

Last updated: December 29, 2023 [View the latest guidelines online](#)

## Manuscript Submission Requirements Checklist

Manuscripts and revised manuscripts must be submitted via the ACS Paragon Plus Web site ([acsparagonplus.acs.org](https://acsparagonplus.acs.org)). E-mailed submissions and hardcopy submissions will not be processed. An overview of and complete instructions for the Web submission process are available at the ACS Paragon Plus website.

When submitting, please be aware of the following requirements:

- All manuscripts must be accompanied by a **written statement on the manuscript's significance** (not a summary of the abstract), addressing the **following three bullet points**: (1) statement of the problem addressed and originality of the approach, (2) contribution of the work to create new knowledge in the field, and (3) relevance of the work to advance research and impact to the field of agricultural and food chemistry, including the specific role of molecular research in the study. This 3-point statement should be uploaded as an informal letter using the manuscript file designation **"Supporting information for review only"**.
- All **co-authors** listed on the title page of the manuscript must be entered into the ACS Paragon Plus System at step 2 in the manuscript submission process. Only one corresponding author is allowed for each manuscript in Paragon Plus. Additional corresponding authors may be designated on the manuscript title page. Use of the phrase "all authors contributed equally" is discouraged. Instead, statements about author contributions should identify the specific aspect of the author's contribution.
- The **manuscript abstract and text** must appear in a single, double-spaced column; lines in the abstract and text must be numbered consecutively from beginning to end in a separate column at the left. There is **no separate conclusion section** to be used; conclusions should be incorporated into the results and discussion section. All of the manuscript text (including title page, abstract, all sections of the body of the paper, figure captions, scheme or chart titles and footnotes, and references) and tabular material should be in **one file**, with the complete text first followed by the tabular material.
- To ensure that a submitted manuscript meets **sufficient interest of the readership** of the journal, it is expected that articles recently published on the respective topic in the *Journal of Agricultural and Food Chemistry* and other similar journals in the field are cited to a reasonable extent. In general, **references** must be numbered in the order in which they appear in the text.
- The author's preference for **manuscript category** is indicated during the submission process. However, the final decision on the category under which the manuscript will be listed lies with the Editor.
- The system requires authors to supply the names, e-mail addresses, and affiliations of at least **four recommended reviewers**. The recommended reviewers should be experts in the subject matter of the manuscript and not be anyone who is or has been a former adviser/advisee, colleague in the same institution, research collaborator, and/or co-author of papers and patents or in any other way has a conflict of interest.
- If the manuscript is one of a series of **companion manuscripts** that will be published sequentially, please describe the planned series in the cover letter, mentioning previously

published parts and giving an estimate of when subsequent parts will be submitted.

Complete instructions for manuscript preparation are updated frequently and are available at the *Journal's* website. Please conform to these instructions when submitting manuscripts.

Authors whose manuscripts are published in *Journal of Agricultural and Food Chemistry* will be expected to review manuscripts submitted by other researchers from time to time.

## Scope of the Journal

The [\*Journal of Agricultural and Food Chemistry\*](#) considers high-quality, original research representing complete studies and scientific advances dealing with the innovative application of chemistry, biochemistry and biological sciences to increase the molecular understanding of product attributes, processes, technologies, and health aspects encompassing the agricultural-food-nutrition continuum.

Manuscripts are expected to involve chemistry, biochemistry and/or molecular biology as the fundamental component and can be combined with novel aspects of process engineering and food technology, authenticity and origin aspects of food, or the biological evaluation of agricultural systems including plant-plant, plant-fungal and plant-insect interactions, and/or food systems. The latter may include microbial, nutritional, physiological, sensory, or toxicological properties, and data must accompany sufficient discussion to demonstrate their relevance to food and nutrition.

Research considered for publication should be of general interest to the scientific community and/or the public, its potential impact should be significant and the technical quality is expected to conform to the highest standards of chemical research.

Current specific categories are as follows:

### **Agricultural and Environmental Chemistry**

to advance molecular knowledge (e.g., crop protection chemistry, nanotechnology, natural toxins, fate and biotransformation of residues), elucidate mechanisms of action of agrochemicals, understand mechanisms of plant-plant, plant-fungal and plant-insect interactions including the action of bioactive constituents in desirable plants on control of pests that threaten them, and promote innovative solutions for increased agricultural productivity, a sustainable supply of food and fiber, and protection of public health and the environment including water quality/treatment, agricultural waste, and energy- related issues.

### **Bioactive Constituents, Metabolites, and Functions**

to increase knowledge of chemical structures of bioactive constituents, phytonutrients, and nutraceuticals in foods, their human and animal metabolism, and their mechanisms of biological function to affect human health status, including various aspects of molecular nutrition such as nutritional biochemistry, nutrigenomics and metabolomics. Studies on traditional medicines and herbal remedies are outside the scope of this category. It is mandatory that manuscripts reporting on biological properties of crude extracts include detailed information on the chemical composition of the extracts causing the described properties.

Manuscripts can encompass cell-based or other in vitro assays, animal models, clinical human trials, or a combination thereof as the fundamental component, however, test systems applied must be appropriate and the analytical method used should allow the quantitation of time and dose response effects. It is understood that discussion on nutritional relevance and conclusions on human health aspects are carefully formulated considering the experimental design used

(appropriate cell test lines, significance of test/trial, relevant dose levels) and the data obtained.

### **Biofuels and Biobased Materials**

to advance knowledge of chemistry, biology, and processing of biobased products and biofuels including all the related areas of biodiesel, bioethanol, biogas, biotransformations and bioprocesses (plants, algae etc.), waste utilization, biorefinery and bioresource technologies associated with conversion or production of biobased materials, and sustainability, and environmental emissions and effects associated with these processes.

### **Biotechnology and Biological Transformations**

to foster technological advances in plant/agricultural biotechnology (e.g., crop improvement, nutraceuticals, bioenergy, transgenic plants, phytoremediation), microbial and insect biotechnology (metabolic engineering and synthetic/systems biology of bacteria, fungi, insects, yeasts and algae in the context of fermentation/bioproduction, biocatalysis, bioremediation, biodegradation), food and flavor biotechnology (biotransformations/microbiology and metabolic aspects of food/beverage systems), and protein and enzyme technology (recombinant proteins/enzymes, cell-free protein expression systems, and biocatalysis using immobilized enzymes).

### **Chemistry and Biology of Odor and Taste**

to advance molecular knowledge of the instrumental analysis (e.g. bioelectronics sensors), chemical structures, and formation pathways of aroma and taste molecules of plant and animal derived foods and beverages, the chemosensory receptors mediating flavor object recognition (e.g. *in vitro* cell assays), human *in vivo* psychophysics (incl. multisensory integration), and neurological processing of flavor stimuli (imaging technologies).

### **Food and Beverage Chemistry/Biochemistry**

to deepen the fundamental understanding of chemical structures, structural modifications, interactions, and (bio)chemical transformations of minor and major components in foods and beverages, potentially in combination with novel aspects of process engineering, food technology, nanotechnology, packaging and storing, authenticity and origin aspects of food, or the biological evaluation of food and beverage systems.

### **Food Safety and Toxicology**

to advance our knowledge of detrimental health effects and the mechanisms of adverse physiological, or pathological changes induced by natural or synthetic chemicals occurring in the human environment with particular emphasis on foods, crop protection chemicals, contaminants and related chemicals (e.g., nanomaterials, biotechnologically derived products), including agricultural safety and consumer product safety, and the design and action of chemically related processes that enhance food safety.

### **Functional Structure/Activity Relationships**

to increase the knowledge on the relationship between chemical structure and biological (microorganisms, insects, animals, human) or technofunctional activity (e.g., Emulsifying, foaming, gelation) of agricultural and food components.

This category comprises (i) organic synthetic studies and/or structural biological studies (X-ray, NMR, etc.) of relevant ligands and targets with the aim of investigating molecular recognition processes in the action of biologically active compounds, (ii) molecular biological studies (e.g., site-directed mutagenesis) of macromolecular targets that lead to an improved understanding of

molecular recognition, and (iii) computational studies that analyze the SAR of compounds of interest and lead to experimental studies or analysis of other available chemical and/or biological data that substantially advance the knowledge in agricultural and food chemistry.

Routine extensions of existing series that do not add significantly to a basic understanding of the structure-activity relationship (SAR) of the series or do not utilize novel chemical/biological approaches will normally not be considered for publication.

### **New Analytical Methods**

to expand the repertoire of analytical methods in agriculture and food research by new analytical method development using chemical, physical, and biological principles. Manuscripts dealing with existing analytical methods should offer a significant, original application of the method or a major improvement going far beyond state-of-the-art.

For manuscripts describing the application of an existing method, even when modified, the category selected should be driven by the application (e.g., Agricultural and Environmental Chemistry, Bioactive Constituents, Metabolites, and Functions, etc.).

