

## **Instructions for Authors**

### **1. Aims and Scope**

*Algal Science and Technology* is a bilingual Japanese/English journal published by the Japanese Society for Applied Algae Research. It publishes a wide range of important, original, and novel research findings on algae, spanning both basic and applied sciences, across various disciplines, including the humanities. The journal is published twice annually in print, with published papers accessible through JST. The journal accepts five types of articles: Review Articles, Original Research Articles, Short Communications, Technical Notes, and Perspectives. All submissions must be original and have not been published elsewhere. Original research papers, technical notes, and short communications present novel findings that have not been previously published. Other types of articles may synthesize prior work but should offer significant new insights or perspectives.

### **2. Types of Manuscripts**

The Journal publishes five types of manuscripts. All submissions undergo peer review, and each type has specific guidelines regarding length and content. As a general rule, 2,500 characters in Japanese and 1,000 words in English correspond to approximately one printed page, excluding figures and tables.

#### **2.1 Review Article**

Review articles systematically summarize, analyze, and evaluate existing literature and research on a specific topic or field. They provide a comprehensive overview of current knowledge and research trends, offering a clear and cohesive understanding of the field. The maximum manuscript length should not exceed 10 pages.

#### **2.2 Original Research Article**

Original research articles report new experimental findings or discoveries in a particular academic field. These articles are based on the authors' original data and experiments, contributing to the advancement of knowledge. The manuscript length should not exceed 8 pages.

#### **2.3 Short Communication**

Short communications deliver rapid reports of new findings or discoveries in a specific research area. These papers are more concise than original research articles and focus on key results. Submissions in this category may also include supplementary data that complements a previously published article, presenting new, important results not previously mentioned. The manuscript length should not exceed 4 pages.

#### **2.4 Technical Note**

Technical notes describe the development or improvement of a particular method, technique, or device. These papers should detail a novel technical approach that can be replicated by other researchers or engineers. The manuscript length should not exceed 8 pages.

## **2.5 Perspective**

Perspectives offer a fresh viewpoint on a specific topic or field of research. These articles present innovative ideas or approaches to existing issues, basic concepts, or widely accepted ideas. The manuscript length should not exceed 2 pages.

## **3. Ethical Guidelines**

Authors must review and comply with the Journal's policies before submitting a manuscript. The Journal reserves the right to reject or withdraw any manuscript that does not meet these standards without peer review. The following outlines the responsibilities of the authors, editorial board members, reviewers, and publishers of the Journal regarding research and publication ethics. Manuscripts submitted to the Journal must be original and must not have been published, either in full or in part, in any language. They must not be under consideration for publication in any other medium at the time of submission to the Journal.

### **3.1 Originality**

Manuscripts must be original. The Journal may use plagiarism detection tools to screen submitted manuscripts. By submitting a manuscript, the author agrees to such screenings. Manuscripts with unoriginal content may be rejected or withdrawn at the editorial board's discretion.

### **3.2 Preprints**

Authors are permitted to submit manuscripts to preprint servers such as bioRxiv or Jxiv prior to or concurrently with submission. However, this must be disclosed in the cover letter at the time of submission. Preprints may only contain the original version of the manuscript describing primary research. Revised versions, accepted manuscripts, or published papers should not be uploaded to preprint servers. A link to the final published version in the journal should be provided once the paper is accepted.

### **3.3 Authorship**

All authors must approve the final list of authors before manuscript submission. Changes to the author list (e.g., additions, deletions, or changes in order) must be approved by all authors and the editorial board. Authors are encouraged to follow the guidelines provided by the International Committee of Medical Journal Editors (ICMJE) on "Defining the Roles of Authors and Contributors." According to ICMJE, authorship is based on the following criteria:

1. Substantial contribution to the conception and design of the work, or the acquisition, analysis, or interpretation of data.
2. Drafting or critically revising the manuscript for important intellectual content.
3. Approving the final version of the manuscript for publication.
4. Accepting responsibility for all aspects of the paper.

Contributors who do not meet all four criteria should be acknowledged but not listed as authors.

### **3.4 Image Integrity**

Authors may digitally process and manipulate images, provided that:

1. Adjustments are minimal and applied uniformly across the image,

2. Processing is consistent with community standards,
3. The manuscript clearly states any image processing performed.

All images must accurately reflect the original data. Authors should not alter, delete, add, or enhance any parts of the images. The editorial board reserves the right to request unprocessed original images. Failure to provide these upon request may result in rejection or withdrawal of the manuscript.

