrick) Torgan et Olivera | GEIAIK | Geissleria aikenensis |
| Geissleria | decussis | (Hustedt) Lange-Bertalot et Metzeltin | GEIDEC | Geissleria decussis |
| Geissleria | ignota | (Krasske) Lange-Bertalot et Metzeltin | GEIIGN | Geissleria ignota |
| Geissleria | kriegeri | (Krasske) Lange-Bertalot | GEIKRI | Geissleria kriegeri |
| Geissleria | paludosa | (Hustedt) Lange-Bertalot et Metzeltin | GEIPAL | Geissleria paludosa |
| Geissleria | schoenfeldii | (Hustedt) Lange-Bertalot et Metzeltin | GEISCH | Geissleria schoenfeldii |
| Gomphoneis | herculeana | (Ehrenberg) Cleve | GMSHER | Gomphoneis herculeana |
| Gomphoneis | herculeana var. robusta | (Grunow) Cleve | GMSHER ROB | Gomphoneis herculeana var. robusta |
| Gomphoneis | minuta | Kociolek et Stoermer | GMSMIN | Gomphoneis minuta |
| Gomphonema | acuminatum | Ehrenberg | GOMACU | Gomphonema acuminatum |
| Gomphonema | acuminatum var. elongatum | Smith | GOMACU ELO | Gomphonema acuminatum var. elongatum |
| Gomphonema | acuminatum var. pusilla | Grunow | GOMACU PUS | Gomphonema acuminatum var. pusilla |
| Gomphonema | affine | Kützing | GOMAFF | Gomphonema affine |
| Gomphonema | americobtusatum | Reichardt et Lange-Bertalot | GOMAME | Gomphonema americobtusatum |
| Gomphonema | angustatum | (Kützing) Rabenhorst | GOMANG | Gomphonema angustatum + G micropus + G innocens |
| Gomphonema | apuncto | Wallace | GOMAPU | Gomphonema apuncto |
| Gomphonema | augur | Ehrenberg | GOMAUG | Gomphonema augur |
| Gomphonema | cf. micropus KYDOW LAP | | GOMMIC LAP | Gomphonema cf. micropus KYDOW LAP |

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|--------------|---|---|---------------|--|
| Gomphonema | cf. subclavatum KYDOW | n/a | GOMSUB _CF | Gomphonema cf. subclavatum KYDOW |
| Gomphonema | cf. subclavatum var. mexicanum KYDOW | n/a | GOMSUB MCF | Gomphonema cf. subclavatum v. mexicanum KYDOW |
| Gomphonema | christenseni | Lowe et Kociolek | GOMCHR | Gomphonema christenseni |
| Gomphonema | dichotomum | Kützing | GOMDIC | Gomphonema dichotomum |
| Gomphonema | drutelingense | Reichardt | GOMDRU | Gomphonema drutelingense |
| Gomphonema | entolejum | Östrup | GOMENT | Gomphonema entolejum |
| Gomphonema | gibba | Wallace | GOMGIB | Gomphonema gibba |
| Gomphonema | gracile | Ehrenberg emend Van Heurck | GOMGRA | Gomphonema gracile |
| Gomphonema | innocens | Reichardt | GOMINN | Gomphonema innocens |
| Gomphonema | intricatum | Kützing | GOMINT | Gomphonema intricatum |
| Gomphonema | intricatum var. pulvinatum | (A.Braun) Grunow | GOMINT PUL | Gomphonema intricatum var. pulvinatum |
| Gomphonema | kobayasii | Kociolek et Kingston | GOMKOB | Gomphonema kobayasii |
| Gomphonema | lagenula | Kützing | GOMLAG | Gomphonema lagenula |
| Gomphonema | longilineare | Reichardt | GOMLON | Gomphonema longilineare |
| Gomphonema | manubrium | Fricke | GOMMAN | Gomphonema manubrium |
| Gomphonema | mehleri | Camburn | GOMMEH | Gomphonema mehleri |
| Gomphonema | mexicanum | Grunow ex Van Heurck | GOMMEX | Gomphonema mexicanum KYDOW |
| Gomphonema | micropus | Kützing | GOMMIC | Gomphonema micropus |
| Gomphonema | minutum | (Agardh) Agardh | GOMMIN | Gomphonema minutum |
| Gomphonema | olivaceoides | Hustedt | GOMOLD | Gomphonema olivaceoides |
| Gomphonema | olivaceoides var. denestriata | Foged | GOMOLI DEN | Gomphonema olivaceoides v. denestriata |
| Gomphonema | olivaceoides var. hutchinsoniana | Patrick | GOMOLI HUT | Gomphonema olivaceoides v. hutchinsoniana |
| Gomphonema | olivaceum | (Lyngbye) Kützing | GOMOLI | Gomphonema olivaceum |
| Gomphonema | pala | Reichardt | GOMPAL | Gomphonema pala |
| Gomphonema | parvulus | (Lange-Bertalot et Reichardt) Lange-Bertalot et Reichardt | GOMPVL | Gomphonema parvulus |
| Gomphonema | parvulum | (Kützing) Kützing | GOMPAR | Gomphonema parvulum + complex |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|---------------|--------------------------|--|------------|--|
| Gomphonema | parvulum fo. saprophilum | Lange-Bertalot et Reichardt | GOMPAR SAP | Gomphonema parvulum fo. saprophilum |
| Gomphonema | patrickii | Kociolek et Stoermer | GOMPAT | Gomphonema patrickii |
| Gomphonema | productum | (Grunow) Lange-Bertalot et Reichardt | GOMPRO | Gomphonema productum |
| Gomphonema | pumilum | (Grunow) Reichardt et Lange-Bertalot | GOMPUM | Gomphonema pumilum + varieties + G kobayasii |
| Gomphonema | reimeri | Kociolek et Kingston | GOMREI | Gomphonema reimeri |
| Gomphonema | rhombicum | Fricke | GOMRHO | Gomphonema rhombicum |
| Gomphonema | sarcophagus | Gregory | GOMSAR | Gomphonema sarcophagus |
| Gomphonema | sp. (1) unidentified | n/a | GOMSP1 | Gomphonema sp. (1) unidentified |
| Gomphonema | sp. (2) unidentified | n/a | GOMSP2 | Gomphonema sp. (2) unidentified |
| Gomphonema | sp. 1 KYDOW LAP | n/a | GOMSP1 LAP | Gomphonema sp. 1 KYDOW LAP |
| Gomphonema | sphaerophorum | Ehrenberg | GOMSPH | Gomphonema sphaerophorum |
| Gomphonema | spp. | n/a | GOMSP | Gomphonema spp. |
| Gomphonema | tergestinum | (Grunow) Fricke | GOMTER | Gomphonema tergestinum |
| Gomphonema | truncatum | Ehrenberg | GOMTRU | Gomphonema truncatum |
| Gomphonema | truncatum var. capitatum | (Ehrenberg) Patrick | GOMTRU CAP | Gomphonema truncatum var. capitatum |
| Gomphonema | truncatum var. turgidum | (Ehrenberg) Patrick | GOMTRU TUR | Gomphonema truncatum var. turgidum |
| Gomphonema | turris | Ehrenberg | GOMTUR | Gomphonema turris |
| Gomphonema | utae | Lange-Bertalot et Reichardt | GOMUTA | Gomphonema utae |
| Gomphosphenia | lingulatiformis | (Lange-Bertalot et Reichardt) Lange-Bertalot | GMALIN | Gomphosphenia lingulatiformis |
| Gyrosigma | acuminatum | (Kützing) Rabenhorst | GYRACU | Gyrosigma acuminatum |