### **Omics Technologies Applied to Agriculture and Food**

to promote a more integrative understanding of complex systems in agriculture, food, and nutrition by the application of metabolomics, proteomics, and transcriptomics/genomics technologies combined with, but not limited to, bioinformatics and computational biology.

It is mandatory that manuscripts in this category go beyond a sheer holistic fingerprinting of samples, metabolic changes need to be identified on a molecular level and validated by means of targeted analysis.

These categories are periodically reviewed and may be changed.

## **Manuscript Types**

**RESEARCH ARTICLES** must report **original research** that is expected to have a definable **impact** on the advancement of science and technology, incorporating a significant component of **innovative chemistry and/or molecular biology**. Novel experimental results, theoretical treatments, interpretations of data, and absence of prior publications on the same/similar topics will document originality. Fragmentation of work into an incremental series of manuscripts is not acceptable.

**REVIEW ARTICLES** will be considered that comprehensively summarize information in a field in which the literature is scattered and/or treat published data or other information so as to provide a new approach or stimulate further research. Authors considering the preparation of a review may contact the Editor with any questions.

**PERSPECTIVES**, as opposed to a comprehensive Review Article, are expected to be concise discussions of a particular field to help readers keep abreast of the advances and trends in agricultural and food chemistry outside their own area of expertise. Therefore, Perspectives are written in a manner understandable to scientists working in any area under the broader umbrella of agricultural and food chemistry. Following an abstract of no more than 100 words, the text of the Perspective should not exceed 12 double-spaced manuscript pages in length, exclusive of tables, figures, photographs, and references. Up to four tables, figures, or photographs, total, may be

included. References should be limited to no more than 30 in total.

**VIEWPOINTS** are short opinion-style manuscripts that provide authors with a venue to comment on an issue of pressing importance to the JAFc readership community. Viewpoints are not peer-reviewed but are subject to editorial approval. JAFc welcomes Viewpoints of a scientific nature; no Viewpoints of an exclusively political nature will be considered for publication. Successful Viewpoints clearly articulate a research need to the reader and avoid summarizing a particular research area or study. A limit of 1000 words + author affiliations + 5 references + 1 single-frame figure with a 50 word caption OR a 350 word table will be strictly enforced; submissions exceeding this maximum will not be considered.

**COMMENTS** related to published papers will be considered from readers if the correspondence is **received within six months of the date of publication of the original paper**; the authors of the original paper will be given the **opportunity to reply** to such comments within two months, if they so desire.

Both comments and replies should not exceed 1000 words each, including citations, and will be published consecutively in the same issue of the *Journal* after peer review. For examples, see *J. Agric. Food Chem.*, **2015**, 63, 5305–5306 (DOI: [10.1021/jf506172q](https://doi.org/10.1021/jf506172q)) and *J. Agric. Food Chem.*, **2015**, 63, 5307–5307 (DOI: [10.1021/acs.jafc.5b01143](https://doi.org/10.1021/acs.jafc.5b01143)).

**SYMPOSIA OR TOPICAL COLLECTIONS** comprise a series of manuscripts reporting or synthesizing original research that are presented in a symposium or otherwise clustered around a single topic. Prospective organizers should **contact the Editor well in advance** to determine whether the subject matter conforms to the *Journal's* goals, criteria, and available space and to obtain specific instructions for submission of the manuscripts. Each manuscript will be subject to the normal peer-review process. For an example, see *J. Agric. Food Chem.*, **2015**, 63, 5837–5840 (DOI: [10.1021/acs.jafc.5b00324](https://doi.org/10.1021/acs.jafc.5b00324)) and *J. Agric. Food Chem.*, **2015**, 63, 5099–5099. (DOI: [10.1021/acs.jafc.5b00159](https://doi.org/10.1021/acs.jafc.5b00159)).

## ACS Publishing Center

While this document will provide basic information on how to prepare and submit the manuscript as well as other critical information about publishing, we also encourage authors to visit the [ACS Publishing Center](#) for additional information on everything that is needed to prepare (and review) manuscripts for ACS journals and partner journals, such as

- [Mastering the Art of Scientific Publication](#), which shares editor tips about a variety of topics including making your paper scientifically effective, preparing excellent graphics, and writing cover letters.
- Resources on [how to prepare and submit a manuscript](#) to ACS Paragon Plus, ACS Publications' manuscript submission and peer review environment, including details on selecting the applicable [Journal Publishing Agreement](#).
- [Sharing your research](#) with the public through the ACS Publications open access program.
- [ACS Reviewer Lab](#), a free online course covering best practices for peer review and related ethical considerations.
- [ACS Author Lab](#), a free online course that empowers authors to prepare and submit strong manuscripts, avoiding errors that could lead to delays in the publication process.
- [ACS Inclusivity Style Guide](#), a guide that helps researchers communicate in ways that recognize and respect diversity in all its forms.

# Manuscript Preparation

## Submit with Fast Format

All ACS journals and partner journals have simplified their formatting requirements in favor of a streamlined and standardized format for an initial manuscript submission. Read more about the requirements and the benefits these serves authors and reviewers [here](#).

Manuscripts submitted for initial consideration must adhere to these standards:

- Submissions must be complete with clearly identified standard sections used to report original research, free of annotations or highlights, and include all numbered and labeled components.
- Figures, charts, tables, schemes, and equations should be embedded in the text at the point of relevance. Separate graphics can be supplied later at revision, if necessary.
- When required by a journal's structure or length limitations, manuscript templates should be used.
- References can be provided in any style, but they must be complete, including titles. For information about the required components of different reference types, please refer to the [ACS Style Quick Guide](#).
- Supporting Information must be submitted as a separate file(s).

## Document Templates and Format

The *Journal of Agricultural and Food Chemistry* does not require the use of any document templates. General information on the preparation of manuscripts may be found in the [ACS Guide to Scholarly Communication](#).

## Acceptable Software, File Designations, and TeX/LaTeX

See the list of [Acceptable Software](#) and appropriate [File Designations](#) to be sure your file types are compatible with ACS Paragon Plus. Information for manuscripts generated from [TeX/LaTeX](#) is also available.

## Cover Letter

A cover letter must accompany every manuscript submission. During the submission process, you may type it or paste it into the submission system, or you may attach it as a file.

## Manuscript Text Components

### MANUSCRIPT FORMAT

The Journal has a **20 typed page limit**, not including references, tables, and figures. Authors must request approval from the Editor-in-Chief to submit manuscripts exceeding 20 typed pages.

The various sections of the manuscript should be assembled in the following sequence:

- Title and authorship (single page)
- Abstract and keywords (single page)

- Introduction
- Materials and Methods (including Safety information)
- Results/Discussion
- Abbreviations Used
- Acknowledgment
- Supporting Information description
- References
- Graphic for table of contents

## TITLE, AUTHORSHIP, AND KEYWORDS

**Title.** The title should be specific, informative, and concise. Keywords in the title assist in effective literature retrieval. If a plant is referred to in the title or elsewhere in the text by its common or trivial name, it should be identified by its scientific name in parentheses immediately following its first occurrence. This term should also be provided as one of the keywords. If trade names are mentioned, give generic names in parentheses.

**Authorship.** Be consistent in authorship designation on the manuscript and on all correspondence. **First name, middle initial, and last name** are generally adequate for correct identification, but omit titles. Give the complete mailing address of all institutions where work was conducted and identify the affiliation of each author. If the current address of an author is different, include it in a footnote on the title page. The name of the author to whom inquiries about the paper should be addressed must be marked with an asterisk; provide the telephone number and e-mail address of this correspondent.

Many Funders and Institutions require that institutional affiliations are identified for all authors listed in the work being submitted. ACS facilitates this requirement by collecting institution information during manuscript submission under Step 2: Authors and Affiliations in ACS Paragon Plus.

**Keywords.** Provide significant keywords to aid the reader in literature retrieval. Please consider the use of words different from those in the title to expand discoverability of the article. The keywords are published immediately before the text, following the abstract.

## ABSTRACT

Authors' abstracts are used directly for *Chemical Abstracts*. The abstract should be a clear, concise (100– 150 words), one-paragraph summary, informative rather than descriptive, giving scope and purpose, experimental approach, significant results, and major conclusions. Write for literature searchers as well as journal readers.

## INTRODUCTION

Discuss relationships of the study to previously published work, but do not reiterate or attempt to provide a complete literature survey. Use of *Chemical Abstracts/Scifinder* and other appropriate databases is encouraged to ensure that important prior publications or patents are cited and that the manuscript does not duplicate previously published work. **The purpose or reason for the research being reported, and its significance, originality, or contribution to new knowledge in the field, should be clearly and concisely stated. Current findings should not be included or summarized in this section.**



## MATERIALS AND METHODS

**Authors must emphasize any unexpected, new, and/or significant hazards or risks associated with the reported work. This information should be in the experimental details section of the full article or communication.**

Apparatus, reagents, and biological materials used in the study should be incorporated into a general section. List devices of a specialized nature or instruments that may vary in performance, such that the model used may affect the quality of the data obtained (e.g., spectroscopic resolution).