### **3.5 Reproduction of Copyrighted Material**

If a manuscript includes material for which the author does not hold copyright, permission must be obtained from the copyright holder. Authors must attach copies of permission letters for any copyrighted material included in the manuscript.

### **3.6 Animal/Human Clinical Studies**

For studies involving humans or human-derived materials, authors must confirm that the research was conducted following the principles outlined in the Declaration of Helsinki and the guidelines of their institution. The manuscript should describe the procedures followed to obtain informed consent from participants. The Journal adheres to ICMJE guidelines for clinical trial registration, which is a requirement for publication. All clinical trials must be registered with a public clinical trial registry, and the registration details should be included in the manuscript. Authors must also follow the EQUATOR Network's Reporting Guidelines for Health Research. Research involving animals must comply with institutional guidelines and require approval from the relevant ethics committee.

### **3.7 Specimen Collection**

Manuscripts discussing the collection of wildlife specimens or samples must include details on their sources and collection methods. Authors should describe the relevant ethical guidelines, local laws, and permissions obtained for specimen collection.

### **3.8 Authors' Interests and Conflicts of Interest**

All authors must declare any conflicts of interest or competing interests related to the manuscript. A conflict of interest arises when a situation could affect the authors' impartiality in conducting and reporting research. Examples include financial interests, affiliations, consulting roles, or stock ownership. Authors should also disclose the funding sources for the research in the manuscript's funding section.

### **3.9 Confidentiality**

The Journal ensures the confidentiality of all unpublished manuscripts. By submitting a manuscript, authors guarantee that all communications regarding the manuscript (including those from the editorial board, editorial members, and reviewers) will remain confidential.

## **4. Review Process**

The Editorial Board will review all manuscripts submitted to the Journal. All papers will undergo review by multiple researchers in a single-blind manner. If the reviewers determine that revisions are necessary, the manuscript will be returned to the authors with detailed reasons for the required changes. If the Editorial Board deems the manuscript unsuitable for publication, it will be rejected. Minor revisions may also be requested for papers accepted for

publication. Acceptance may be rescinded if serious errors are found or if misconduct, such as data fabrication, falsification, or plagiarism, is discovered. If authors wish to withdraw or amend the manuscript for resubmission, the Editorial Board may approve this after review. However, the authors will bear the costs associated with any corrections and republication.

#### **4.1 Editorial and Review Process**

The Journal follows a single-blind peer review system. Initially, the editorial board members review all submitted manuscripts. Manuscripts that do not fall within the scope of the Journal or are deemed unsuitable for publication will be rejected without peer review. Manuscripts passing the initial review will be assigned to two or more reviewers chosen by the editorial board. Reviewers are selected based on their expertise, research achievements, and experience. The review deadline varies depending on the manuscript type. After receiving the reviewers' reports, the editorial board will decide on the manuscript's acceptance or rejection. If revisions are required, authors must resubmit the manuscript within three months. Manuscripts submitted after this deadline may be treated as new submissions. The editorial board will either send the revised manuscript back to the reviewers or evaluate it internally to ensure that the comments from reviewers and the editorial board have been addressed. The editorial board will then recommend the manuscript for publication to the Editor-in-Chief, who will make the final decision. If the Editor-in-Chief is an author of the manuscript, the editorial board will make the final decision regarding its suitability for publication.

#### **4.2 Selection of Reviewers**

Reviewers are selected based on their expertise, research accomplishments, recommendations, and previous experience as reviewers for the Journal. Invitations to reviewers will be sent within two weeks of paper submission. Reviewers must submit their initial reports within three weeks of accepting the review invitation. Authors may suggest specific reviewers for inclusion or exclusion in the review process when submitting their manuscript via the cover letter.

#### **4.3 Acceptance Criteria**

Manuscripts that meet the publication requirements of the Journal and are expected to contribute significantly to its content will be recommended for acceptance by the editorial board. The criteria for acceptance include:

- The manuscript falls within the scope of the Journal.
- The manuscript is original and novel.
- The research is technically rigorous and accurately described.
- The content is of interest to the Journal's readers.

If a manuscript does not meet these requirements, the editorial board may recommend rejection.

#### **4.4 Appeal**

Authors may appeal to the Editorial Board if they believe that an editorial decision was made in error. Appeals will only be considered if the author provides specific evidence of misunderstanding or error by the reviewers or the editorial board. The Editor-in-Chief will carefully review the appeal and make the final decision, following the Committee on Publication Ethics (COPE) guidelines.