| Gyrosigma | attenuatum | (Kützing) Rabenhorst | GYRATT | Gyrosigma attenuatum |
| Gyrosigma | distortum | (Smith) Griffith et Henfrey | GYRDIS | Gyrosigma distortum |
| Gyrosigma | exilis | (Grunow) Reimer | GYREXI | Gyrosigma exilis |
| Gyrosigma | eximium | (Thwaites) Boyer | GYREXM | Gyrosigma eximium |
| Gyrosigma | nodiferum | (Grunow) Reimer | GYRNOD | Gyrosigma nodiferum |
| Gyrosigma | obscurum | (Smith) Griffith et Henfrey | GYROBS | Gyrosigma obscurum |
| Gyrosigma | obtusatum | (Sullivant et Wormley) Boyer | GYROBT | Gyrosigma obtusatum |

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|--------------|------------------------|--|---------------|----------------------------------|
| Gyrosigma | reimeri | Sterrenburg | GYRREI | Gyrosigma reimeri |
| Gyrosigma | scalproides | (Rabenhorst) Cleve | GYRSCA | Gyrosigma scalproides |
| Gyrosigma | sciotense | (Sullivan et Wormley) Cleve | GYRSCI | Gyrosigma sciotense |
| Gyrosigma | sp. (1) unidentified | n/a | GYRSP1 | Gyrosigma sp. (1) unidentified |
| Gyrosigma | spencerii | (Smith) Griffith et Henfrey | GYRSPE | Gyrosigma spencerii |
| Gyrosigma | spencerii var. curvula | (Grunow) Reimer | GYRSPE CUR | Gyrosigma spencerii var. curvula |
| Gyrosigma | spp. | n/a | GYRSPP | Gyrosigma spp. |
| Gyrosigma | wormleyi | (Sullivan) Boyer | GYRWOR | Gyrosigma wormleyi |
| Hantzschia | amphioxys | (Ehrenberg) Grunow | HANAMP | Hantzschia amphioxys |
| Hantzschia | elongata | (Hantzsch) Grunow | HANELO | Hantzschia elongata |
| Hippodonta | capitata | (Ehrenberg) Lange-Bertalot, Metzeltin et Witkowski | HIPCAP | Hippodonta capitata |
| Hippodonta | hungarica | (Grunow) Lange-Bertalot, Metzeltin et Witkowski | HIPHUN | Hippodonta hungarica |
| Hippodonta | luneburgensis | (Grunow) Lange-Bertalot, Metzeltin et Witkowski | HIPLUN | Hippodonta luneburgensis |
| Karayevia | clevei | (Grunow) Bukhtiyarova | KARCLE | Karayevia clevei |
| Karayevia | clevei var. rostrata | (Hustedt) Bukhtiyarova | KARCLE ROS | Karayevia clevei var. rostrata |
| Karayevia | ploenensis | (Hustedt) Bukhtiyarova | KARPLO | Karayevia ploenensis |
| Kobayasiella | subtilissima | (Cleve) Lange-Bertalot | KOBSUB | Kobayasiella subtilissima |
| Lemnicola | hungarica | (Grunow) Round et Basson | LEMHUN | Lemnicola hungarica |
| Luticola | binodis | (Hustedt) M.B. Edlund | LUTBIN | Luticola binodis |
| Luticola | goeppertiana | (Bleisch) Mann | LUTGOE | Luticola goeppertiana |
| Luticola | mutica | (Kützing) Mann | LUTMUT | Luticola mutica |
| Luticola | muticopsis | (Van Heurck) Mann | LUTMTC | Luticola muticopsis |
| Luticola | nivalis | (Ehrenberg) Mann | LUTNIV | Luticola nivalis |
| Luticola | cohnii | (Hilse) Mann | LUTCOH | Luticola cohnii |
| Luticola | saxophila | W. Bock ex Hustedt) D.G. Mann | LUTSAX | Luticola saxophila |
| Luticola | stigma | (Patrick) Johansen | LUTSTI | Luticola stigma |
| Luticola | undulata | (Hilse) Mann | LUTUND | Luticola undulata |
| Luticola | ventricosa | (Kützing) Mann | LUTVEN | Luticola ventricosa |

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|---------------|---------------------------|---|---------------|---------------------------------------|
| Mastogloia | smithii | Thwaites | MASSMI | Mastogloia smithii |
| Mayamaea | agrestis | (Hustedt) Lange-Bertalot | MAYAGR | Mayamaea agrestis |
| Mayamaea | atomus | (Kützing) Lange-Bertalot | MAYATO | Mayamaea atomus + Fisulifera spp. |
| Mayamaea | atomus var. permitis | (Hustedt) Lange-Bertalot | MAYATO PER | Mayamaea atomus var. permitis |
| Melosira | varians | Agardh | MELVAR | Melosira varians |
| Meridion | circulare | (Greville) Agardh | MERCIR | Meridion circulare |
| Meridion | circulare var. constricta | (Ralfs) Van Heurck | MERCIR CON | Meridion circulare var. constricta |
| Microcostatus | krasskei | (Hustedt) Johansen et Sray | MICCRA | Microcostatus krasskei |
| Microcostatus | maceria | (Schimanski) Lange-Bertalot | MICMAC | Microcostatus maceria |
| Navicula | absoluta | Hustedt | NAVABS | Navicula absoluta |
| Navicula | amphiceropsis | Lange-Bertalot et Rumrich | NAVAMP | Navicula amphiceropsis |
| Navicula | angusta | Grunow | NAVANG | Navicula angusta |
| Navicula | antonii | Lange-Bertalot | NAVANT | Navicula antonii |
| Navicula | arctotenelloides | Lange-Bertalot et Metzeltin | NAVARC | Navicula arctotenelloides |
| Navicula | arvensis | Hustedt | NAVARV | Navicula arvensis + other small forms |
| Navicula | bacilloides | Hustedt | NAVBCD | Navicula bacilloides |
| Navicula | bicephala | Hustedt | NAVVIC | Navicula bicephala |
| Navicula | canalis | Patrick | NAVCAN | Navicula canalis |
| Navicula | capitatoradiata | Germain | NAVCPR | Navicula capitatoradiata |
| Navicula | cari | Ehrenberg | NAVCARI | Navicula cari |
| Navicula | caterva | Hohn et Hellermann | NAVCAT | Navicula caterva |
| Navicula | cincta | (Ehrenberg) Ralfs | NAVCIN | Navicula cincta |
| Navicula | cincta var. rostrata | Reimer | NAVCINR OS | Navicula cincta v. rostrata |
| Navicula | constans var. symmetrica | Hustedt | NAVCON SYM | Navicula constans var. symmetrica |
| Navicula | contenta var. biceps | (Arnott) Van Heurck | NAVCON BIC | Navicula contenta var. biceps |
| Navicula | cryptocephala | Kützing | NAVCRY | Navicula cryptocephala |
| Navicula | cryptotenella | Lange-Bertalot ex Krammer et Lange-Bertalot | NAVCRT | Navicula cryptotenella |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|--------------|--------------------------|--------------------|---------------|---|
| Navicula | dibola | Hohn | NAVDIB | Navicula dibola |
| Navicula | difficillima | Hustedt | NAVDIF | Navicula difficillima |
| Navicula | difficillimoides | Hustedt | NAVDFM | Navicula difficillimoides |
| Navicula | elginensis var. rostrata | (Mayer) Patrick | NAVELG ROS | Navicula elginensis var. rostrata |
