

# Records of Agricultural and Food Chemistry

A scientific open access journal in the field of agricultural and food chemistry.

Volume: 2 Year: 2022 Issue: 1 January-June



Photo by Fevzi Özgökçe

**A C G**  
publications

## Editor-in chief

Editor-in-Chief **Mehmet Öztürk**

Book Review Editor **Turgut Kılıç**

Editor: Food Science and Technology **Murat Taşan**

Co-Editor-in Chief **Ahmet C Goren**

## Editors

Abdurrahim **Kocyyigit**

Muhammet **Arıcı**

M. Iqbal **Choudhary**

Bouchra **El Amiri**

Ahmet C **Gören**

Zahia **Kabouche**

Turgut **Kılıç**

Veronique **Seidel**

Adel **Shehata**

Tamer **Üstuner**

Maged S. Abdel-kader **Abdel-kader**

Riadh **Ben Mansour**

Mehmet Emin **Duru**

Abduselam **Ertaş**

Mudassar **Iqbal**

Murat **Kartal**

Mehmet **Ozturk**

William N. **Setzer**

Murat **Taşan**

Balakyz **Yeskaliyeva**

## Language Editors

## Abstracting & Indexing

Records of Agricultural and Food Chemistry is abstracted and Indexed in: Chemical Abstracts Service (CAS), ProQuest; EBSCOhost, Google Scholar.

## Publisher

### ACG Yayıncılık Basın Yayın Sanayi ve Ticaret Limited Şirketi

Yenikent Mahallesi, Fırat Caddesi, 1/3, Gebze, Kocaeli, İstanbul, Türkiye  
+90 850 305 05 72 - www.acgpubs.org - info@acgpubs.org

2022© ACG Publications. All Rights Reserved

## Instruction For Authors

Agriculture and Food has been an interesting nutrient for human beings up to date. Food production has also become important with the increment of population. Everyone prefers good quality food having high nutritional value and long shelf life. The safe foods on which have been searched by the researchers will be investigated in the future, as well. Briefly, humanity will always be interested in what they are eating.

Potential topics include, but are not limited to:

- Agriculture-plant protection, weeds, plant disease, pests and control methods
- The novel chromatographic methods to determine both major and minor components of food(s) and medicinal plant(s) especially nutrients and/or bioactive compounds
- The chemotaxonomy of molecules in food(s) or medicinal plant(s)
- Analysis of the flavors and the essential oils of the food(s) or medicinal plant(s), chemistry relating to major and minor components of food(s)



- The chemical composition of the food(s) or medicinal plant(s)
- Fast screening and analysis of bioactive ingredients of food(s), including antioxidants, anticancer, anti-diabetes, immunomodulatory, anti-inflammatories, anti-microbial, polysaccharides and other phytochemicals
  - The structural changes in the molecule(s) during or after food processing, food distribution and food local conditions
  - Determination of food quality and safety and by-products, and the processing wastes
  - Analysis of food contaminants, additives, and other agro-chemicals
  - The inter-comparison studies of the results of methods to develop food reference materials of food components to be able to be used in the developed assays
  - Determination of origin and authentication studies. Verification of organic, biological and ecological labeling of food(s) or medicinal plant(s) including origin labeling of honeys.
  - The production of chemicals from natural origin in industrial scale studies will also be considered.

### Audiences:

Food engineers, Food technologists, Farmers, Agriculture, Chemist's, Toxicologists, and Researchers of the pharmaceutical and Food industries.

### Preparation of Manuscripts

Manuscripts should be prepared in English using a word processor.

Authors are **must** use templates ([Template file for original article:Please click to open template file](#)) or ([Template file for short report:Please click to open template file](#)) for the preparation of manuscripts. The template offers the authors many features that ease manuscript preparation and submission; all graphics and Tables can be integrated into the manuscript where author wishes to place them. Requested supporting information must be prepared as shown in the [template of supporting information:Please click to open template file](#).

The essential oil and fatty acids and related papers should be prepared according to requested rules of international standards such as RRI value report.

**Novelty statements** of submitted manuscripts must be provided as MS word file item by item. The maximum item should be 6 for the novelty statement.

**A graphical abstract** must be provided during submission. The dimensions of the graphical abstract must be 6.5 cm (h) x 12.5 cm (l). Please do not use the portrait version of graphical abstract. The graphical abstract must briefly show the contents of the abstract. Only structure of compound or picture of species not allowed for the graphical abstract.

**For new compounds:** New compounds search report of SciFinder should also be uploaded via the supporting information document system in PAMS.

**Review Articles** are critically evaluated on the specific area in natural product chemistry. If you would like to contribute to the journal with a review article, the authors must initially contact the editorial office by email to [info@acgpubs.org](mailto:info@acgpubs.org), as such articles are normally invited.