#### **4.5 Errata and Withdrawals**

Errors in published articles will be addressed through the issuance of an erratum. Errata are issued for errors that significantly affect the scientific integrity of the publication, the reputation of the authors, or the Journal. Authors wishing to correct an article should contact the editorial board with details of the error and the proposed corrections. Retractions may be issued if a published article contains invalid or unreliable results or conclusions, has been previously published elsewhere, or violates ethical standards. Retraction requests should be directed to the Editor-in-Chief, who will investigate the matter and contact the authors for their response. The final decision regarding errata or retractions rests with the Editor-in-Chief.

#### **4.6 Editorial Board Members as Authors**

If an editorial board member, including the Editor-in-Chief, submits a manuscript, they will be excluded from the peer review process and will not have access to the manuscript details. Manuscripts authored by editorial board members will undergo the same peer review process as those authored by other researchers, with editorial decisions made according to the standard procedure.

#### **4.7 Actions in Case of Ethical Violations**

The Journal will address allegations of ethical violations in accordance with its policies and the Committee on Publication Ethics (COPE) guidelines.

### **5. Copyright, Open Access, and Fees**

This Journal is fully open-access and operates under the Creative Commons (CC) license. The details of the CC license are as follows:

#### **5.1 Copyright and Licensing**

All articles published in this Journal are copyrighted by the Japan Society for Applied Algae Research. Articles are distributed under the terms of the Creative Commons License "CC BY," which allows for reuse and distribution with proper attribution. Any use, distribution, or reproduction outside the scope of this license is prohibited.

#### **5.2 Article Publication Charge (APC)**

The Journal charges an Article Publication Charge (APC) for all manuscripts. Authors of accepted manuscripts will be invoiced for the APC prior to publication.

#### **5.3 Waiver Policy**

The publication fee will be waived for authors from countries classified as "Group A" under Research4Life. Additionally, the Journal will consider waiving the publication fee in cases of proven financial hardship. Requests for fee waivers must be submitted to the Editor-in-Chief prior to manuscript submission. Requests will not be considered once peer review has begun.

#### **5.4 Publication Fee (Page Charge)**

The publication fee is 30,000 yen per paper. However, if the corresponding author is a member of the Japan Society of Applied Algae Research, the fee will be waived. The page charge is waived for black-and-white pages within the maximum number of printed pages. The maximum number of pages for each article type is:

- Review Article: 10 pages

- Original Research Article and Technical Note: 8 pages
- Short Communication: 4 pages
- Perspective: 2 pages

If the manuscript exceeds the maximum page limit, an additional fee of 12,000 yen will be charged for each extra page. Color pages incur an additional fee of 12,000 yen per page. In principle, no page charges or publication fees will apply to invited papers.

## 6. Manuscript Submission

Manuscripts should be submitted by email to the Editor-in-Chief. Initial submissions should include a PDF file containing the manuscript text, tables, figures, and other materials, as well as a submission form. A manuscript template in Word format is available on the JSME website. Authors will receive instructions for manuscript revision along with the initial decision if revisions are required.

## 7. Preparation of Manuscript (Writing Guidelines)

### 7.1 Formatting Style

Manuscripts should be prepared using Microsoft Word or other suitable software. The Word file should be formatted as follows:

- **Paper Size:** A4
- **Margins:** 2 cm on all sides (top, bottom, left, and right)
- **Font:**
  - Japanese: "MS P 明朝"
  - English: "Calibri"
- **Font Size:** 10.5 pt
- **Character Layout:** 50 characters per line (horizontal) and 27 lines per page (equivalent to MS Word's "1.5 lines" paragraph line spacing setting)
- **Page Number:** At the bottom center of each page
- **Line Numbering:** Add serial numbers to the left side of the manuscript (excluding figures and tables)
- **Punctuation:** Use standard punctuation marks as follows:
  - **In Japanese:** Full-width periods ( . ) and full-width commas ( , )
  - **In English:** Half-width periods ( . ) and half-width commas ( , ) with a half-width space after them

Manuscripts that have been previously rejected by other journals (due to reasons such as field differences) may be resubmitted in the format of the original journal, along with the earlier review results. However, if the manuscript is accepted by this Journal, it must be reformatted according to the submission rules of this Journal.