| Navicula | erifuga | Lange-Bertalot | NAVERI | Navicula erifuga |
| Navicula | exigua var. capitata | Patrick | NAVEXIC AP | Navicula exigua var. capitata |
| Navicula | exigua var. signata | Hustedt | NAVEXISI G | Navicula exigua var. signata |
| Navicula | festiva | Krasske | NAVRES | Navicula festiva |
| Navicula | fracta | Hustedt | NAVFRA | Navicula fracta |
| Navicula | germainii | Wallace | NAVGER | Navicula germainii |
| Navicula | gibbosa | Hustedt | NAVIGIB | Navicula gibbosa |
| Navicula | gottlandica | Lange-Bertalot | NAVIGOT | Navicula trivialis |
| Navicula | gregaria | Donkin | NAVGRE | Navicula gregaria |
| Navicula | gysingensis | Foged | NAVGYG | Navicula gysingensis |
| Navicula | hambergii | Hustedt | NAVHAM | Navicula hambergii |
| Navicula | hasta | Pantocsek | NAVHAS | Navicula hasta |
| Navicula | helensis | Schulz | NAVHEL | Navicula helensis |
| Navicula | ingenua | Hustedt | NAVING | Navicula ingenua |
| Navicula | integra | (Smith) Ralfs | NAVINT | Navicula integra |
| Navicula | kotschyi | Grunow | NAVKOT | Navicula kotschyi |
| Navicula | lanceolata | (Agardh) Ehrenberg | NAVLAN | Navicula lanceolata + N avenacea + N trivialis |
| Navicula | lateropunctata | Wallace | NAVLAP | Navicula lateropunctata |
| Navicula | laterorostrata | Hustedt | NAVLAT | Navicula laterorostrata |
| Navicula | leistikowii | Lange-Bertalot | NAVLEI | Navicula leistikowii |
| Navicula | libonensis | Schoeman | NAVLIB | Navicula libonensis |
| Navicula | lundii | Reichardt | NAVLND | Navicula lundii |
| Navicula | menisculus | Schumann | NAVMEN | Navicula antonii + Navicula menisculus |

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|----------|--------------------------|--------------------|---------------|-----------------------------------|
| Navicula | menisculus var. obtusa | Hustedt | NAVMEN OBT | Navicula menisculus v. obtusa |
| Navicula | microcari | Lange-Bertalot | NAVMCC | Navicula mirocari |
| Navicula | minima | Grunow | NAVMIN | Navicula minima |
| Navicula | notha | Wallace | NAVNOT | Navicula notha |
| Navicula | parablis | Hohn et Hellermann | NAVPAR | Navicula parablis |
| Navicula | perminuta | Grunow | NAVPRM | Navicula perminuta |
| Navicula | perpusilla | Grunow | NAVPER | Navicula perpusilla |
| Navicula | phyllepta | Kützing | NAVPHY | Navicula phyllepta |
| Navicula | pseudoarvensis | Hustedt | NAVPCA | Navicula pseudoarvensis |
| Navicula | pseudolanceolata | Lange-Bertalot | NAVPSL | Navicula pseudolanceolata |
| Navicula | pseudoreinhardtii | Patrick | NAVPSR | Navicula pseudoreinhardtii |
| Navicula | pseudotenelloides | Krasske | NAVPTL | Navicula pseudotenelloides |
| Navicula | pseudoventralis | Hustedt | NAVPCV | Navicula pseudoventralis |
| Navicula | radiosa | Kützing | NAVRAD | Navicula radiosa |
| Navicula | radiosafallax | Lange-Bertalot | NAVRAX | Navicula radiosafallax |
| Navicula | recens | Lange-Bertalot | NAVREC | Navicula recens |
| Navicula | reichardtiana | Lange-Bertalot | NAVREI | Navicula reichardtiana |
| Navicula | rynchocephala | Kützing | NAVRHY | Navicula rynchocephala |
| Navicula | rostellata | Kützing | NAVROS | Navicula rostellata |
| Navicula | salinarum | Grunow | NAVSAL | Navicula salinarum |
| Navicula | sanctaerucis | Östrup | NAVSAN | Navicula sanctaerucis |
| Navicula | schadei | Krasske | NAVSCD | Navicula shadei |
| Navicula | schmassmannii | Hustedt | NAVSCM | Navicula schmassmannii |
| Navicula | schroeteri var. escambia | Patrick | NAVSCS ESC | Navicula schroeteri var. escambia |
| Navicula | secreta var. apiculata | Patrick | NAVSEC API | Navicula secreta var. apiculata |
| Navicula | seminulum var. hustedtii | Patrick | NAVSEM HUS | Navicula seminulum var. hustedtii |
| Navicula | sp. (1) unidentified | n/a | NAVSP1 | Navicula sp. (1) unidentified |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|----------|----------------------------------|---|---------------|--------------------------------------|
| Navicula | sp. (2) unidentified | n/a | NAVSP2 | Navicula sp. (2) unidentified |
| Navicula | sp. (3) unidentified | n/a | NAVSP3 | Navicula sp. (3) unidentified |
| Navicula | sp. (4) unidentified | n/a | NAVSP4 | Navicula sp. (4) unidentified |
| Navicula | sp. 1 KYDOW LAP | n/a | NAVSP1L AP | Navicula sp. 1 KYDOW LAP |
| Navicula | spp. | n/a | NAVSP | Navicula spp. |
| Navicula | stroemii | Hustedt | NAVSTR | Navicula stroemii |
| Navicula | subatomoides | Hustedt | NAVSPA | Navicula subatomoides |
| Navicula | subminuscula | Manguin | NAVSUB | Navicula subminuscula |
| Navicula | subrotundata | Hustedt | NAVSTR | Navicula subrotundata |
| Navicula | symmetrica | Patrick | NAVSYM | Navicula symmetrica |
| Navicula | tantula | Hustedt | NAVTA | Navicula tantula |
| Navicula | tenelloides | Hustedt | NAVTE | Navicula tenelloides + related forms |
| Navicula | tridentula | Krasske | NAVTRD | Navicula tridentula |
| Navicula | tripunctata | (Müller) Bory | NAVTRI | Navicula tripunctata |
| Navicula | trivialis | Lange-Bertalot | NAVTRV | Navicula trivialis |
| Navicula | trivialis var. oligotrachenta | Lange-Bertalot et Hofmann | NAVTRV OLI | Navicula trivialis v. oligotrachenta |
| Navicula | upsaliensis | (Grunow) Peragallo | NAVUPS | Navicula upsaliensis |
| Navicula | venerabilis | Hohn et Hellerman | NAVVEN | Navicula venerabilis |
| Navicula | veneta | Kützing | NAVVEN | Navicula veneta |
| Navicula | ventralis | Krasske | NAVVNT | Navicula ventralis |
| Navicula | vilaplanii | (Lange-Bertalot et Sabater) Lange-Bertalot et Sabater | NAVVIL | Navicula vilaplanii |
| Navicula | viridula | (Kützing) Kützing emend. Van Heurck | NAVVIR | Navicula viridula (+ similar forms?) |