List and describe preparation of special reagents only. Reagents normally found in the laboratory and preparations described in standard handbooks or texts should not be listed.

Specify the source, vendor [city and state (or city and country if non-U.S.)], and availability of special equipment, reagents, kits, etc. Do not include catalog numbers.

Biological materials should be identified by scientific name (genus, species, authority, and family) and cultivar, if appropriate, together with the site from which the samples were obtained. Specimens obtained from a natural habitat should be preserved by deposit of samples in an herbarium for plants or in a culture collection for microorganisms, with a corresponding collection or strain number listed.

Manuscripts describing studies in which live animals or human subjects are used must include a statement that such experiments were performed in compliance with the appropriate laws and institutional guidelines and **also name the institutional committee that approved the experiments. Authors are encouraged to note the approval code or number or give the name of the approving office or official.** (See Reporting Specific Data: Animal or Human Studies.) Manuscripts reporting data from inhumane treatment of experimental animals will be rejected.

Specific experimental methods should be sufficiently detailed for others to repeat the experiments unequivocally. Omit details of procedures that are common knowledge to those in the field. Brief highlights of published procedures may be included, but details must be left to the References, and verbatim repeat of previously published methods, even if done by the authors, will not be permitted unless a quotation from a published work is included, and placed in quotation marks, with the reference to the source included at the end of the quotation. Describe pertinent and critical factors involved in reactions so the method can be reproduced, but avoid excessive description. For information on the reporting of certain types of data see Reporting Specific Data.

## RESULTS AND DISCUSSION

Results and discussion may be presented in separate sections or combined into a single section, whichever format conveys the results in the most lucid fashion without redundancy. Be complete but concise in discussing findings, comparing results with previous work and proposing explanations for the results observed.

**All data must be accompanied by appropriate statistical analyses, including complete information on sampling, replication, and how the statistical method employed was chosen.**



Avoid comparisons or contrasts that are not pertinent, and avoid speculation unsupported by the data obtained.

A separate summary or conclusion section is not to be used; any **concluding statements** are to be incorporated under Results and Discussion.

## ABBREVIATIONS AND NOMENCLATURE

Standard abbreviations, without periods, should be used throughout the manuscript.

Refer to [The ACS Style Guide](#) for the preferred forms of commonly used abbreviations. Specialized abbreviations may be used provided they are placed in parentheses after the word(s) for which they are to substitute at first point of use and are again defined in this section. Avoid trivial names and “code” abbreviations (e.g., NAR for naringenin) unless such codes are in common usage (e.g., MTBE for methyl *tert*-butyl ether).

If trade names are used, define at point of first use. If nomenclature is specialized, include a “Nomenclature” section at the end of the paper, giving definitions and dimensions for all terms. Use SI units insofar as possible. Refer to [The ACS Style Guide](#) for lists of SI units and a discussion of their use.

Write all equations and formulas clearly and number equations consecutively. Place superscripts and subscripts accurately; avoid superscripts that may be confused with exponents. Identify typed letters and numbers that might be misinterpreted, such as “oh” for zero or “ell” for one. Chemistry numbering requiring primes should be identified as such (i.e., 3,3'-dihydroxy-), not by an apostrophe (e.g., 3,3'- dihydroxy- ).

It is the authors' responsibility to provide correct nomenclature. Structures should be included for uncommon chemicals, particularly when the systematic or common name is too complex or unclear to readily denote the structure. Such structures should be included as a figure or table. All nomenclature must be consistent and unambiguous and should conform to current American usage. Insofar as possible, authors should use systematic names similar to those used by Chemical Abstracts Service, the International Union of Pure and Applied Chemistry, and the International Union of Biochemistry and Molecular Biology. *Chemical Abstracts* (CA) nomenclature rules are described in Appendix IV of the *Chemical Abstracts Index Guide*. For CA nomenclature advice, consult the Manager of Nomenclature Services, Chemical Abstracts Service, P.O. Box 3012, Columbus, OH 43210-0012. A name generation service is available for a fee through CAS Client Services, 2540 Olentangy River Road, P.O. Box 3343, Columbus, OH 43210-0334 [telephone (614) 447-3870; fax (614) 447-3747; e-mail [answers@cas.org](mailto:answers@cas.org)].

## ACKNOWLEDGMENT

Include essential credits but hold to an absolute minimum. Omit academic and social titles. Meeting presentation data and acknowledgment of financial support of the work should not be included here; give these instead in a note following the References. It is the responsibility of the corresponding author to notify individuals named in the Acknowledgment prior to submission.

## FUNDING SOURCES

Authors are required to report ALL funding sources and grant/award numbers relevant to the manuscript. Enter all sources of funding for ALL authors relevant to the manuscript BOTH in the Open Funder Registry tool in ACS Paragon Plus and in the manuscript to meet this requirement. See [http://pubs.acs.org/page/4authors/funder\\_options.html](http://pubs.acs.org/page/4authors/funder_options.html) for complete instructions.

**Funding should be acknowledged in a separate statement (not in the Acknowledgment paragraph).**

## REFERENCES

Consult [The ACS Style Guide](#) and current issues of the *Journal* for examples of reference format.

Authors should cite all prior published work directly pertinent to the manuscript. To demonstrate that the submitted manuscript meets sufficient interest of the readership of the journal, **it is expected that articles recently published on the respective topic in the *Journal of Agricultural and Food Chemistry* and other similar journals in the field are cited to a reasonable extent.** As a general guideline, authors should attempt to limit the literature cited to approximately 50 or fewer citations (except for Review manuscripts).

Authors are responsible for the accuracy of their references. References taken from a review or other secondary source should be checked for accuracy with the primary source.

References should be listed on a separate page and numbered in the order in which they are cited in the text.

References should be cited in the text by superscript numbers, for example, <sup>1,2–5</sup>, etc.

Give complete information, using the last name and initials of the author, patentee, or equivalent; do not use “Anonymous”.

Follow *Chemical Abstracts Service Source Index* for abbreviations of journal titles. Because subscribers to the Web edition of the *Journal* are now able to click on the “Chemport” or other tag following each reference to retrieve the corresponding abstract from various Web resources, reference accuracy is critical.

Typical references follow the styles given below.

For journals:

- Brown, J.; Jones, M.; Green, D. Article title. *J. Agric. Food Chem.* **1980**, 28, 1–4. (Issue number must be used if each issue of the periodical begins with page )

For books:

- Smith, L; Caldwell, A. Chapter title. In *Book Title*, edition no.; Keys, F., Park, G., Eds.; Publisher: City, State (or Country if non-U.S.), Year; Vol. no., pp.

For Web pages:

- Black, A.; White, B. Page title. URL (<http://...>) (most recent access date).

Papers should not depend for their usefulness on unpublished material, and excessive reference to material “in press” is discouraged. Reference to the authors’ own unpublished work is permitted if the subject is of secondary importance to the manuscript in question, but any unpublished results of central importance must be described in sufficient detail within the manuscript. **If pertinent references are “in press” or unpublished for any reason, furnish copies to enable reviewers to evaluate the manuscript. An electronic copy of these materials should be uploaded according to the directions for review-only Supporting Information. “In press” references should include the Digital Object Identifier (DOI) assigned by the potential publisher.**

## TABLES AND ARTWORK

**Tables and figures should be carefully designed to maximize presentation and comprehension of the experimental data with superfluous information excluded.** Tables must be self-contained, that is, understandable without reading the text of the article. This includes using footnotes to explain sample names, units, and other relevant information. Useful information not directly relevant to the discussion may be included under Supporting Information.

**Tables.** Tables may be created using a word processor’s text mode or table format feature. The table format feature is preferred. Ensure each data entry is in its own table cell. Lower case should be used for all table entries unless a capital letter is required. If the text mode is used, separate columns with a single tab and use a line feed (enter) at the end of each row.

Tables should be numbered consecutively with Arabic numerals and should be grouped after the figure captions. Footnotes in tables should be given letter designations and be cited in the table by italic superscript letters. The sequence of letters should proceed by row rather than by column. Each table should be provided with a descriptive heading, which, together with the individual column headings, should make the table, as nearly as possible, self-explanatory. In setting up tabulations, authors are requested to keep in mind the type area of the journal page (17.8 × 25.4 cm), and the column width (8.5 cm), and to make tables conform to the limitations of these dimensions. **Arrangements that leave many columns partially filled or that contain much blank space should be avoided.** Conversely, arrangements that include >20 columns should be broken into two tables if possible. If *significance of values* is to be indicated, use a lower case letter, on line, one space after the value.