### 7.2 Standard of English

Manuscripts must be written in clear, grammatically correct English. Authors whose native language is not English are strongly encouraged to have their manuscripts reviewed by a native English speaker or to utilize an English editing service before submission. Manuscripts written

in English that significantly hinder comprehension of the content may be rejected without peer review.

### **7.3 Structure of Manuscript**

#### **(1) Review Article**

- Front cover
- Page 2 (Abstract, Keywords)
- Main text
- Acknowledgments
- Author Contribution
- Funding
- Conflict of interest
- Description of Supplementary data
- References
- Tables
- Figure legends
- Figures
- Supplementary data

#### **(2) Original Research Article, Technical Note**

- Front cover
- Page 2 (Abstract, Keywords)
- Introduction
- Materials and Methods
- Results
- Discussion
- Accession numbers
- Acknowledgments
- Author Contributions
- Funding
- Conflict of interest
- Description of Supplementary data
- References
- Tables
- Figure legends
- Figures
- Supplementary data

#### **(3) Short Communication**

- Front cover
- Page 2 (Abstract, Keywords)
- Main text
- Accession numbers
- Acknowledgments
- Author Contribution
- Funding
- Conflict of interest
- Description of Supplementary data
- References

- Tables
- Figure legends
- Figures
- Supplementary data

#### 4) Perspective

- Front cover
- Page 2 (Abstract, Keywords)
- Main text
- Acknowledgments
- Author Contributions
- Funding
- Conflict of interest
- Description of Supplementary data
- References
- Tables
- Figure legends
- Figures
- Supplementary data

### 7.4 Manuscript Format

#### (1) First Page

The first page of the manuscript (cover page) should include, in order from top to bottom, the title, English title, author(s), English author(s), affiliation, English affiliation, address, and Running Title. The title should be written in both Japanese and English. A series of papers by the same author should not use a common main title with a numbered subtitle. Titles should not include abbreviations, except for those commonly used in the relevant field.

#### Authors:

The full names of all authors should be provided. Joint authors should be connected by a comma. The responsible author(s) should be indicated by a superscript "† (dagger)," and their email address should be provided as contact information. The first and middle names should be written with the first letter capitalized and the rest in lowercase. Joint authors should be separated by commas, with "and" before the last author.

#### Institutional Affiliation:

The author's official institutional affiliation (including department, institute/university, municipality, prefecture, and country) should be listed in both Japanese and English, in that order. If co-authors have different affiliations, superscript numbers should be added to each author's name. If it is necessary to list the current affiliation or a JSPS Research Fellowship, etc., the author's name should be marked with superscript lowercase letters. The name of the city, prefecture, postal code, and country should be written in italics.

#### ORCID iD:

If an author has an ORCID iD (<http://www.orcid.org>), the iD should be listed. The journal encourages the inclusion of ORCID iDs for all authors.

#### Running Title:

The paper's title should not exceed 30 characters in Japanese or 40 characters in English.

## **2) Page 2**

Provide an abstract and keywords in English.

### **Abstract:**

A clear and concise summary of the purpose, methods, and results of the research, in 200 words or less, written in English.

### **Keywords:**

List 3 to 8 general terms closely related to the manuscript's content below the abstract. An English translation of keywords is not required.

## **3) Page 3 and After**

- The Review should begin with an introduction, followed by a section with a title determined by the author(s).
- Original Research Articles and Technical Notes should be divided into the following sections: Introduction, Materials and Methods, Results, and Discussion. The Technical Note should also be divided into these sections. Results and Discussion can be combined into one section (Results and Discussion) if this improves comprehension for the reader.
- Short Communications and Perspectives should be written without sections for Introduction, Materials and Methods, Results, and Discussion.
- After the Discussion, all papers should include Acknowledgments, Author Contributions, Funding, Conflict of Interest, Description of Supplementary Data, and References, in that order.

### **Introduction:**

The introduction should provide sufficient background information to help the reader understand the purpose of the study and its relationship to other research in the field, without being an extensive review of the topic.

### **Materials and Methods:**

Provide detailed information to allow readers to replicate the experiments. List the sources of chemicals, reagents, and equipment, with the location (city, country) in parentheses. If hazardous materials or procedures are used, detailed precautions should be provided.

### **Results:**

Describe the results of the experiment. The "Results" and "Discussion" sections may be combined into a "Results and Discussion" section if this improves understanding for the reader, but they should be separated if required by the editorial board. Tables and figures (including photographs) may be used to illustrate the experimental results. Avoid excessive explanations of data presented in tables and figures.

