

# Journal of Chemical Metrology

A scientific open access journal in the field of analytical chemistry and accreditation

Volume: 14 Year: 2020 Issue: 2 July-December



**EISSN:1307-6183**

**A C G**  
publications

## Editor-in chief

Editor-in-Chief **Mustafa Özyürek**

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

Book Review and Review Article Editor **John Warren**

## Editors

Ewa **Bulska**

Mahmut **Durmuş**

Carlos A. **Gonzales**

İlhami **Gülçin**

Jin Seog **Kim**

Ivo **Leito**

Nuri **Nakiboglu**

Mustafa **Özyürek**

Kenneth W. **Pratt**

Michela **Sega**

John **Warren**

Florabela **Dias**

Andrzej **Gawor**

Ahmet C **Gören**

Byungjoo **Kim**

Turgut **Kılıç**

Bertil **Magnusson**

Masahiko **Numata**

Mehul **Patel**

Marina **Ricci**

Miloslav **Suchánek**

Steven **Westwood**

## Language Editors

John **Warren**

## Abstracting & Indexing

*Journal of Chemical Metrology* is abstracted and Indexed in: Chemical Abstracts Service; ESCI Web of Science by Clarivate Analytics (formerly Thomson Reuters); SCOPUS, Google Scholar; ProQuest; EBSCOhost, Crossref; i-Journals; i-Focus.

## 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](http://www.acgpubs.org) - [info@acgpubs.org](mailto:info@acgpubs.org)

2020© ACG Publications. All Rights Reserved

## Instruction For Authors

Manuscripts should be prepared in English using a word processor.

**Review Articles** are critically evaluated on the specific area in chemical metrology, analytical chemistry and accreditation. 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, CRM Report Articles and Discussion Articles** are manuscripts describing new chemical measurements (new CRM report for the CRM Report Articles) and also discussions on the modern analytical techniques, results, new applications to other areas, such as bioanalytical and pharmaceutical studies. In determining the suitability of submitted articles for publication, particular scrutiny will be placed on the degree of novelty and significance of the research and the extent to which it adds to existing knowledge in analytical chemistry. Discussion papers on the fundamentals of analytical chemistry and Metrology in Chemistry and Biology including educational facilities are welcome. These manuscripts should reflect completed investigations

rather than fragmentary parts of a larger study. In order to reduce manuscript length, specific experimental details, and some spectra and/or figures should be made available as [supplementary](#) material from the corresponding author.

Authors are **must** use templates ([Template file for original article](#)) for the preparation of manuscripts. The section order and topics should be determined by the authors for the discussion articles if it has no experimental data. 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

1. Introduction
  2. Experimental
  3. Results and Discussion
  4. Conclusion
- Acknowledgements/Supporting Informations  
References.

**Short Report Articles** are suitable for reporting the urgent results of the large study, or new application of known analytical methods. Small modifications and validation data of known methods should be prepared as a short report. Brief discussion on the chemical metrology are welcome in short report form. In order to reduce manuscript length, specific experimental details, and some spectra and/or figures should be made available as supplementary material from the corresponding author.

Authors are **must** use templates ([Template file for short report](#)) for the preparation of manuscripts.

1. Sample Source
  2. Previous Studies
  4. Present Study
- Acknowledgements/Supporting Informations  
References


**Special Issues, Letter to Editor and Book Reviews** are collections of articles on the specific topics in areas related to aims and scope of journal 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.

**Novelty statements** of submitted manuscript 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.

**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 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.

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:

#### 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, *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 Journal of Chemical Metrology (JCM), and it is authors responsibility to inform the Editor of Journal of Chemical Metrology if such event exists. If the submitted manuscript is a revised version of a previously rejected by JCM, 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 Journal of Chemical Metrology. Authors of all the manuscripts submitted to JCM automatically accept the guidelines given in the [Ethical Guidelines for Publication 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 JCM publications are routinely screened by a software to check the originality of the submitted articles. It should be noted that JCM 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 author's previous work with citation without quotation mark, it will still be considered as self-plagiarism and plagiarism, respectively. Journal of Chemical Metrology has the right of removing any article published in Journal of Chemical Metrology, 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

##### APC of Journal of Chemical Metrology

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.