| Navicula | viridulacalcis | (Hustedt) Lange-Bertalot | NAVVDC | Navicula viridulacalcis |
| Neidium | affine | (Ehrenberg) Pfitzer | NEIAFF | Neidium affine |
| Neidium | affine var. amphirhynchus | (Ehrenberg) Cleve | NEIAFFA MP | Neidium affine var. amphirhynchus |
| Neidium | affine var. longiceps | (Gregory) Cleve | NEIAFFL ON | Neidium affine var. longiceps |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|-----------|---------------------------------|-----------------------------|---------------|---|
| Neidium | affine var. undulatum | (Grunow) Cleve | NEIAFFU ND | Neidium affine var. undulatum |
| Neidium | alpinum | Hustedt | NEIALP | Neidium alpinum |
| Neidium | amphigomphus | (Ehrenberg) Pfitzer | NEIAGM | Neidium amphigomphus |
| Neidium | ampliatum | (Ehrenberg) Krammer | NEIAMP | Neidium ampliatum |
| Neidium | apiculatum | Reimer | NEIAPI | Neidium apiculatum |
| Neidium | binodeformis | Krammer | NEIBFR | Neidium binodeformis |
| Neidium | bisulcatum | (Lagerstedt) Cleve | NEIBIS | Neidium bisulcatum |
| Neidium | bisulcatum var. baicalense | (Skvortzow et Meyer) Reimer | NEIBISBA I | Neidium bisulcatum var. baicalense |
| Neidium | densestriatum | (Östrup) Krammer | NEIDEN | Neidium densestriatum |
| Neidium | dubium | (Ehrenberg) Cleve | NEIDUB | Neidium dubium |
| Neidium | dubium fo. constrictum | Hustedt | NEIDUBC ON | Neidium dubium f. constrictum |
| Neidium | hercynicum | Mayer | NEIHRC | Neidium hercynicum |
| Neidium | hercynicum var. subrostratum | Wallace | NEIHRCS UB | Neidium hercynicum var. subrostratum |
| Neidium | iris | (Ehrenberg) Cleve | NEIIRI | Neidium iris |
| Neidium | javanicum | Hustedt | NEIJAV | Neidium javanicum |
| Neidium | productum | (Smith) Cleve | NEIPRO | Neidium productum |
| Neidium | sp. (1) unidentified | n/a | NEISP1 | Neidium sp. (1) unidentified |
| Neidium | spp. | n/a | NEISPP | Neidium spp. |
| Nitzschia | abridia | Camburn | NITABR | Nitzschia abridia |
| Nitzschia | acicularioides | Hustedt | NITACD | Nitzschia acicularioides |
| Nitzschia | acicularis | (Kützing) Smith | NITACI | Nitzschia acicularis |
| Nitzschia | acidoclinata | Lange-Bertalot | NITACL | Nitzschia acidoclinata |
| Nitzschia | acula | (Kützing) Hantzsch | NITACU | Nitzschia acula |
| Nitzschia | adapta | Hustedt | NITADA | Nitzschia adapta |
| Nitzschia | agnita | Hustedt | NITAGN | Nitzschia agnita |
| Nitzschia | amphibia | Grunow | NITAMP | Nitzschia amphibia |
| Nitzschia | amphibia fo. frauenfeldii | (Grunow) Lange-Bertalot | NITAMPF RA | Nitzschia amphibia fo. frauenfeldii |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|--------------|--------------------------|----------------------------|---------------|------------------------------------|
| Nitzschia | amphibioides | Hustedt | NITAPD | Nitzschia amphibioides |
| Nitzschia | angustata | (Smith) Grunow | NITANG | Nitzschia angustata |
| Nitzschia | angustata var. acuta | Grunow | NITANGA CU | Nitzschia angustata var. acuta |
| Nitzschia | angustatula | Lange-Bertalot | NITANL | Nitzschia angustatula |
| Nitzschia | archibaldii | Lange-Bertalot | NITARC | Nitzschia archibaldii |
| Nitzschia | aurariae | Cholnoky | NITAU | Nitzschia aurariae |
| Nitzschia | biacrula | Hohn et Hellermann | NITBIA | Nitzschia biacrula |
| Nitzschia | bita | Hohn et Hellermann | NITBIT | Nitzschia bita |
| Nitzschia | bremensis | Hustedt | NITBRM | Nitzschia bremensis |
| Nitzschia | brevissima | Grunow ex Van Heurck | NITBRE | Nitzschia brevissima |
| Nitzschia | capitellata | Hustedt | NITCAP | Nitzschia capitellata |
| Nitzschia | clausii | Hantzsch | NITCLA | Nitzschia clausii |
| Nitzschia | communis | Rabenhorst | NITCOM | Nitzschia communis |
| Nitzschia | communis var. hyalina | Lund | NITCOM HYA | Nitzschia communis v. hyalina |
| Nitzschia | compressa var. balatonis | (Grunow) Lange-Bertalot | NITCOMB AL | Nitzschia compressa var. balatonis |
| Nitzschia | compressa var. vexans | (Grunow) Lange-Bertalot | NITCOMV EX | Nitzschia compressa var. vexans |
| Nitzschia | dissipata | (Kützing) Grunow | NITDIS | Nitzschia dissipata |
| Nitzschia | dissipata var. media | (Hantzsch) Grunow | NITDISM ED | Nitzschia dissipata var. media |
| Nitzschia | dissipata var. undulata | Sovereign | NITDISU ND | Nitzschia dissipata v. undulata |
| Nitzschia | draveillensis | Coste et Ricard | NITDRA | Nitzschia draveillensis |
| Nitzschia | dubia | Smith | NITDUB | Nitzschia dubia |
| Nitzschia | elegantula | Grunow | NITELE | Nitzschia elegantula |
| Nitzschia | filiformis | (Smith) Van Heurck | NITFIL | Nitzschia filiformis |
| Nitzschia | filiformis var. conferta | (Reichardt) Lange-Bertalot | NITFILCO N | Nitzschia filiformis v. conferta |
| Nitzschia | flexa | Schumann | NITFLE | Nitzschia flexa |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|-----------|--------------------------------|--------------------------------------|---------------|--|
| Nitzschia | fonticola | Grunow | NITFON | Nitzschia fonticola + related Nitzschias |
| Nitzschia | fonticola var. pelagica | Hustedt | NITFONP EL | Nitzschia fonticola var. pelagica |
| Nitzschia | frustulum | (Kützing) Grunow | NITFRU | Nitzschia frustulum + related Nitzschias |
| Nitzschia | gandersheimiensis | Krasske | NITGAN | Nitzschia gandersheimiensis |
| Nitzschia | gracilis | Hantzsch ex Rabenhorst | NITGRA | Nitzschia gracilis |
| Nitzschia | gracilis var. minor | Skabitshevsky ex Proschkina-Lavrenko | NITGRAM IN | Nitzschia gracilis v. minor |
| Nitzschia | gracilliformis | Lange-Bertalot et Simonsen | NITGFS | Nitzschia gracilliformis |
| Nitzschia | hantzschiana | Rabenhorst | NITHAN | Nitzschia hantzschiana |
| Nitzschia | heufferiana | Grunow | NITHEU | Nitzschia heufferiana |