**Figures and Artwork.** The preferred submission procedure is to embed graphic files in a Word document. It may help to print the manuscript on a laser printer to ensure all artwork is clear and legible. Artwork should be sequentially numbered using Arabic numbers. Schemes and charts may have titles and footnotes; figures should have captions. Insert the captions following the References and the graphics after the Tables.

Additional acceptable file formats are TIFF, PDF, EPS (vector artwork), or CDX (ChemDraw file). If submitting individual graphic files in addition to their being embedded in a Word document, ensure the files are named according to graphic function (i.e., Scheme 1, Figure 2, Chart 3), not the scientific name.

Labeling of all figure parts should be present, and the parts should be assembled into a single graphic. For EPX files, ensure that all fonts are converted to outlines or embedded in the graphic file. The document setting should be in RGB mode. **Note:** Although EPS files are accepted, the vector-based graphics will be rasterized for production. Please see below for TIFF file production

resolutions.

TIFF files (either embedded in a Word document or submitted as individual files) should have the following resolution requirements: black and white line art, 1200 dpi; grayscale art (a monochromatic image containing shades of gray), 600 dpi; color art (RGB color mode), 300 dpi.

The RGB and resolution requirements are essential for producing high-quality graphics within the published paper. Graphics submitted in CMYK or at lower resolution may be used; however, the colors may not be consistent. Graphics of poor quality may not be able to be improved.

Most graphic programs provide an option for changing the resolution when images are saved. Best practice is to save the graphic file at the final resolution and size using the program used to create the graphic.

For bar charts, bars with hatching patterns generally reproduce well. Bars that range in shading from light to dark gray to black can usually be reproduced successfully, although we do not recommend any more than two shades of gray. A legend needs to be included within the figure itself rather than the patterns or shades included in the caption.

For manuscripts containing gel patterns, use of a high-resolution digital scanner is recommended. Only high-quality original, unaltered digital reproductions will allow reviewers to correctly verify the experimental results. For an example of gel patterns see *J. Agric. Food Chem.*, 2012, 60 (18), 4492–4499 (DOI: [10.1021/jf300563n](https://doi.org/10.1021/jf300563n)).

Only readable and accurately represented images are acceptable; the **Editors reserve the option to reject images that do not satisfactorily support points made in the manuscript or that are not of satisfactory quality for publication.**

The quality of the illustrations published in the *Journal* largely depends on the quality of the originals provided. Figures cannot be modified or enhanced by the journal production staff. Contrast is important. Each figure or photograph should be properly labeled.

**Structural Formulas. Structural formulas should be included for all new chemicals and for existing chemicals for which chemical nomenclature and/or trivial names do not convey the structure adequately.** Structural formulas are valuable in expressing concisely the precise nature of the compounds under discussion and revealing the essence of the subject to readers unfamiliar with the topic, without their necessary recourse to reference materials. The use of chemical names without accompanying structures may cause readers to overlook the significance of the paper.

Structures should be produced with the use of a drawing program such as ChemDraw. Structure drawing requirements (preset in the ACS Stylesheet in ChemDraw) are as follows:

- As drawing settings, select: chain angle, 120°; bond spacing, 18% of width; fixed length, 14.4 pt (0.508 cm, 0.2 in.); bold width, 2.0 pt (0.071 cm, 0.0278 in.); line width, 0.6 pt (0.021 cm, 0.0084 in.); margin width, 1.6 pt (0.056 cm, 0.0222 in.); hash spacing, 2.5 pt (0.088 cm, 0.0347 in.)
- As text settings, select: font, Arial/Helvetica; size, 10 pt
- Under the preferences, choose: units, points; tolerances, 5 pixels
- Under page setup, choose: paper, US Letter; scale, 100%

Using the ChemDraw ruler or appropriate margin settings, create structure blocks, schemes, and

equations having maximum widths of 11.3 cm (one-column format) or 23.6 cm (two-column format). Note: if the foregoing preferences are selected as cm values, the ChemDraw ruler is calibrated in cm. Also note that a standard sheet of paper is only 21.6 cm wide, so all graphics submitted in two-column format must be prepared and printed in landscape mode.

Use boldface type for compound numbers but not for atom labels or captions.

Authors using other drawing packages should, as far as possible, modify their program's parameters to reflect the above guidelines.

## REVISIONS AND RESUBMISSIONS

### For all revisions:

- Clearly identify the manuscript as a revision; reference the manuscript number.
- Include an itemized list of changes, with a response to each comment made by the Editor and by each reviewer.
- Be aware that the manuscript may be sent for additional review, to the same or additional reviewers, at the discretion of the Editor.

### For all resubmissions:

- Clearly identify all resubmissions; reference the previous manuscript number.
- Include an itemized list of changes, including a response to each comment made by the Editor and by each reviewer.

## Supporting Information

This information is provided to the reviewers during the peer-review process (for Review Only) and is available to readers of the published work (for Publication). Supporting Information must be submitted at the same time as the manuscript. See the list of [Acceptable Software by File Designation](#) and confirm that your Supporting Information is [viewable](#).

If the manuscript is accompanied by any supporting information files for publication, these files will be made available free of charge to readers. A brief, nonsentence description of the actual contents of each file, including the file type extension, is required. This description should be labeled Supporting Information and should appear before the Acknowledgement and Reference sections. Examples of sufficient and insufficient descriptions are as follows:

Examples of sufficient descriptions: "Supporting Information:  $^1\text{H}$  NMR spectra for all compounds (PDF)" or "Additional experimental details, materials, and methods, including photographs of experimental setup (DOC)".

Examples of insufficient descriptions: "Supporting Information: Figures S1-S3" or "Additional figures as mentioned in the text".

When including supporting information for review only, include copies of references that are unpublished or in-press. These files are available only to editors and reviewers.

## Research Data Policy

All ACS journals strongly encourage authors to make the research data underlying their articles publicly available at the time of publication.

*Research data* is defined as materials and information used in the experiments that enable the validation of the conclusions drawn in the article, including primary data produced by the authors for the study being reported, secondary data reused or analyzed by the authors for the study, and any other materials necessary to reproduce or replicate the results.

The [ACS Research Data Policy](#) provides additional information on Data Availability Statements, Data Citation, and Data Repositories.

## Data Requirements

**Bioactivity.** Manuscripts reporting on key bioactive constituents in agricultural products, foods, and beverages and on the mechanisms of how these compounds promote health in living organisms, including humans, livestock and domestic animals are expected to follow a cutting edge chemical, biochemical, and/or molecular biological approach. For the identification of a bioactive agricultural/food compound, an activity-guided fractionation approach should be followed, with generally accepted criteria for complete chemical characterization of the bioactive compound's molecular structure using state-of-the-art analytical tools (TOF-MS, 1D/2D-NMR etc.).

Manuscripts can encompass cell-based or other in vitro assays, animal models, human intervention studies, clinical trials, or a combination thereof as the fundamental component, however, target compounds need to be tested at relevant dose levels, test systems applied must be validated, should allow the quantitation of time and dose response effects, and need to be appropriate for in vivo conditions. In order to demonstrate bioefficacy as an overall aim of the 'Bioactives Research' theme, the bioavailability of the target food constituent has to be substantial and may, in some cases, not be sufficient to exert the desired effect after dietary intake. Therefore, the discussion on nutritional relevance and conclusions on human health aspects need to be carefully formulated considering the experimental design used (appropriate cell-based or other in vitro assays, animal models, clinical human trials, significance of test/trial, relevant dose levels etc.), the robustness of the data set obtained, and addressing the underlying mechanism of action.

It is mandatory that manuscripts reporting on biological properties of individual constituents include information on the purity of the test components and on how it has been determined (e.g.,  $^1\text{H}$  NMR, GC- FID, HPLC-ELSD). Similarly, investigations performed with crude extracts need to present detailed information on the chemical composition of the extracts responsible for the described properties. This means that key representatives of the chemical class investigated (e.g., polyphenols, terpenoids, alkaloids, peptides) should be quantitatively fingerprinted.

**Gas Chromatographic Methods.** For manuscripts in which gas chromatographic methods are used, see "Reporting of Gas Chromatographic Methods", by Morton Beroza and Irwin Hornstein [*J. Agric. Food Chem.* **1973**, 21, 7A (located at the back of the January 1973 issue or as a link from the *Journal's* Author Information page)]. Consult recent issues for examples of GC, LC, and other instrument parameter descriptions.