**Original Articles are manuscripts describing original full length research papers in the field of agricultural and food chemistry area that have not published previously on the food and agricultural products and technologies, as well as new analytical methods (analytical methods must include method validation and uncertainty evaluation parts in the main text and the details must be given in the supporting information file), chemotaxonomic investigations, chemical ecology, and biotechnology. These manuscripts should reflect completed investigations rather than fragmentary parts of a larger study. In order to reduce manuscript length, specific experimental details, spectral data and repeated experimental parts should be prepared as supporting information.**


**Short Reports are suitable for reporting early reports on new food sources, biological sources, agricultural applications, essential oil compositions, and new activities of known compounds. Manuscripts describing bioactivity screening (e.g., antimicrobial, antioxidant, antifeedant, etc.) of crude extracts or predictable and/or unexceptional bioactivity (e.g., antioxidant activity of polyphenolics, antimicrobial activity of essential oils), are generally not acceptable. Short Reports should be kept to a maximum of six pages, including references.**

**Special Issues and Book reviews** are collections of articles on the specific topics in areas related to aims and scope of journals published in the journal. Offers for the special topics must be applied to the editorial office.

As the manuscript language is English, any author who is not fluent enough in English is encouraged to consult a fluent colleague or a paid editing service for the preparation of the manuscripts. Manuscripts having language deficiencies, i.e. grammar, fluency, etc., create heavy problems during the review process. Such manuscripts might be returned to the authors

for correcting the language deficiencies.

**Manuscripts submitted to ACG publications are routinely screened by a software to check the originality of the submitted articles. It should be noted that ACG publications are committed to deterring plagiarism and self-plagiarism. Manuscripts submitted to ACG publications are routinely screened by a software to check the originality of the submitted articles. It should be noted that ACG publications are committed to deterring plagiarism and self-plagiarism. A plagiarism report must be uploaded during submission of manuscript.**

Title of the manuscript should be as brief as possible and typed to the template file with affiliation and addresses of all the authors, including corresponding author with an asterisk. **ORCID**  of all authors should be added as shown in the template of manuscripts. The e-mail address, phone and fax numbers of the corresponding author should be provided as a footnote on the title page. Abstracts of all kinds of submissions should be prepared with a maximum 200 words.

Manuscripts should be compiled in the following order: Manuscripts should be compiled in the following order: **Title page; Abstract; Graphical abstract (in PAMS only), Keywords; Introduction, Materials and Methods, Results and Discussion, Acknowledgments; Appendixes** (as appropriate); **References**; using a decimal system for subsections. Novelty statements of manuscript must be provided and authors must adhere to [SI units](#). When using a word which is or is asserted to be a proprietary term or trade mark authors must use the symbol ® or TM or alternatively a footnote can be inserted using the wording below: Please see the details of section to the following link "[Guide for manuscript preparation](#)".

### References

References should be cited in the text by Arabic numbers in square brackets and should be arranged in the list of references according to the numbers in the end of the main text. Unpublished results and personal communications should not be in the reference list, but may be mentioned in the text. If reference is made to papers submitted or in press, authors are requested to enclose a copy of manuscript or galley proof.

The following examples illustrate the format for reference:

#### *Journal citation*

A.C. Goren, B.N. Zhou and D.G.I. Kingston (2003). Cytotoxic and DNA damaging activity of some aporphine alkaloids from *Stephania dinklagei*, *Planta Med.* **69**, 867-868.

#### *Chapter citation*

A. Ulubelen and G. Topcu (1992). Diterpenoids from *Salvia* species and their pharmacological activities, In: *Studies in Natural Products*, ed: Atta-ur Rahman, Elsevier Science, Amsterdam, Netherlands, pp.363-381.

#### *Book citation*

R.P. Adams (1995). Identification of essential oil components by gas chromatography/mass spectroscopy. Allured publishing Co. Carol Stream, Illinois.

### ATTENTION

The number of authors of the reference is more than 10, names should be written up to the 10th author, and et.al should be written thereafter. When there are 10 authors or less, all authors should be written as shown in the example. While the issue number is written in bold, the parentheses should not be written in bold.

**Warning: The most common mistakes for the References:** Writing format of author names, not writing the reference name in lowercase letters, placing a period instead of a comma after the reference title, Journal names should not be written in their abbreviated form and with a period after the abbreviation. If the journal name consists of a single word, please do not put a period at the end.

### Plagiarism Check and Ethics

Any manuscript submitted, soon to be submitted or in press at any other journal will not be considered by Records of Agricultural and Food Chemistry (RAFC), and it is authors responsibility to inform the Editor of Records of Agricultural and Food Chemistry if such event exists. If the submitted manuscript is a revised version of a previously rejected by RNP, the authors must indicate previous submission in their cover letter and explain the reason/changes that they made in the revised one.

The *Ethical Guidelines for Publication in Journals and Reviews* issued by the [European Association of Chemical and Molecular Sciences](#) are applied by Records of Agricultural and Food Chemistry. Authors of all the manuscripts submitted to Records of Agricultural and Food Chemistry automatically accept the guidelines given in the [Ethical Guidelines for Publication in Journals and Reviews](#) and the authors have to provide the ethical board approved document informations ( the number and date and ethical board name of ethical approval) in the main text of manuscript and related data should be available in supporting

information file of manuscript, if necessary or requested by the editorial office. The following studies strongly needs ethical board approval eg. any of in vivo studies on any animal and human body, studies of endangered species in nature, information about the people including any kind of survey data etc. For detail please see the COPE guidelines.