### **Discussion:**

The Discussion should be concise and focus on the interpretation of the results. This section should only present new models or hypotheses if the experimental results suggest them, and should not merely repeat the description of the experimental results.

**Accession Number:**

Gene sequences, cDNAs, genomes, proteins, sequencing reads, etc., should be registered with the databases of the International Nucleotide Sequence Database Collaboration (INSDC) member institutions (DDBJ, EBI, NCBI). Accession numbers should be indicated in the manuscript.

**Acknowledgments:**

Include a brief summary of all funding sources related to the research.

**Author Contributions:**

For all authors, provide contributions according to authorship criteria. Author names should be indicated by initials.

**Funding:**

List all funding sources associated with the conduct of the research.

**Conflict of Interest:**

Any financial interests or associations that could bias the content of the research should be disclosed. If there are no conflicts of interest, this section should state "No conflicts of interest declared" in Japanese and "No conflicts of interest to disclose" in English.

**Description of Supplementary Data:**

Create a section listing all supplementary data, including titles.

**References:**

References should be cited in the text with the first author's last name followed by the year in parentheses. If there are two authors, list both surnames (e.g., Mikami and Kishimoto 2018). For three or more authors, list the first author's surname followed by "et al." (e.g., Mikami et al. 2018). For database citations, follow the notation specified by the citation source. If no specific format is provided, include the name or URL of the database. Do not cite papers that are in progress. Unpublished works such as master's theses and conference proceedings should not be included in the reference list but should be cited as (unpublished) in the text.

Examples: (Yamada 2007a), (Yamada and Tanaka 2007), (Yamada et al. 2007)

When citing multiple references together in the text, separate the references with semicolons (;) and list them in chronological order, starting with the earliest year of publication. If multiple references were published in the same year, list them in alphabetical order by the surname of the first author.

Example: (Hiwatashi et al. 2014; Tashiro and Yoshizumi 2014; Tashiro 2015; Hiwatashi et al. 2018; Takahashi et al. 2023; Ashino et al. 2024)

In the References section, list references in alphabetical order by the first author's last name

and chronologically where applicable. Japanese-language references should also be listed alphabetically but remain in their original Japanese format. The order is determined first by the alphabetical order of the first author's surname, then by chronological order. Punctuation marks such as periods (.), commas (,), colons (:), and semicolons (;) should be used with care. If there are more than 10 authors, list the first 10 and add "et al." for the remaining authors.

#### Examples:

- **Journal Article:**

Tashiro Y, Ogawa H. (2020) Relationships between gel-forming ability and molecular weight distribution of agar. *Algal Resources* 13: 107-110.

[https://doi.org/10.20804/jsap.13.2\\_107](https://doi.org/10.20804/jsap.13.2_107) (In Japanese with English abstract)

Rochas C, Lahaye M, Yaphe W. (1986) Sulphate content of carrageenan and agar determined by infrared spectroscopy. *Bot. Mar.* 29: 335-340. <https://doi.org/10.1515/botm.1986.29.4.335>

Sekkal M, Legrand P, Huvenne PJ, Verdus MC. (1993) The use of FTIR microspectrometry as a new tool for the identification in situ of polygalactanes in red J. *Mol. Struct.* 294: 227-230. <https://doi.org/10.1111/j.1529-8817.2009.00684.x>

Watase M, Nishinari K. (1981) Rheological studies of agar-agar gels prepared from Makusa (*Gelidium amansii*) gathered in different seasons. *Nippon Shokuhin Kogyo Gakkaishi* 28: 437-443. [https://doi.org/10.3136/nskkk1962.28.8\\_437](https://doi.org/10.3136/nskkk1962.28.8_437) (In Japanese with English abstract)

- **Book:**

Mikami K, Li L, Takahashi M. (2012) Monospore-based asexual life cycle in *Porphyra yezoensis*. In: Mikami K (ed). *Porphyra yezoensis: Frontiers in Physiological and Molecular Biological Research*. Nova Science Publishers, New York, pp. 15-37.

- **Internet Article:**

European Commission. (2024) EU agri-food surplus increased in the first half of 2024. September 27, 2024. [https://agriculture.ec.europa.eu/news/eu-agri-food-surplus-increased-first-half-2024-2024-09-27\\_en](https://agriculture.ec.europa.eu/news/eu-agri-food-surplus-increased-first-half-2024-2024-09-27_en) (Accessed October 3, 2024).