| Nitzschia | homburgienis | Lange-Bertalot | NITHOM | Nitzschia hamburgienis |
| Nitzschia | inconspicua | Grunow | NITINC | Nitzschia inconspicua |
| Nitzschia | intermedia | Hantzsch ex Cleve et Grunow | NITINT | Nitzschia intermedia |
| Nitzschia | lacuum | Lange-Bertalot | NITLCU | Nitzschia lacuum |
| Nitzschia | liebetruthii | Rabenhorst | NITLIE | Nitzschia liebetruthii |
| Nitzschia | linearis | (Agardh ex Smith) Smith | NITLIN | Nitzschia linearis |
| Nitzschia | linearis var. tenuis | (Smith) Grunow ex Cleve et Grunow | NITLINTE N | Nitzschia linearis var. tenuis |
| Nitzschia | lorenziana | Grunow | NITLOR | Nitzschia lorenziana |
| Nitzschia | lorenziana var. subtilis | Grunow ex Cleve et Grunow | NITLORS UB | Nitzschia lorenziana var. subtilis |
| Nitzschia | microcephala | Grunow | NITMIC | Nitzschia microcephala |
| Nitzschia | nana | Grunow ex Van Heurck | NITNAN | Nitzschia nana |
| Nitzschia | Nitzschia sp. 1 KYDOW LAP | | NITSP1L AP | Nitzschia sp. 1 KYDOW LAP |
| Nitzschia | obtusa | Smith | NITOBT | Nitzschia obtusa |
| Nitzschia | obtusa var. scalpelliformis | Grunow ex Cleve et Möller | NITOBTS CA | Nitzschia obtusa v. scalpelliformis |
| Nitzschia | obtusa var.kurziana | Rabenhorst | NITOBTK UR | Nitzschia obtusa v.kurziana |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|--------------|-------------------------|-------------------------|---------------|-----------------------------------|
| Nitzschia | palea | (Kützing) Smith | NITPAL | Nitzschia palea |
| Nitzschia | palea var. debilis | (Kützing) Grunow | NITPDE | Nitzschia palea var. debilis |
| Nitzschia | palea var. tenuirostris | Grunow | NITPTE | Nitzschia palea var. tenuirostris |
| Nitzschia | paleacea | Grunow ex Van Heurck | NITPLC | Nitzschia paleacea |
| Nitzschia | parvula | Smith | NITPAR | Nitzschia parvula |
| Nitzschia | perminuta | (Grunow) Peragallo | NITPER | Nitzschia perminuta |
| Nitzschia | pumila | Hustedt | NITPUM | Nitzschia pumila |
| Nitzschia | pusilla | Grunow | NITPUS | Nitzschia pusilla |
| Nitzschia | radicula | Hustedt | NITRAD | Nitzschia radicula |
| Nitzschia | rautenbachiae | Cholnoky | NITRAU | Nitzschia rautenbachiae |
| Nitzschia | recta | Hantzsch ex Rabenhorst | NITREC | Nitzschia recta |
| Nitzschia | reversa | Smith | NITREV | Nitzschia reversa |
| Nitzschia | romana | Grunow | NITROM | Nitzschia romana |
| Nitzschia | rostellata | Hustedt | NITROS | Nitzschia rostellata |
| Nitzschia | sigma | (Kützing) Smith | NITSIG | Nitzschia sigma |
| Nitzschia | sigmoidea | (Nitzsch) Ehrenberg | NITSGO | Nitzschia sigmoidea |
| Nitzschia | siliqua | Archibald | NITSIL | Nitzschia siliqua |
| Nitzschia | sinuata var. delognei | (Grunow) Lange-Bertalot | NITSIND EL | Nitzschia sinuata v. delognei |
| Nitzschia | sinuata var. tabellaria | (Grunow) Grunow | NITSINTA B | Nitzschia sinuata var. tabellaria |
| Nitzschia | sociabilis | Hustedt | NITSOC | Nitzschia sociabilis |
| Nitzschia | solita | Hustedt | NITSOL | Nitzschia solita |
| Nitzschia | sp. | n/a | NITSP | Nitzschia spp. |
| Nitzschia | sp. (1) unidentified | n/a | NITSP1 | Nitzschia sp. (1) unidentified |
| Nitzschia | sp. (2) unidentified | n/a | NITSP2 | Nitzschia sp. (2) unidentified |
| Nitzschia | sp. (3) unidentified | n/a | NITSP3 | Nitzschia sp. (3) unidentified |
| Nitzschia | sp. (4) unidentified | n/a | NITSP4 | Nitzschia sp. (4) unidentified |
| Nitzschia | spp. | n/a | NITSP | Nitzschia spp. |
| Nitzschia | stricta | n/a | NITSTR | Nitzschia stricta |
| Nitzschia | subacicularis | Hustedt | NITSBA | Nitzschia subacicularis |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|--------------|-----------------------------|---|-------------|--|
| Nitzschia | sublinearis | Hustedt | NITSBL | Nitzschia sublinearis |
| Nitzschia | subtilis | Hustedt | NITSBT | Nitzschia subtilis |
| Nitzschia | supralitorea | Lange-Bertalot | NITSUP | Nitzschia supralitorea |
| Nitzschia | terrestris | (Petersen) Hustedt | NITTER | Nitzschia terrestris |
| Nitzschia | thermalis | Kützing | NITTHE | Nitzschia thermalis |
| Nitzschia | tropica | Hustedt | NITTRO | Nitzschia tropica |
| Nitzschia | tubicola | Hustedt | NITTUB | Nitzschia tubicola |
| Nitzschia | umbonata | Lange-Bertalot | NITUMB | Nitzschia umbonata |
| Nitzschia | valdestriata | Aleem et Hustedt | NITVAL | Nitzschia valdestriata |
| Nitzschia | vermicularis | (Kützing) Hantzsch ex Rabenhorst | NITVER | Nitzschia vermicularis |
| Nitzschia | vitrea | Norman | NITVIT | Nitzschia vitrea |
| NO | DIATOMS | n/a | NODIATOM | NO DIATOMS |
| Nupela | lapidosa | (Krasske) Lange-Bertalot | NUPLAP | Nupela lapidosa |
| Nupela | sp. (1) unidentified | n/a | NUPSP1 | Nupela sp. (1) unidentified |
| Orthoseira | roseana | (Rabhenhorst) O'Meara | ORTROS | Orthoseira roseana |
| Parlibellus | protracta | (Grunow) Witkowski, Lange-Bertalot et Metzeltin | PARPRO | Parlibellus protracta |
| Pinnularia | abaujensis | (Pantocsek) Ross | PINABA | Pinnularia abaujensis |
| Pinnularia | abaujensis var. linearis | (Hustedt) Patrick | PINABALIN | Pinnularia abaujensis var. linearis |
| Pinnularia | abaujensis var. rostrata | (Patrick) Patrick | PINABAROS | Pinnularia abaujensis var. rostrata |
| Pinnularia | abaujensis var. subundulata | (Mayer ex Hustedt) Patrick | PINABASUB | Pinnularia abaujensis v. subundulata |
| Pinnularia | acoricola | Hustedt | PINACO | Pinnularia acoricola |
| Pinnularia | acrosphaeria | (Brébisson) Smith | PINACR | Pinnularia acrosphaeria |
| Pinnularia | acrosphaeria var. turgidula | Grunow ex Cleve | PINACRTUR | Pinnularia acrosphaeria var. turgidula |
| Pinnularia | appendiculata | (Agardh) Cleve | PINAPP | Pinnularia appendiculata |
| Pinnularia | biceps | Gregory | PINBIC | Pinnularia biceps |