**Spectroscopic Data.** This is a guide only; in certain cases different methods of data presentation may be more suitable. Authors are encouraged to consult examples of data presentation published in recent issues of the *Journal* for appropriate style and format. **Complete NMR, mass spectrometric, or other spectral data will be published only if novel or necessary to substantiate points made under the Results or Discussion sections.** Such presentations take up valuable space, and essentially the same information can frequently be put into a much more compact form by simply listing the position and intensity of the maxima. It is usually not necessary to list all of the maxima in the spectra to provide an adequate description. Report the type of



instrument used (e.g., in mass spectrometry, whether magnetic, quadrupole, time-of-flight, etc.) and also the type of cell, the solvent (if any), and the state of the sample (whether liquid, gas, solution, etc.).

**Mass Spectra.** List the molecular ion and about 10 of the major ions with their intensities in parentheses, or more preferably use the method outlined by H. S. Hertz, R. A. Hites, and K. Biemann (*Anal. Chem.* **1971**, *43*, 681–691). This method involves dividing the spectrum into consecutive regions of 14 mass units starting at  $m/z$  6 (i.e., 6–19, 20–33, 34–47, 48–61, etc.). The two most intense ions in each region are then listed. Intensities, relative to the most intense ion, the intensity of which is taken as 100, are shown in parentheses immediately following the  $m/z$  value; for example: hexanal, mass spectrum found (70 eV, two most intense ions each 14 mass units above  $m/z$  34): 43 (86), 44 (100), 56 (86), 57 (65), 71 (28), 72 (33), 82 (18), 85 (5), 97 (2), 100 (2). If the molecular ion does not appear in this presentation, the author should indicate it separately.

**Nuclear Magnetic Resonance ( $^1\text{H}$  NMR or  $^{13}\text{C}$  NMR) Spectra.** A document providing detailed information for the presentation of NMR data is now available through “Information for Authors and Reviewers” on the Journal’s home page.

The frequency, the solvent, and also the temperature (if other than ambient) used are first specified. The type of unit used ( or ) is then stated, followed by the position of the center of gravity of the sharp line, broad line, or spin–spin multiplet in these units. This is then followed by information in parentheses which (1) describes the type of splitting, that is, singlet as s, doublet as d, triplet as t, quadruplet as qd, multiplet as m; (2) gives the value of the number of protons the area represents; (3) gives the coupling constant  $J$ ; and (4) gives the part of the molecule connected with the particular absorption with the protons involved underlined.

An example would be  $^1\text{H}$  NMR for ethanol (60 MHz,  $\text{CCl}_4$ ): 1.22 (t, 3,  $J = 7$  Hz,  $\text{CH}_2\text{CH}_3$ ), 2.58 (s, 1, OH), 3.70 (qd, 2,  $J = 7$  Hz,  $\text{OCH}_2\text{CH}_3$ ).

**Other Spectra.** In general, list position and intensity of the maxima. In some cases it may be desirable to list points of inflection.

A brief explanation should be given for any abbreviations not in common use. Examples:

- Reporting liquid chromatography (HPLC) and HPLC/MS: “Analysis of Polyphenolic Antioxidants from the Fruits of Three *Pouteria* Species by Selected Ion Monitoring Liquid Chromatography– Mass Spectrometry”, by Jun Ma et al. *J. Agric. Food Chem.* **2004**, *52*, 5873–5878.
- Reporting data in detail, including UV shifts and IR spectra: “Characterization of Vegetable Oils: Detailed Compositional Fingerprints Derived from Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry”, by Zhigang Wu et al. *J. Agric. Food Chem.* **2004**, *52*, 5322–5328.

**Novel Compound Characterization.** For a discussion of the *Journal’s* expectations for compound characterization, please read “Compound Identification: A *Journal of Agricultural and Food Chemistry* Perspective” by R. J. Molyneux and P. Schieberle. *J. Agric. Food Chem.* **2007**, *55*, 4625–4629 (DOI: [10.1021/jf070242j](https://doi.org/10.1021/jf070242j)). It is essential that novel compounds, either synthetic or isolated from natural sources, be characterized rigorously and unequivocally. Supporting data normally include physical form, melting point (if solid), UV/IR



spectra if appropriate,  $^1\text{H}$  and  $^{13}\text{C}$  NMR, mass spectrometric data, and optical rotation (when compounds have chiral centers).

Examples:

- Reporting X-ray data: “Racemic and Enantiopure Synthesis and Physicochemical Characterization of the Novel Taste Enhancer *N*-(1-Carboxyethyl)-6-(hydroxymethyl)pyridinium-3-ol Inner Salt”, by Renaud Villard et al. *J. Agric. Food Chem.* **2004**, 51, 4040–4045 (DOI: [10.1021/jf034246+](https://doi.org/10.1021/jf034246+)).
- Reporting data in detail, including UV shifts: “Novel Flavonol Glycoside, 7-O-Methyl Mearnsitrin, from *Sageretia theezans* and Its Antioxidant Effect”, by Shin-Kyo Chung et al. *J. Agric. Food Chem.* **2004**, 52, 4664–4668 (DOI: [10.1021/jf049526j](https://doi.org/10.1021/jf049526j)).
- Reporting data for previously known compounds: “Phenolic Constituents and Antioxidant Activity of *Wendita calysina* Leaves (Burrito), a Folk Paraguayan Tea”, by Anna Lisa Piccinelli et al. *J. Agric. Food Chem.* **2004**, 52, 5863–5868 (DOI: [10.1021/jf040100e](https://doi.org/10.1021/jf040100e)).

**Flavor Constituents.** Manuscripts reporting on flavor constituents should conform to the recommendations made by the International Organization of the Flavor Industry [for details, see the editorial in the October 1996 issue of *J. Agric. Food Chem.* (44, 2941–2941) (DOI: [10.1021/jf960654k](https://doi.org/10.1021/jf960654k))]. In brief, any identification of a flavoring substance must pass scrutiny of the latest forms of available analytical techniques. **In practice, this means that any particular substance must have its identity confirmed by at least two methods, for example, comparison of chromatographic and spectrometric data (which may include GC, MS, IR, and NMR) with those of an authentic sample.** If only one method has been applied (MS data alone or retention index or Kovats index alone), the identification shall be labeled “tentative”. In addition, authors are encouraged to include at least semiquantitative data on the concentration of an identified component in the original source, for example, foodstuff or plant part. Ranges such as <1 g/kg, 1–10 g/kg, and 10–100 g/kg are acceptable.

Flavor is evoked by smell (aroma) and taste. A good example showing the correct characterization of taste compounds is the study by Czepa and Hofmann (*J. Agric. Food Chem.* **2003**, 51, 3865–3873) (DOI: [10.1021/jf034085+](https://doi.org/10.1021/jf034085+)). A good example for aroma compound identification is (*J. Agric. Food Chem.*, **2000**, 48 (6), pp 2430–2437) (DOI: [10.1021/jf991116l](https://doi.org/10.1021/jf991116l)).

The use of reference compounds is a must, if data on sensory properties of single compounds are reported. Odor, which is perceived during sniffing of a food extract at a certain retention index, may be indicative of the presence of a given compound, but not conclusive unless substantiated by chromatographic and/or spectrometric data and comparison with an authentic reference compound.

**Soil Classification.** Soils used in research should be described down to the family level according to the soil classification scheme given in *Soil Taxonomy, A Basic System of Soil Classification for Making and Interpreting Soil Surveys*, 2<sup>nd</sup> ed. (Agricultural Handbook 436; U.S. Government Printing Office: Washington, DC, 1999) (available on-line at <http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/class/taxonomy>). Also give series name if known.

This requirement is to allow comparison and extrapolation to other work giving similar soil classifications, as published in journals such as the *Journal of Soil Science*, *Soil Science Society of America Journal*, *Journal of Environmental Quality*, and *Geoderma*. If information is unavailable to classify the soils at the desired family level, classification should be described or estimated at

least to the great group level in the same classification system.

**Statistics.** Manuscripts reporting analytical, biological activity, composition, and related data must include relevant statistical information to support discussion of differences or similarities in data sets. Refer to a standard statistics reference such as *Statistical Methods*, 8th ed.; Snedecor, G. W., Cochran, G., Eds.; University Press: Ames, IA, 1989.

**Metabolomics.** This category considers applications of metabolomics as related to research topics in agriculture, food, and nutrition, in particular metabolite-targeted analysis and progress in the development of analytical platforms for metabolomics approaches. A metabolome is the quantitative set of chemical compounds in a biological system, i.e., a food, at a given time. However, also metabonomics studies, focused on changes in a given metabolome, e.g., induced by environmental conditions or diseases, fall into this category.

Metabolic profiling and metabolomic fingerprinting correlated with multivariate or data-mining methods are acceptable, if presented in a targeted way. For additional information consult “Targeted Metabolomics: A New Section in the *Journal of Agricultural and Food Chemistry*” by J. N. Seiber, R. J. Molyneux, and P. Schieberle, *J. Agric. Food Chem.* **2013**, (DOI: [10.1021/jf4046254](https://doi.org/10.1021/jf4046254)).