#### Tables

All tables should be written in English and numbered consecutively using Arabic numerals (e.g., Table 1, Table 2, etc.). Each table must have an English title. Explanatory notes and footnotes should be placed below the table and designated with superscript letters (e.g., a), b)). Units of measurement should be listed at the top of the respective columns, including numerical values. A detailed description of the experimental conditions used to obtain the data shown in the table should be provided in the relevant sections of the manuscript, not within the table description.

#### Figures

All figures must be written in English. Figures may include line drawings, photographs, charts, graphs, etc. Use high-resolution images (300 dpi or higher) and ensure they are sized for direct

printing. The maximum width for single-column figures is 8.6 cm, and for double-column figures, 17.8 cm. The maximum height for all figures should be 24 cm. If the figure contains a photograph, the magnification should be indicated in the figure legend or shown with a scale on the photograph. Figures should be numbered consecutively using Arabic numerals (e.g., Fig. 1, Fig. 2, etc.). Each figure should have a concise title. If a figure consists of multiple images, label each image in the upper left corner with capital letters (A, B, C, etc.). Do not use parentheses. The font size for labels should be 12 points, in capital letters. The figure legend should be provided on a separate page and include sufficient details about the experiment to help readers interpret the figure. Avoid repeating information already provided in the "Materials and Methods" and "Results" sections. Figures should be submitted in their actual size, although the editorial board reserves the right to reduce the figure size. All graphs must include X- and Y-axes, and the font size for letters and numbers should be at least 6 points.

### **Supplementary Data**

Supplementary data is provided as additional, non-essential material that aids in the reader's understanding of the manuscript. This may include data, text, audio, or video files, which will be made available online with the accepted manuscript. A summary list of titles for supplementary materials should be included after the "Conflict of Interest" section. Supplementary material is subject to peer review, and authors must submit a final version along with the manuscript. Once the manuscript is accepted, no further changes to the supplementary material may be made. Video files should be less than 10 MB and submitted in .mp4, .avi, or .mov format.

### **Terminology:**

Terminology should follow the "Glossary of Scientific Terms (Zoology, Botany, Chemistry, Agriculture, etc.)" (Ministry of Education, Culture, Sports, Science, and Technology), and the "New English-Japanese-Japanese-English Dictionary of Fisheries Science Terms" or "Web Edition New English-Japanese-English Dictionary of Fisheries Science Terms" (The Japanese Society of Fisheries Science, Koseisha-Koseikaku, 2017).

### **Names of Genes and Proteins:**

Gene and locus names should be italicized, while protein names should be written in roman type.

### **Enzymes:**

Enzyme names should include the enzyme number, strain name, or common name, and should not be abbreviated unless customary.

### **Physical Quantities and Symbols:**

Follow IUPAC recommendations for physical quantities. Symbols for physical quantities should be italicized if the subscripts represent physical quantities, and in roman if they do not.

### **Units**

The International System of Units (SI), as shown in Tables 1 to 3, must be adhered to when describing units. Do not add an "s" to plural units, even when abbreviated. Units that are the product of multiple units should be indicated by connecting each unit with the multiplication

symbol ".". However, the multiplication symbol may be omitted if there is no risk of ambiguity.  
 Example: N·m (Nm is also acceptable)

When an assembled unit is expressed as the quotient of multiple units, it should be represented using the division symbol "/" or by employing negative exponents for each unit. The division symbol should be used only once within an assembled unit. If there are multiple units with negative exponents, they should be enclosed in parentheses.

Examples: J/K or J·K<sup>-1</sup>, W/(m·K) or W·m<sup>-1</sup>·K<sup>-1</sup>

**Table 1: SI Units and Units Used in Combination**

Physical quantity	SI unit	Units used with SI	Non-SI units to be avoided
Length	m	ua, nautical mile	mμ, μ, in, ft, yd
Area	m <sup>2</sup>	a, ha	
Volume	m <sup>3</sup>	L	ltr., cc
Plane angle	rad	°, ', "	
Solid angle	sr		
Time	s	min, h, d	
Frequency	Hz		
Rotational speed		rpm	
Wavenumber	m <sup>-1</sup>	cm <sup>-1</sup>	
Velocity	m s <sup>-1</sup>	knot	
Mass	kg	g, t, u, Da	lb
Pressure	Pa	bar	Torr, atm
Energy	J	eV	erg, cal
Temperature	K, °C		deg