All articles in *Journal of Chemical Metrology* (ISSN 1307-6183) are published in full open access. ♦ Authors are asked to pay an article processing charge (APC) of per processed paper given below.

Current publication fees for the different kinds of articles are given below

Article Type	Number of Pages	Publication fee
Review Article	1-50	1000 USD
Book Reviews	1-2	300 USD
Original Articles	1-20	750 USD
Short Reports	1-6	700 USD

\*% VAT is included, bank commission should be applied to payments. No per-page publication fee will be charged for articles up to eight (8) pages in the final edition. However, for articles exceeding eight pages, a per-page fee of \$10 must be paid separately by the authors.

\*\*No submission fee applied by ACG Publications journal. APC is only applicable for the accepted articles.

\*\*\*While the fees given in the table above are valid for articles up to 8 pages, a fee of 10 USD is requested from authors for each page after 8 pages

*Withdrawal of a Manuscript* : If you intend to withdraw your 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: 450 USD per article

For Accepted and typesetting: Editorial service fee of the article type must be paid by the authors. See above Table.

Considering the primary aim of JCM, waivers are available for the authors who are from the least developed countries.. To apply to those options, the corresponding author and 80 % of the authors of the concerned manuscript must be from those countries and the study must be conducted in the least developed countries. Please visit the page concerning the list of these countries; <https://www.un.org/development/desa/dpad/least-developed-country-category/ldcs-at-a-glance.html> . If you have any difficulties about this issue please contact the editorial office. APC only available for accepted articles in ACG Journals and no fee required during the submission of manuscript.

#### 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 Journal of Chemical Metrology have undergone rigorous single blind peer review, based on initial editor screening and anonymized refereeing by expert referees.

## Contents

### Discussion Article

Ivo Leito and Irja Helm

[Metrology in chemistry: some questions and answers](#) - p.83-87

### Original Article

Adel Shehata, Abdulrahman Alaskar, Mohammed Alrashed, Abdullah Alosaimi, Fahad Alkharraa and Abdulrahman Alzahrani

[Certification of sodium benzoate solution reference material by HPLC-UV, LC-MS/MS and UV-VIS-NIR spectrophotometry for food and drug analysis](#) - p.88-105

### Original Article

Kalpana Patel, Priyanka Shah, Purvi Shah and Tejal Gandhi

[UV-spectrophotometry-assisted chemometric methods for simultaneous determination of ambroxol hydrochloride and doxofylline in pharmaceutical formulation](#) - p.106-113

### Original Article

Aslı Baysal, Hasan Saygin and Gul Sirin Ustabasi

[Impact of test conditions on the bacterial bioassay in the presence of TiO<sub>2</sub> nanoparticles](#) - p.114-124

### Original Article

Dimalkumar A Shah, Ishita Gondalia, Vandana Patel, Ashok Mahajan and Usmangani K. Chhalotiya

[Stability indicating liquid chromatographic method for the estimation of remogliflozin etabonate](#) - p.125-132

### Original Article

Zeynep Kalaycıoğlu, Merve Kopar and F. Bedia Erim

[Oleuropein levels of Anatolian olive leaves and correlated antioxidant, antidiabetic, and anti-inflammatory activities](#) - p.133-141

### Original Article

Devansh Kansara, Usmangani K. Chhalotiya, Hetaben Kachhiya and Ishita Patel

[Development of TLC method for simultaneous estimation of novel combination of amlodipine besylate, rosuvastatin calcium, and fimasartan potassium in synthetic mixture](#) - p.142-152

### Original Article

Muge Guleli, Sezin İşsever, Cem Caliskan and Mahmut Ozbek

[Determination of simethicone in different drug formulations by gravimetry and comparison with the FTIR method](#) - p.153-159

### Original Article

Merve Bat Özmatara and Şule Dinç Zor

[Achievement of antioxidants from \*Abelmoschus esculentus\* L. seeds using ultrasound-assisted extraction optimized by the help of experimental design approach](#) - p.160-168

### Original Article

Arzu Morkoyunlu Yüce and Hüseyin Altundağ

[Assessment of the relationship between some physico-chemical properties of soil and soil algae in micro basin scale in Kocaeli](#) - p.169-176

Original Article

Sibel Mentese and Batuhan Bas

[A year - round monitoring of ambient volatile organic compounds across Dardanelles strait](#) - **p.177-189**