**Animal or Human Studies.** Manuscripts describing studies in which the use of live animals or human subjects is involved must include under Materials and Methods a statement that such experiments were performed in compliance with the appropriate laws and institutional guidelines, and also name the institutional committee that approved the experiments. For experiments with human subjects, a statement that informed consent was obtained from each individual must be included and the consent forms made available to the *Journal* on request. Reviewers of manuscripts involving animal or human experiments will be asked to comment specifically on the appropriateness and conformity to regulations of such experiments. **Authors are encouraged to note the approval code or number or give the name of the approving office of official.**

*Animal Subjects.* The use of animals in a study should be employed only when there are no alternative methods for investigating the fundamental questions of the study. In such cases, **it is the ethical responsibility of all authors to ensure that the care of animals is of the highest possible order, that pain and/or distress is minimized, and that the numbers involved are strictly limited** to those essential to fulfill the experimental design. In the United States the care and use of laboratory animals is regulated by the U.S. Department of Agriculture (USDA) under the Animal Welfare Act. Links to the regulations and other information are available at [http://www.aphis.usda.gov/animal\\_welfare/links.shtml](http://www.aphis.usda.gov/animal_welfare/links.shtml). It is recognized that researchers in other countries may be governed by different laws and regulations. In such cases, experiments should be designed to conform either to the above USDA regulations or to the International Guiding Principles for Biomedical Research Involving Animals (1985), available at [http://www.cioms.ch/publications/guidelines/1985\\_texts\\_of\\_guidelines.htm](http://www.cioms.ch/publications/guidelines/1985_texts_of_guidelines.htm).

*Human Subjects.* **The use of human subjects in experimental studies requires informed consent.** Such consent requires that the subjects be informed completely not only about the procedures involved but also about the aims, design, and expected outcomes of the study. Consent must be obtained not only when subjects are involved directly in the study but also when samples (tissue, blood, plasma, etc.) are required for in vitro experiments. In the United States the protection of human research subjects is regulated by the U.S. Department of Health and Human Services (HHS). Regulations are available at <http://www.hhs.gov/ohrp/>. Laws and regulations governing researchers in other countries must be observed, but experiments should be designed

to conform to the intent of the HHS regulations as far as possible.

In relation to the subject matter of the *Journal*, experiments involving taste and food quality evaluation and consumer acceptance are exempt from the above regulations [CFR 46.101 (b) (6)]. However, it should be noted that this would not exempt studies in which extracts, isolates, pure compounds, etc., obtained from conventional food sources are subjected to such evaluation.

**JAFRC will reject any manuscript for which there is reason to believe that animals have been subjected to unnecessary pain or distress or when informed consent of human subjects is absent or incomplete.**

## Language and Editing Services

A well-written paper helps share your results most clearly. ACS Publications' [English Editing Service](#) is designed to help scientists communicate their research effectively. Our subject-matter expert editors will edit your manuscript for grammar, spelling, and other language errors so your ideas are presented at their best.

## Preparing Graphics

The quality of illustrations in ACS journals and partner journals depends on the quality of the original files provided by the authors. Figures are not modified or enhanced by journal production staff. All graphics must be prepared and submitted in digital format.

Graphics should be inserted into the main body whenever possible. Please see Appendix 2 for additional information.

Any graphic (figure chart, scheme, or equation) that has appeared in an earlier publication should include a [credit line](#) citing the original source. Authors are responsible for [obtaining written permission](#) to re-use this material.

## Figure and Illustration Services

The impact of your research is not limited to what you can express with words. Tables and figures such as graphs, photographs, illustrations, diagrams, and other visuals can play a significant role in effectively communicating your findings. Our [Artwork Editing](#) and [Graphical Abstract](#) services generate publication-ready figures and Table of Contents (TOC) graphics that conform to your chosen journal's specifications. For figures, this includes changes to file type, resolution, color space, font, scale, line weights, and layout (to improve readability and professional appearance). For TOC graphics, our illustrators can work with a rough sketch or concept or help extract the key findings of your manuscript directly for use as a visual summary of your paper.

## Preparing for Submission

Manuscripts, graphics, supporting information, and required forms, as well as manuscript revisions, must all be submitted in digital format through [ACS Paragon Plus](#), which requires an ACS ID to log in. Registering for an ACS ID is fast, free, and does not require an ACS membership. Please refer to Appendix 1 for additional information on preparing your submission

## Prior Publication Policy

*JAFAC* considers for publication original work that has not been previously published and is not under consideration for publication elsewhere. Related work under consideration for publication in any medium must be cited in the manuscript and the Editor-in-Chief informed at the time of submission. In addition, an author must inform the Editor-in-Chief of prior dissemination of the content in print or electronic formats in the cover letter. Posting of pre-prints to a pre-print server is considered acceptable but requires citing of the pre-print. Please note the use of a pre-print server in the cover letter, and as appropriate, state how the manuscript has been adjusted/updated between the pre-print version and the version submitted to *JAFAC*. Publicly available patents are considered similarly. Failure to alert *JAFAC* in your cover letter to any prior publication of your submission may be viewed as an ethical violation. Upon publication in *JAFAC*, authors are advised to add a link from the pre-print to the published paper via the Digital Object Identifier.

## Theses/dissertations

Authors submitting material that has been used in their thesis/dissertation must contact the Editor-in-Chief for approval. Authors will be asked to confirm that they alone hold the copyright to the work and to read and comply with the ACS dissertation policy and the conditions and procedures laid out in the ACS Journal Publishing Agreement. Authors will also need to make arrangements with their degree-granting institution (and any repositories to which their thesis/dissertation has been or will be posted) to either delay posting of the thesis/dissertation or remove the material from the Internet until the final paper is published by *JAFAC*. Finally, they will need to properly cite the *JAFAC* article in any versions of the thesis/dissertation made publicly available after the embargo period.

Authors wishing to include published *JAFAC* material in their thesis/dissertation should follow the guidelines of the ACS dissertation policy. They must contact the Editor-in-Chief for permission, and properly cite and link to the published *JAFAC* article.

## Proceedings of conferences and symposia

Authors cannot publish presentations in proceedings (paper or electronic) that are copyrighted (except by ACS) and then submit them to *JAFAC* due to copyright concerns. If the proceedings are not copyrighted, publishing a short abstract without figures or tables is permissible. It is the responsibility of authors to notify *JAFAC* of any abstracts that have been published in any form.

## Websites

*JAFAC* will consider for publication a paper or presentation that has been posted on a website available to the general public, provided that the site is the personal site of the author and is not connected to a commercial site. Authors must notify the journal at the time of submission if the material has been available on the Internet or equivalent electronic media and must remove the material from the site at the time of submission. When the paper is published, authors may provide an electronic link from that site to the *JAFAC* homepage. If the website is a commercial site not owned by ACS, the authors are advised that consideration of the paper may be endangered.

## Reports

Authors must confirm that they alone hold the copyright to the report. If a government or funding organization requires posting of a related report, please contact the Editor-in-Chief and provide specific details.

## Editorial Policies

Peer review is used to help ensure the **highest possible quality** in published manuscripts. Scientists with expertise in the subject matter being treated will evaluate the manuscript for its originality and validity of the experimental design and results, the significance and impact in the field of agricultural and food chemistry, as well as the appropriateness to the *Journal*.

**All manuscripts submitted are reviewed** and handled by the Editor-in-Chief or Executive Editors, or assigned to one of the Associate Editors. The Associate Editor and Editorial Assistant are then responsible for the assigned manuscripts, including evaluating the content and format of the paper, selecting reviewers, monitoring the progress of the review process, evaluating the comments of reviewers and forwarding them to the authors for their response, communicating ultimate acceptance or rejection to the corresponding author, and carrying out a final check of accepted manuscripts for appropriate format and style.

The Editors may exercise their prerogative to decline a manuscript after **editorial review** if that paper is judged to be outside the scope of the *Journal* (lacks significant chemistry/biochemistry), poorly written or formatted, fragmentary and marginally incremental, or lacking in significance.

**Typically, three reviewers are selected** per paper on the basis of the subject matter, available expertise, and the Editor's knowledge of the field. Authors must submit the names and addresses (including e-mail addresses) of at least four potential reviewers who do not have conflicts of interest with the authors or manuscript content; however, the Editors are under no obligation to use specific individuals. Reviewers are normally asked to provide their assessments within two to three weeks. Anonymous copies of the reviews and the Editor's decision regarding the acceptability of the manuscript are sent to the corresponding author. If the reviewers' evaluations of the manuscript disagree, or if reviewer's and Editor's comments are not satisfactorily addressed by the authors, the Editor may reject the manuscript or select additional reviewers. These additional reviews are used by the Editor to assist in reaching the final decision regarding disposition of the manuscript.