Authors are encouraged to attach an authenticated report during the submission to make sure that there is no plagiarism problem. Manuscripts submitted to Records of Agricultural and Food Chemistry publications are routinely screened by a software to check the originality of the submitted articles. It should be noted that RNP publications are committed to deterring plagiarism and self-plagiarism

ACG Publications journals use iThenticate® software to check the originality of submitted manuscripts for plagiarism. If a duplication is detected by the editorial office and reviewers, the manuscript will directly be rejected. If the authors use the same sentences of their or another authors previous work with citation without quotation mark, it will still be considered as self-plagiarism and plagiarism, respectively. Records of Agricultural and Food Chemistry has the right of removing any article published in RNP, and banning the authors submitting their studies in future if any ethical violation is identified.

### Copyright

It is a condition of publication that authors vest or license copyright in their articles, including abstracts, in ACG Publications. This enables us to ensure full copyright protection and to disseminate the article, and the Journal, to the widest possible readership in electronic formats as appropriate. Authors must accept the articles published in the journal for free all around the world. To read and download published papers is free for scientific purposes.

### Supplementary Material

Supplementary materials could be sent together with manuscript submission such as spectra, video, Picture etc.

### Publication Fee

ACG Publications is happy to announce continuation of the publication of Records of Agricultural and Food Chemistry completely free of charge for two years and as RAFC papers are now supported by Troyasil HPLC Column Technologies. On this occasion, we would like to thank [Troyasil HPLC Column Technologies \(www.troyasil.com\)](http://www.troyasil.com) for their great support to our scientific community.

The authors are charged a fee for English language corrections and/or journal format corrections requested by the authors or editorial team. These services are not considered within the free publication criteria of related journals of ACG PUBLICATIONS.

### Withdrawal of a Manuscript

If the authors intend to withdraw their manuscript after it has been peer reviewed, or after it has been typeset, but not yet published, you will be asked to pay according to the following:

For peer review: 200 USD per article

For peer review and typesetting: 300 USD per article

### Proof Corrections

**The proof corrections must be done carefully by the authors. When proof corrections are returned to Journal further corrections are not allowed.**

**Erratum or Publisher Correction.** Notification of an important error made by the journal that affects the publication record or the scientific integrity of the paper, or the reputation of the authors or of the journal.

**Corrigendum or Author Correction.** Notification of an important error made by the author(s) that affects the publication record or the scientific integrity of the paper, or the reputation of the authors or the journal.

**Retraction.** Notification of invalid results that affect the reliability of a previously published article. The original article is marked as retracted but remains available to readers, and the retraction statement notifying readers of the invalidity of the published paper is bi-directionally linked to the original published paper.

**Addendum.** Notification of additional information about a paper. Addenda are published when the editors decide that the addendum is crucial to the reader's understanding of a significant part of the published contribution. Addenda include Editorial Expression of Concern, which is an editorial statement alerting our readership to serious concerns with the published paper. Editorial Expressions of Concern are typically updated with another amendment once further information is available. The editors may request additional information after publication of the article from the authors and it can be available on the page of the article.

### Peer Review Policy

All published research articles in Records of Agricultural and Food Chemistry have undergone rigorous single blind peer review, based on initial editor screening and anonymized refereeing by expert referees.

## Contents

### Review Article

Abdellatif Rahim , Fatma Aydoğmuş-Öztürk, Cansel Çakir, Abdelkhalid Essamadi and Bouchra El Amiri

[Mitigating Fluoride, Lead, Arsenic and Cadmium Toxicities in Laboratory Animals and Ruminants through Natural Products](#)

- p.1-17

### Original Article

Işın Aydın Ünsal, Murat Taşan, Taner Gökçen and Ahmet C. Gören

[Development and validation of a primary IDMS method for the quantification of 12 sulfonamides in meat by using LC-MS/MS](#)

- p.18-26

### Original Article

Ertan Şahin, Esra Çapanoğlu, Aslı Can Karaça and Aslı Barla Demirköz

[Extraction of Cocoa Butter from by-product Cocoa Bean Shells by using SC-CO<sub>2</sub> Extraction and Investigation of Flavour Profile and Antioxidant Capacities](#)

- p.27-40

### Original Article

Zain Ullah, Ibrarullah -, Anwar Ali Shad and Mehmet Ozturk

[Determination of Fatty Acids Profile, Antioxidant, and Anticholinesterase Inhibitory Activities of Ganoderma lucidum collected from Swat, Pakistan](#)

- p.41-49

### Original Article

Oğuz Akpolat

[Optimization of Assay Conditions for t-RNA by Experimental Design](#)

- p.50-58