| Pinnularia | borealis | Ehrenberg | PINBOR | Pinnularia borealis |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|------------|-------------------------------|-----------------------|---------------|--|
| Pinnularia | borealis var. rectangularis | Carlson | PINBORR EC | Pinnularia borealis var. rectangularis |
| Pinnularia | braunii | (Grunow) Cleve | PINBRA | Pinnularia braunii |
| Pinnularia | braunii var. amphicephala | (Mayer) Hustedt | PINBRAA MP | Pinnularia braunii var. amphicephala |
| Pinnularia | brebissonii | (Kützing) Rabenhorst | PINBRE | Pinnularia brebissonii |
| Pinnularia | divergens | Smith | PINDIV | Pinnularia divergens |
| Pinnularia | divergentissima | (Grunow) Cleve | PINDVT | Pinnularia divergentissima |
| Pinnularia | formica | (Ehrenberg) Patrick | PINFOR | Pinnularia formica |
| Pinnularia | intermedia | (Lagerstedt) Cleve | PININT | Pinnularia intermedia |
| Pinnularia | legumen | (Ehrenberg) Ehrenberg | PINLEG | Pinnularia legumen |
| Pinnularia | lundii | Hustedt | PINLUN | Pinnularia lundii |
| Pinnularia | maior | (Kützing) Rabenhorst | PINMAI | Pinnularia maior |
| Pinnularia | mesogongyla | Ehrenberg | PINMSG | Pinnularia mesogongyla |
| Pinnularia | mesolepta | (Ehrenberg) Smith | PINMSL | Pinnularia mesolepta |
| Pinnularia | microstauron | (Ehrenberg) Cleve | PINMIC | Pinnularia microstauron |
| Pinnularia | nodosa | (Ehrenberg) Smith | PINNOD | Pinnularia nodosa |
| Pinnularia | obscura | Krasske | PINOBS | Pinnularia obscura |
| Pinnularia | sp. (1) unidentified | n/a | PINSP1 | Pinnularia sp. (1) unidentified |
| Pinnularia | spp. | n/a | PINSP | Pinnularia spp. |
| Pinnularia | stomatophora | (Grunow) Cleve | PINSTO | Pinnularia stomatophora |
| Pinnularia | subcapitata | Gregory | PINSUB | Pinnularia subcapitata |
| Pinnularia | subcapitata var. paucistriata | (Grunow) Cleve | PINSUBP AU | Pinnularia subcapitata var. paucistriata |
| Pinnularia | termitina | (Ehrenberg) Patrick | PINTER | Pinnularia termitina |
| Pinnularia | viridis | (Nitzsch) Ehrenberg | PINVIR | Pinnularia viridis |
| Pinnularia | viridis var. minor | Cleve | PINVIRMI N | Pinnularia viridis var. minor |
| Placoneis | clementis | (Grunow) Cox | PLCCLE | Placoneis clementis |
| Placoneis | clementoides | (Hustedt) Cox | PLCCLM | Placoneis clementoides |
| Placoneis | elginensis | (Gregory) Cox | PLCELG | Placoneis elginensis |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|---------------|------------------------------|---|---------------|---|
| Placoneis | exigua | (Gregory) Mereschkowsky | PLCEXI | Placoneis exigua |
| Placoneis | gastrum | (Ehrenberg) Mereschkowsky | PLCGAS | Placoneis gastrum |
| Placoneis | neglecta | (Krasske) Lowe | PLCNEG | Placoneis neglecta |
| Placoneis | placentula | (Ehrenberg) Hienzerling | PLCPLA | Placoneis placentula |
| Placoneis | pseudoanglica | (Lange-Bertalot) Cox | PLCPAN | Placoneis pseudoanglica |
| Plagiotropis | lepidoptera | (Gregory) Kuntze | PLGLEP | Plagiotropis lepidoptera |
| Plagiotropis | lepidoptera var. proboscidea | (Cleve) Reimer | PLGLEP RO | Plagiotropis lepidoptera v. proboscidea |
| Planothidium | apiculatum | (Patrick) Lange-Bertalot | PLAAPI | Planothidium apiculatum |
| Planothidium | biporum | (Hohn et Hellerman) Lange-Bertalot | PLABIP | Planothidium biporum |
| Planothidium | dauai | (Foged) Lange-Bertalot | PLADAU | Planothidium dauai |
| Planothidium | delicatulum | (Hohn et Hellerman) Lange-Bertalot | PLADEL | Planothidium delicatulum |
| Planothidium | dubium | (Grunow) Round et Bukhtiyarova | PLADUB | Planothidium dubium |
| Planothidium | frequentissimum | (Lange-Bertalot) Lange-Bertalot | PLAFRE | Planothidium frequentissimum |
| Planothidium | hauckianum | (Grunow) Round et Bukhtiyarova | PLAHAU | Planothidium hauckianum |
| Planothidium | haynaldii | (Schaarschmidt) Lange-Bertalot | PLAHAY | Planothidium haynaldii |
| Planothidium | lanceolatum | (Brébisson ex Kützing) F.E. Round et L. Bukhtiyarova | PLALAN | Planothidium lanceolatum |
| Planothidium | robustum | (Hustedt) Lange-Bertalot | PLAROB | Planothidium robustum |
| Planothidium | rostratum | (Östrup) Lange-Bertalot | PLAROS | Planothidium rostratum |
| Planothidium | stewartii | (Patrick) Lange-Bertalot | PLASTE | Planothidium stewartii |
| Platessa | conspicua | (Mayer) Lange-Bertalot | PLTCON | Platessa conspicua |
| Platessa | hustedtii | (Krasske) Lange-Bertalot | PLTHUS | Platessa hustedtii |
| Pleurosigma | delicatulum | Smith | PLSDEL | Pleurosigma delicatulum |
| Pleurosira | laevis | (Ehrenberg) Compère | PLELAE | Pleurosira laevis |
| Psammothidium | altaicum | Bukhtiyarova | PSAALT | Psammothidium altaicum |
| Psammothidium | bioretii | (Germain) Bukhtiyarova et Round | PSABIO | Psammothidium bioretii |
| Psammothidium | chlidanos | (Hohn et Hellerman) Lange-Bertalot | PSACHL | Psammothidium chlidanos |
| Psammothidium | grischunum fo. daonensis | (Lange-Bertalot ex Lange-Bertalot et Krammer) Bukhtiyarova et Round | PSAGRID AO | Psammothidium grischunum fo. daonensis |
| Psammothidium | helveticum | (Hustedt) Bukhtiyarova et Round | PSAHEL | Psammothidium helveticum |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|------------------|-------------------------------|---|------------|--|
| Psammothidium | lauenburgianum | (Hustedt) Bukhtiyarova et Round | PSALAU | Psammothidium lauenburgianum |
| Psammothidium | marginulatum | (Grunow) Bukhtiyarova et Round | PSAMAR | Psammothidium marginulatum |
| Psammothidium | scoticum | (Flower et Jones) Bukhtiyarova et Round | PSASCO | Psammothidium scoticum |
| Psammothidium | subatomoides | (Hustedt) Bukhtiyarova et Round | PSASUB | Psammothidium subatomoides |