## Providing Potential Reviewer Names

Please suggest 4 reviewers. Authors are encouraged to avoid suggesting reviewers from the authors' institutions. Do not suggest reviewers who may have a [real or perceived conflict of interest](#). Whenever possible, suggest academic email addresses rather than personal email addresses.

## Manuscript Transfer

If your submission is declined for publication by this journal, the editors might deem your work to be better suited for another ACS Publications journal or partner journal and suggest that the authors consider transferring the submission. [Manuscript Transfer](#) simplifies and shortens the process of submitting to another ACS journal or partner journal, as all the coauthors, suggested reviewers, manuscript files, and responses to submission questions are copied by ACS Paragon Plus to the new draft submission. Authors are free to accept or decline the transfer offer.

Note that each journal is editorially independent. Transferring a manuscript is not a guarantee that the manuscript will be accepted, as the final publication decision will belong to the editor of the next journal.

# PRODUCTION AND PUBLICATION

## Proofs via ACS Direct Correct

Correction of the galley proofs is the responsibility of the Corresponding Author. The Corresponding Author of an accepted manuscript will receive e-mail notification and complete instructions when page proofs are available for review via [ACS Direct Correct](#). Extensive or important changes on page proofs, including changes to the title or list of authors, are subject to review by the editor.

It is the responsibility of the Corresponding Author to ensure that all authors listed on the manuscript agree with the changes made on the proofs. Galley proofs should be returned within 48 hours in order to ensure timely publication of the manuscript.

## Publication Date and Patent Dates

Accepted manuscripts will be published on the ACS Publications Web site as soon as page proofs are corrected and all author concerns are resolved. The first date on which the document is published on the Web is considered the publication date.

Publication of manuscripts on the Web may occur weeks in advance of the cover date of the issue of publication. Authors should take this into account when planning their patent and intellectual property activities related to a document and should ensure that all patent information is available at the time of first publication, whether ASAP or issue publication.

All articles published ahead of print receive a unique Digital Object Identifier (DOI) number, which is used to cite the manuscript before and after the paper appears in an issue. Additionally, any supplemental information submitted along with the manuscript will automatically be assigned a DOI and hosted on Figshare to promote open data discoverability and use of your research outputs.

## ASAP Publication

Manuscripts will be published on the “ASAP Articles” page on the web as soon as page proofs are corrected and all author concerns are resolved. ASAP publication usually occurs within a few working days of receipt of page proof corrections, which can be several weeks in advance of the cover date of the issue.

## Post-Publication Policies

The American Chemical Society follows guidance from the [Committee on Publication Ethics](#) (COPE) when considering any ethical concerns regarding a published article, Retractions, and Expressions of Concern.

## Additions and Corrections

Additions and Corrections may be requested by the author(s) or initiated by the Editor to address important issues or correct errors and omissions of consequence that arise after publication of an article. All Additions and Corrections are subject to approval by the Editor, and should bring new



and directly relevant information and corrections that fix scientific facts. Minor corrections and additions will not be published. Readers who detect errors of consequence in the work of others should contact the corresponding author of that work.

Additions and Corrections must be submitted as new manuscripts via ACS Paragon Plus by the Corresponding Author for publication in the “Addition/Correction” section of the Journal. The corresponding author should obtain approval from all coauthors prior to submitting or provide evidence that such approval has been solicited. The manuscript should include the original article title and author list, citation including DOI, and details of the correction.

## Retractions

Articles may be retracted for scientific or ethical reasons and may be requested by the article author(s) or by the journal Editor(s), but are ultimately published at the discretion of the Editor. Articles that contain seriously flawed or erroneous data such that their findings and conclusions cannot be relied upon may be retracted in order to correct the scientific record. When an article is retracted, a notice of Retraction will be published containing information about the reason for the Retraction. The originally published article will remain online except in extraordinary circumstances (e.g. where deemed legally necessary, or if the availability of the published content poses public health risks).

## Expressions of Concern

Expressions of Concern may be issued at the discretion of the Editor if:

- there is inconclusive evidence of research or publication misconduct by the authors;
- there is evidence that the findings are unreliable but the authors’ institution will not investigate the case;
- an investigation into alleged misconduct related to the publication either has not been, or would not be, fair and impartial or conclusive;
- an investigation is underway but a judgment will not be available for a considerable time.

Upon completion of any related investigation, and when a final determination is made about the outcome of the article, the Expression of Concern may be replaced with a Retraction notice or Correction.

## Sharing Your Published Article

At ACS Publications, we know it is important for you to be able to share your peer reviewed, published work with colleagues in the global community of scientists. As sharing on sites known as scholarly collaboration networks (SCNs) is becoming increasingly prevalent in today’s scholarly research ecosystem, we would like to remind you of the many ways in which you, a valued ACS author, can [share your published work](#).

Publishing open access makes it easy to share your work with friends, colleagues, and family members. In addition, ACS Publications makes it easy to share your newly published research with ACS Articles on Request (see below). Don’t forget to promote your research and related data on social media, at conferences, and through scholarly communication networks. Increase the impact of your research using the following resources: [Altmetrics](#), [Figshare](#), [ACS Certified Deposit](#)



## E-Prints

When your article is published in an ACS journal or partner journal, corresponding authors are provided with a link that offers up to 50 free digital prints of the final published work. This link is valid for the first 12 months following online publication, and can be shared via email or an author's website. After one year, the access restrictions to your article will be lifted, and you can share the [Articles on Request](#) URL on social media and other channels. To access all your Articles on Request links, log in to your ACS Publishing Center account and visit the “My Published Manuscripts” page.

## Reprints

[Article](#), [journal](#), and [commercial](#) reprints are available to order.

## Appendix 1: PREPARING FOR SUBMISSION

We've developed ACS' publishing and editorial policies in consultation with the research communities that we serve, including authors and librarians. Browse our policies below to learn more.

### Ethical Guidelines

ACS editors have provided [Ethical Guidelines](#) for persons engaged in the publication of chemical research—specifically, for editors, authors, and reviewers. Each journal also has a specific [policy on prior publication](#).

### OFAC Compliance

As a U.S.-based non-profit organization, the American Chemical Society (ACS) is required to comply with U.S. sanctions laws and regulations administered by the [U.S. Treasury Department's Office of Foreign Assets Control](#) (OFAC). While these laws and regulations permit U.S.-based publishers like ACS to engage in publishing-related activities with authors located in sanctioned regions in many cases, ACS may be prohibited under U.S. law from engaging in publishing-related activities in some cases, including, but not limited to, instances where an author or the institution with which an author is affiliated is located in a particular sanctioned region or has been designated by OFAC as a [Specially Designated National](#) (SDN) pursuant to certain U.S. sanctions programs. ACS reserves the right to refrain from engaging in any publishing-related activities that ACS determines in its sole discretion may be in violation of U.S. law.

### Safety Considerations

Authors must emphasize any unexpected, new, and/or significant hazards or risks associated with the reported work. This information should be in the Experimental Section of a full article and included in the main text of a letter. Statement examples can be found in the [Safety Statement Style Sheet](#) and additional information on communicating safety information from the *ACS Guide to Scholarly Communication* [is freely available here](#).

### Conflict of Interest Disclosure

A statement describing any financial conflicts of interest or lack thereof is published in each ACS journal and partner journal article.

During the submission process, the Corresponding Author must provide a statement on behalf of all authors of the manuscript, describing all potential sources of bias, including affiliations, funding sources, and financial or management relationships, that may constitute conflicts of interest. If the manuscript is accepted, the statement will be published in the final article.

If the manuscript is accepted and no conflict of interest has been declared, the following statement will be published in the final article: "The authors declare no competing financial interest."

## **Plagiarism**

In publishing only original research, ACS is committed to deterring plagiarism, including self-plagiarism. ACS Publications uses CrossCheck's iThenticate software to screen submitted manuscripts for similarity to published material. Note that your manuscript may be screened during the submission process.

Further information about plagiarism can be found in Part B of the [Ethical Guidelines to Publication of Chemical Research](#). See also the [press release](#) regarding ACS' participation in the CrossCheck initiative.

## **Authorship, Author List, and Coauthor Notification**

Authors are required to obtain the consent of all their coauthors prior to submitting a manuscript. The submitting author accepts the responsibility of notifying all coauthors that the manuscript is being submitted.

During manuscript submission, the submitting author must provide contact information (full name, email address, institutional affiliation, and mailing address) for all of the coauthors. Because all of the author names are automatically imported into the electronic [Journal Publishing Agreement](#), the names must be entered into ACS Paragon Plus. (Note that coauthors are not required to register in ACS Paragon Plus.) Author affiliation should reflect where the work was completed, even if the author has since left that institution. Authors may include a note with a current address if their institution has changed since the work was completed.