**Table 2: SI Units**

Physical quantity	SI unit	Physical quantity	SI unit
Heat capacity	J K <sup>-1</sup>	Electric charge	C
Molar energy	J mol <sup>-1</sup>	Electric current	A
Photon flux density	μmol m <sup>-2</sup> s <sup>-1</sup>	Voltage	V
Illuminance	lx	Magnetic flux	Wb

**Table 3: SI Prefixes**

Factor	Prefix	Symbol	Factor	Prefix	Symbol
10 <sup>-15</sup>	femto	f	10 <sup>1</sup>	deca	da
10 <sup>-12</sup>	pico	p	10 <sup>2</sup>	hecto	h
10 <sup>-9</sup>	nano	n	10 <sup>3</sup>	kilo	k
10 <sup>-6</sup>	micro	μ	10 <sup>6</sup>	mega	M
10 <sup>-3</sup>	milli	m	10 <sup>9</sup>	giga	G

### Character Designation

Variables (including statistical variables) and parameters should be written in italics. For statistical variables, use uppercase and lowercase letters according to conventional guidelines. The variables **p**, **r**, and **n** should be written in lowercase, but may be capitalized if necessary. However, capital letters are acceptable when required, provided that the notation is consistent

throughout the manuscript, including figures and tables.

**Italicized forms:** x, y, n (number of individuals, etc.), p, r (correlation coefficient), R<sup>2</sup> (coefficient of determination), t-test, F-test, U-test

**Roman form** (abbreviations, not variables): SD (standard deviation), SE (standard error), df (degrees of freedom; **v** is not used)

Chemical symbols should be written as follows:

- **Italicized symbols:** o-, m-, p-, N-, O-, S-, n-, d-, l-, prim-, sec-, tert-, cis-, trans
- **Roman form:** pH, R<sub>f</sub>, Cl<sup>-</sup>, bis-, iso-, homo-

### 8.1 Cover Letter:

A cover letter should be attached to the submission, including:

- Type and title of the paper
- Contact information of the corresponding author(s)
- A brief description of the purpose and results of the research, highlighting its novelty and contribution to algal science
- Names of editors and reviewers who recommend or oppose the paper
- Other important information, such as APC exemption requests, ethical declarations, conflicts of interest, etc.
- Whether the paper has been submitted to a preprint server.

### 8.2 Manuscript Submission Address:

Manuscripts should be submitted via email:

- Email address: edit@applied-phycology.jp (use "0" as @)
- Subject line: "Submission of Papers for AST"

The files to be sent should include:

- Cover letter
- Submission form (Word manuscript template)
- PDF file with text, tables, figures, and other materials.

## 9. After Acceptance

### 9.1 Submission of the Electronic File of the Accepted Manuscript

After receiving the acceptance notice, the author(s) should submit the electronic file of the accepted manuscript according to the instructions provided by the Editorial Board. In the case of minor revisions, the electronic file of the final manuscript should also be submitted. In principle, the manuscript in the electronic file should match the final accepted version. If revisions have been made, the details of those revisions should be clearly reported. The image file format should be in Word, Excel, PowerPoint, TIFF, or EPS with a high resolution of 300 dpi or higher. To ensure reproducibility, PDF files that reflect the original photographs, figures, and text style must be included. For tables, in addition to PDF files, the original files in Word, Excel, etc., should also be submitted.

### 9.2 Accepted Manuscripts

Accepted manuscripts will be proofread and typeset by the Journal's production team before publication. All correspondence regarding accepted manuscripts will be addressed to the corresponding author(s). For proofreading, the responsible author(s) should check and return the page proofs within 48 hours, in principle. Excessive changes are not allowed during the

proofreading stage; only corrections for typographical errors and omissions are permitted. A reprint order form will be sent to the corresponding author(s) along with the proofs, which should be returned together with the proofs. A PDF of the published version of the paper will be sent separately to the responsible author(s).

### **9.3 Registration with Institutional Repositories**

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### **9.4 Submission of Cover Images**

This journal may use images related to articles published in each issue as the cover image of the printed volume. Authors who wish to have an image considered for use as a cover image should submit, by e-mail, a striking image related to their accepted paper together with a caption (in Japanese or English). The selection of cover images will be carefully reviewed and decided by the Editorial Committee.

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## **10. Contact Information**

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