| Pseudostaurosira | brevistriata | (Grunow) Williams et Round | PSEBRE | Pseudostaurosira brevistriata |
| Pseudostaurosira | parasitica | (Smith) Morales | PSSPAR | Pseudostaurosira parasitica |
| Pseudostaurosira | parasitica var. subconstricta | (Grunow) Morales | PSSPAR SUB | Pseudostaurosira parasitica v. subconstricta |
| Pseudostaurosira | trainorii | Morales | PSETRA | Pseudostaurosira trainorii |
| Puncticulata | bodanica | (Grunow in Schneider) Håkansson | PUNBOD | Puncticulata bodanica |
| Puncticulata | radiosa | (Lemmermann) Håkansson | PUNRAD | Puncticulata radiosa |
| Reimeria | sinuata | (Gregory) Kociolek et Stoermer | REISIN | Reimeria sinuata |
| Rhoicosphenia | abbreviata | (Agardh) Lange-Bertalot | RHCABB | Rhoicosphenia abbreviata |
| Rhopalodia | brebissonii | Krammer | RHOBRE | Rhopalodia brebissonii |
| Rhopalodia | gibba | (Ehrenberg) Müller | RHOGIB | Rhopalodia gibba |
| Rhopalodia | gibba var. ventricosa | (Kützing) Peragallo et Peragallo | RHOGIBV EN | Rhopalodia gibba var. ventricosa |
| Rhopalodia | gibberula var. vanheurckii | Müller | RHOGIBV AN | Rhopalodia gibberula var. vanheurckii |
| Rhopalodia | musculus | (Kützing) Müller | RHOMUS | Rhopalodia musculus |
| Rhopalodia | sp. (1) unidentified | n/a | RHOSP1 | Rhopalodia sp. (1) unidentified |
| Rossithidium | linearis | (Smith) Round et Bukhtiyarova | ROSLIN | Rossithidium linearis |
| Rossithidium | pusillum | (Grunow) Round et Bukhtiyarova | ROSPUS | Rossithidium pusillum |
| Sellaphora | bacillum | (Ehrenberg) Mann | SELBAC | Sellaphora bacillum |
| Sellaphora | hustedtii | (Krasske) Lange-Bertalot | SELHUS | Sellaphora hustedtii |
| Sellaphora | laevissima | (Kützing) Mann | SELHAE | Sellaphora laevissima |
| Sellaphora | mutata | (Krasske) Lange-Bertalot | SELMUT | Sellaphora mutata |
| Sellaphora | pupula | (Kützing) Mereschkowsky | SELPUP | Sellaphora pupula |
| Sellaphora | pupula var. capitata | Skvortzov et Mayer | SELPUP CAP | Sellaphora pupula var. capitata |
| Sellaphora | pupula var. elliptica | (Hustedt) Bukhtiyarova | SELPUP ELL | Sellaphora pupula var. elliptica |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|-------------|-----------------------------|---------------------------------------|---------------|--|
| Sellaphora | pupula var. rectangularis | (Gregory) Lange-Bertalot et Metzeltin | SELPUP REC | Sellaphora pupula var. rectangularis |
| Sellaphora | rostrata | (Hustedt) Johansen | SELROS | Sellaphora rostrata |
| Sellaphora | seminulum | (Grunow) Mann | SELSEM | Sellaphora seminulum |
| Sellaphora | sp. 1 KYDOW LAP | n/a | SELSP1L AP | Sellaphora sp. 1 KYDOW LAP |
| Simonsenia | delognei | (Grunow) Lange-Bertalot | SIMDEL | Simonsenia delognei |
| Skeletonema | potomos | (Weber) Hasle | SKEPOT | Skeletonema potomos |
| Stauroneis | agrestis | Petersen | STAAGR | Stauroneis agrestis |
| Stauroneis | alabamae | Heiden | STAALA | Stauroneis alabamae |
| Stauroneis | anceps | Ehrenberg | STAANC | Stauroneis anceps |
| Stauroneis | anceps fo. americana | Reimer | STAANC GRA | Stauroneis anceps fo. americana |
| Stauroneis | anceps fo. gracilis | Rabenhorst | STAANC AME | Stauroneis anceps f. gracilis |
| Stauroneis | anceps fo. linearis | (Ehrenberg) Hustedt | STAANCL IN | Stauroneis anceps for. linearis |
| Stauroneis | borrichii | (Petersen) Lund | STABOR | Stauroneis borrichii |
| Stauroneis | kriegeri | Patrick | STAKRI | Stauroneis kriegeri |
| Stauroneis | legumen | (Ehrenberg) Kützing | STALEG | Stauroneis legumen |
| Stauroneis | livingstonii | Reimer | STALIV | Stauroneis livingstonii |
| Stauroneis | nana | Hustedt | STANAN | Stauroneis nana |
| Stauroneis | obtusa | Lagerstedt | STAOBT | Stauroneis obtusa |
| Stauroneis | phoenicenteron | (Nitzsch) Ehrenberg | STAPHO | Stauroneis phoenicenteron |
| Stauroneis | phoenicenteron fo. gracilis | (Ehrenberg) Hustedt | STAPHO GRA | Stauroneis phoenicenteron fo. gracilis |
| Stauroneis | smithii | Grunow | STASMI | Stauroneis smithii |
| Stauroneis | smithii var. incisa | Pantocsek | STASMI NC | Stauroneis smithii var. incisa |
| Stauroneis | smithii var. sagitta | (Cleve) Hustedt | STASMIS AG | Stauroneis smithii var. sagitta |
| Stauroneis | sp. (1) unidentified | n/a | STASP1 | Stauroneis sp. (1) unidentified |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|-----------------|-----------------------------|---------------------------------|---------------|---------------------------------------|
| Stauroneis | spp. | n/a | STASPP | Stauroneis spp. |
| Stauroneis | thermicola | (Petersen) Lund | STATHE | Stauroneis thermicola |
| Staurosira | construens | Ehrenberg | STACON | Staurosira construens |
| Staurosira | construens var. binodis | (Ehrenberg) Hamilton | STACON BIN | Staurosira construens var. binodis |
| Staurosira | construens var. venter | (Ehrenberg) Hamilton | STACON VEN | Staurosira construens var. venter |
| Staurosirella | lapponica | (Grunow) Williams et Round | STLLAP | Staurosirella lapponica |
| Staurosirella | leptostauron | (Ehrenberg) Williams et Round | STALEP | Staurosirella leptostauron |
| Staurosirella | pinnata | (Ehrenberg) Williams et Round | STLPIN | Staurosirella pinnata |
| Stenopteroberia | delicatissima | (Lewis) Brébisson | STNDEL | Stenopteroberia delicatissima |
| Stephanodiscus | alpinus | Hustedt | STEALP | Stephanodiscus alpinus |
| Stephanodiscus | hantzschii | Grunow | STEHAN | Stephanodiscus hantzschii |
| Stephanodiscus | hantzschii fo. tenuis | (Hustedt) Håkansson et Stoermer | STEHAN TEN | Stephanodiscus hantzschii fo. tenuis |
| Stephanodiscus | minutulus | (Kützing) Cleve et Möller | STEMIN | Stephanodiscus minutulus |
| Stephanodiscus | niagarae | Ehrenberg | STENIA | Stephanodiscus niagarae |