To expedite the processing of your manuscript, please format your author and affiliation information according to the guidelines in this link:

<https://pubsapp.acs.org/paragonplus/submission/author-address-information.pdf>.

Criteria for authorship can be found in Part B of the [Ethical Guidelines to Publication of Chemical Research](#). Artificial intelligence (AI) tools do not qualify for authorship. The use of AI tools for text or image generation should be disclosed in the manuscript within the Acknowledgment section with a description of when and how the tools were used. For more substantial use cases or descriptions of AI tool use, authors should provide full details within the Methods or other appropriate section of the manuscript.

If any change in authorship is necessary after a manuscript has been submitted, confirmation is required that all of the authors (including those being added or removed) have been notified and

have agreed to the change. To provide this confirmation, authors are asked to complete and sign an [authorship change form](#) and provide the completed form to the appropriate editorial office.

**Authors with a single name:** If you, or any of your coauthors, have only one name, please follow these steps for proper submission to ACS Paragon Plus:

1. First (Given) Name Field: Enter an asterisk (\*) into the "First (Given) Name" field.
2. Last (Family) Name Field: Enter your single name into the "Last (Family) Name" field.

If your paper is accepted, the asterisk (\*) will be removed from the published version of the paper.

## Patent Activities and Intellectual Property

Authors are responsible for ensuring that all patent activities and intellectual property issues are satisfactorily resolved prior to first publication (ASAP or in issue). Acceptance and publication will not be delayed for pending or unresolved issues of this nature.

## Open Researcher and Contributor ID (ORCID)

Authors submitting manuscript revisions are required to provide their own personal, validated ORCID iD before completing the submission, if an ORCID iD is not already associated with their ACS Paragon Plus user profiles. This ID may be provided during original manuscript submission or when submitting the manuscript revision. All authors are strongly encouraged to register for an ORCID iD, a unique researcher identifier. The ORCID iD will be displayed in the published article for any author on a manuscript who has a validated ORCID iD associated with ACS when the manuscript is accepted.

ORCID iDs should not be typed into the manuscript. ACS publishes only those ORCID iDs that have been properly verified and linked **before the manuscript is accepted**. After your ORCID iD is linked, it will be displayed automatically in all subsequently accepted manuscripts for any/all ACS journals. We do not publish ORCID iDs provided during proof review or via other communications after a manuscript is accepted for publication.

With an ORCID iD, you can create a profile of your research activities to distinguish yourself from other researchers with similar names, and make it easier for your colleagues to find your publications. If you do not yet have an ORCID iD, or you wish to associate your existing ORCID iD with your ACS Paragon Plus account, you may do so by clicking on "Edit Your Profile" from your ACS Paragon Plus account homepage and following the ORCID-related links. Learn more at [www.orcid.org](http://www.orcid.org).

## Copyright and Permissions

To obtain forms and guidelines for completing the Journal Publishing Agreement or obtaining permissions from copyright owners, and to explore a Copyright Learning Module for chemists, click [here](#).

## Funder Reporting Requirement

Authors are [required to report funding sources](#) and grant/award numbers. Enter **ALL** sources of

funding for **ALL** authors in **BOTH** the Funder Registry Tool in ACS Paragon Plus and in your manuscript to meet this requirement.

## Open Access Compliance

ACS offers options by which authors can fulfill the requirements for open access and deposition into repositories for funded research. Visit our ACS Open Science site to see [how to fulfill requirements for specific funders](#) and to find out if you are eligible to publish under a [Read + Publish agreement](#) between ACS and your institution. You can also find out more about [Open Access Compliance](#) and [ACS Open Science initiatives](#).

## Diversity and Inclusion Statement

During manuscript submission, ACS journal authors have the option to submit a statement sharing information related to diversity and inclusion that is relevant for their paper. If supplying a diversity and inclusion statement, the corresponding author must provide this on behalf of all authors of the manuscript during the submission process. These statements include but are not limited to analysis of citation diversity and acknowledgment of indigenous land on which research was conducted. Statements expressing political beliefs are not permitted and may be removed by the journal office. All statements are subject to final review by the Editor.

- **Citation Diversity Statement:** The citation diversity statement should appear in the Acknowledgements section of the manuscript. ACS recommends including the following: (1) the importance of citation diversity, (2) the proportion of citations by gender and race/ethnicity for the first and last authors, (3) the method used to determine those proportions and its limitations, and (4) steps taken to by the authors to improve citation diversity in the article. We recognize that one limitation of the current methods is that it cannot account for intersex, non-binary, and transgender people, or Indigenous and mixed-race authors. (Adapted from [BMES/Springer Guidelines](#))
- **Land acknowledgment:** The land acknowledgment statement should appear in the Acknowledgements section of the manuscript. The statement should link to the institutions' formal land acknowledgments on which the research took place, if possible. Further guidance for creating these statements can be found here: <https://nativegov.org/news/a-guide-to-indigenous-land-acknowledgment/>.

## Appendix 2: Preparing Graphics

### Resolution

Digital graphics pasted into manuscripts should have the following minimum resolutions:

- Black and white line art, 1200 dpi
- Grayscale art, 600 dpi
- Color art, 300 dpi

### Size

Graphics must fit a one- or two-column format. Single-column graphics can be sized up to 240 points wide (3.33 in.) and double-column graphics must be sized between 300 and 504 points

(4.167 in. and 7 in.). The maximum depth for all graphics is 660 points (9.167 in.) including the caption (allow 12 pts. For each line of caption text). Lettering should be no smaller than 4.5 points in the final published format. The text should be legible when the graphic is viewed full-size. Helvetica or Arial fonts work well for lettering. Lines should be no thinner than 0.5 point.

## **Color**

Color may be used to enhance the clarity of complex structures, figures, spectra, and schemes, etc., and color reproduction of graphics is provided at no additional cost to the author. Graphics intended to appear in black and white or grayscale should not be submitted in color.

## **Type of Graphics**

### **Table of Contents (TOC)/Abstract Graphic**

Consult the Guidelines for [Table of Contents/Abstract Graphics](#) for specifications.

Our team of subject-matter experts and graphical designers can also help generate a compelling TOC graphic to convey your key findings. Learn more about our [Graphical Abstract service](#).

## **Figures**

A caption giving the figure number and a brief description must be included below each figure. The caption should be understandable without reference to the text. It is preferable to place any key to symbols used in the artwork itself, not in the caption. Ensure that any symbols and abbreviations used in the text agree with those in the artwork.

## **Charts**

Charts (groups of structures that do not show reactions) may have a brief caption describing their contents.

## **Tables**

Each table must have a brief (one phrase or sentence) title that describes the contents. The title should be understandable without reference to the text. Details should be put in footnotes, not in the title. Tables should be used when the data cannot be presented clearly in the narrative, when many numbers must be presented, or when more meaningful inter-relationships can be conveyed by the tabular format. Tables should supplement, not duplicate, information presented in the text and figures. Tables should be simple and concise.

## **Schemes**

Each scheme (sequences of reactions) may have a brief caption describing its contents.

## **Chemical Structures**

Chemical structures should be produced with the use of a drawing program such as ChemDraw.

## Cover Art

*Journal of Agricultural and Food Chemistry* authors are encouraged to submit images to be considered for use on the journal's front cover or [Supplementary Covers](#) at the time of the submission of their revised manuscript. If your article is accepted for publication, your suggestion may also be selected for use on one of the journal's covers. Images chosen for the front cover will be published at no cost to the author. If your art is selected for front cover, ACS will send you information about how to request one complimentary 18" by 24" printed poster featuring your work.

Cover image submissions should be colorful and visually engaging, with minimal text. The cover image should not resemble a graphical abstract or data figure, but rather should be an artistic and scientifically accurate representation of the manuscript.

Image files should be submitted as TIF, JPG, PNG or EPS files with a resolution of at least 300 dpi for pixel-based images. Images should be 8.19 in. wide × 10.00 in. high (or 20.80 cm × 25.40 cm). Please note that the journal title will cover the top 2 in. (5.08 cm) of the image. Authors should submit the cover image, along with a short, clear legend explaining the image, as supplementary files to ACS Paragon Plus with their revised manuscript.

If you wish to be considered only for the front cover, and not a paid supplementary cover, please respond NO accordingly to the Supplementary Cover Art question in ACS Paragon Plus. For more information on the Supplementary Covers program, please see [this webpage](#). All art submitted for consideration for a supplementary cover will also be considered for a front cover.

## Web Enhanced Objects (WEO)

The Web editions of ACS journals allow readers to view multimedia attachments such as animations and movies that complement understanding of the research being reported.

WEOs should be uploaded in ACS Paragon Plus with 'Web Enhanced Object' selected as the file designation. Consult the list of [compatible WEO formats](#).