| Stephanodiscus | sp. (1) unidentified | n/a | STESP1 | Stephanodiscus sp. (1) unidentified |
| Stephanodiscus | subtilis | (Van Goor) A. Cleve | STESUB | Stephanodiscus subtilis |
| Stephanodiscus | vestibulus | Håkansson, Theriot et Stoermer | STEVES | Stephanodiscus vestibulus |
| Surirella | agmatilis | Camburn | SURAGM | Surirella agmatilis |
| Surirella | angusta | Kützing | SURANG | Surirella angusta |
| Surirella | bifrons | Ehrenberg | SURBIF | Surirella bifrons |
| Surirella | biseriata | Brébisson | SURBIS | Surirella biseriata |
| Surirella | bohemica | Maly | SURBOH | Surirella bohemica |
| Surirella | brebissoni | Krammer et Lange-Bertalot | SURBRE | Surirella brebissoni |
| Surirella | brebissonii var. kuetzingii | Krammer et Lange-Bertalot | SURBRE KUE | Surirella brebissonii var. kuetzingii |
| Surirella | elegans | Ehrenberg | SURELE | Surirella elegans |
| Surirella | gracilis | (Smith) Grunow | SURGRA | Surirella gracilis |
| Surirella | guatimalensis | Ehrenberg | SURGUA | Surirella guatimalensis |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|--------------|------------------------|----------------------|---------------|--------------------------------|
| Surirella | helvetica | Brun | SURHEL | Surirella helvetica |
| Surirella | linearis | Smith | SURLIN | Surirella linearis |
| Surirella | minuta | Brébisson | SURMIN | Surirella minuta |
| Surirella | ovalis | Brébisson | SUROVL | Surirella ovalis |
| Surirella | ovata | Kützing | SUROVT | Surirella ovata |
| Surirella | ovata var. africana | Cholnoky | SUROVT AFR | Surirella ovata var. africana |
| Surirella | ovata var. pinnata | (Smith) Brun | SUROVT PIN | Surirella ovata var. pinnata |
| Surirella | roba | Leclercq | SURROB | Surirella roba |
| Surirella | robusta | Ehrenberg | SURRBS | Surirella robusta |
| Surirella | robusta fo. lata | Hustedt | SURRBS LAT | Surirella robusta f. lata |
| Surirella | sp. (1) unidentified | n/a | SURSP1 | Surirella sp. (1) unidentified |
| Surirella | splendida | (Ehrenberg) Kützing | SURSPL | Surirella splendida |
| Surirella | spp. | n/a | SURSP1 | Surirella spp. |
| Surirella | stalagma | Hohn et Hellermann | SURSTA | Surirella stalagma |
| Surirella | subsalsa | Smith | SURSUB | Surirella subsalsa |
| Surirella | suecica | Grunow ex Van Heurck | SURSUE | Surirella suecica |
| Surirella | tenera | Gregory | SURTEN | Surirella tenera |
| Surirella | tenera var. nervosa | Schmidt | SURTEN NER | Surirella tenera var. nervosa |
| Synedra | acus | Kützing | SYNACU | Synedra acus |
| Synedra | capitata | Ehrenberg | SYNCAP | Synedra capitata |
| Synedra | delicatissima | Smith | SYNDEL | Synedra delicatissima |
| Synedra | filiformis | Grunow | SYNFIL | Synedra filiformis |
| Synedra | filiformis var. exilis | Cleve-Euler | SYNFILE XI | Synedra filiformis var. exilis |
| Synedra | rumpens | Kützing | SYNRUM | Fragilaria capucina "complex" |
| Synedra | rumpens var. scotica | Grunow | SYNRUM SCO | Synedra rumpens var. scotica |
| Synedra | socia | Wallace | SYNSOC | Synedra socia |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|---------------|---|----------------------------------|---------------|--|
| Synedra | sp. (1) unidentified | n/a | SYNSP1 | Synedra sp. (1) unidentified |
| Synedra | sp. 1 KYDOW LAP | | SYNSP1L AP | Synedra sp. 1 KYDOW LAP |
| Synedra | spp. | n/a | SYNSPP | Synedra spp. |
| Synedra | ulna | (Nitzsch) Ehrenberg | SYNULN | Synedra ulna |
| Synedra | ulna var. amphirhynchus | (Ehrenberg) Grunow | SYNULN AMP | Synedra ulna var. amphirhynchus |
| Synedra | ulna var. contracta | Östrup | SYNULN CON | Synedra ulna var. contracta |
| Synedra | ulna var. danica | (Kützing) Van Heurck | SYNULN DAN | Synedra ulna var. danica |
| Synedra | ulna var. oxyrhynchus | (Kützing) Van Heurck | SYNULN OXY | Synedra ulna var. oxyrhynchus |
| Synedra | ulna var. oxyrhynchus fo. mediocontracta | (Fonti) Hustedt | SYNULN OXM | Synedra ulna v. oxyrhynchus f. mediocontracta |
| Synedra | ulna var. ramesi | (Héribaude) Hustedt | SYNULN RAM | Synedra ulna var. ramesi |
| Tabellaria | fenestrata | (Lyngbye) Kützing | TABFEN | Tabellaria fenestrata |
| Tabellaria | flocculosa | (Roth) Kützing | TABFLO | Tabellaria flocculosa |
| Tabularia | fasciculata | (Agardh) Williams et Round | TBUFAS | Tabularia fasciculata |
| Tabularia | tabulata | (Agardh) Snoeijis | TBUTAB | Tabularia tabulata |
| Tetracyclus | glans | (Ehrenberg) Mills | TETGLA | Tetracyclus glans |
| Tetracyclus | rupestris | Ralfs | TETRUP | Tetracyclus rupestris |
| Thalassiosira | weissflogii | (Grunow) Fryxell et Hasle | THAWEI | Thalassiosira weissflogii |
| Tryblionella | apiculata | Gregory | TRYAPI | Tryblionella apiculata |
| Tryblionella | calida | (Grunow ex Cleve et Grunow) Mann | TRYCAL | Tryblionella calida |
| Tryblionella | circumsuta | (Bailey) Ralfs | TRYCIR | Tryblionella circumsuta |
| Tryblionella | coarctata | (Grunow) Mann | TRYCOA | Tryblionella coarctata |
| Tryblionella | compressa | (Bailey) Poulin | TRYCOM | Tryblionella compressa |
| Tryblionella | debilis | Arnott | TRYDEB | Tryblionella debilis |
| Tryblionella | gracilis | Smith | TRYGRA | Tryblionella gracilis |
| Tryblionella | hungarica | (Grunow) Mann | TRYHUN | Tryblionella hungarica |

| Genus | Species | Authority | Code | FormerNameinEDAS |
|--------------|----------------|--------------------|-------------|-------------------------|
| Tryblionella | levidensis | Smith | TRYLEV | Tryblionella levidensis |
| Tryblionella | littoralis | (Grunow) Mann | TRYLIT | Tryblionella littoralis |
| Tryblionella | salinarum | (Grunow) Pantocsek | TRYSAL | Tryblionella salinarum |
| Tryblionella | victoriae | Grunow | TRYVIC | Tryblionella victoriae |

APPENDIX C: DIATOM ANALYSIS BENCH SHEET EXAMPLE

