

This short guide is intended to assist those preparing manuscripts for submission to *LCGC* and *Spectroscopy*, including columns, feature articles, and peer-reviewed articles.

Tips for Avoiding the Most Common Formatting Missteps

Abstract: An abstract of one or two short paragraphs describing what the paper is about and its significance to the field of analytical measurements. Do not include any references in this section.

Figures: Figures should be named and called out in text using Arabic numerals (Figure 1, 2, 3, and so on). Be sure to provide high-resolution graphics and send to us as original quality for each figure and subfigure. For excellent quality presentation in print we request that you email us your original artwork or graphics as high image resolution (>200 dpi) images. The original figures may be as TIFF, PDF, EPS, JPEG, PowerPoint, or Word but must be saved at higher than 200 dpi resolution. There are many sites online that instruct you in generating and saving high resolution files, depending on the software used to create the graphical images. Note that email is limited to 20 MB files and so we recommend that you send compressed .zip files or separate emails with less than 20 MB of attachments per email. Individual figures within a figure are designated as (a), (b), (c), and so on for both the figure and the explanations of the figures within the captions. Ensure that all axes in figures are clearly labeled and sufficient font size with what is being measured, followed by the unit of measure in parentheses. Common examples of ordinate (y-axis) labels include Milliabsorbance (mAU), Signal (mV), Intensity (a.u.), Counts (cps), Relative abundance, Absorbance (AU), Percent transmittance (%T), Reflectance (R); examples of abscissa (x-axis) labels include, Time (min), Mass (m/z), Wavenumbers (cm^{-1}), Nanometers (nm), and so on. If two words are used the first is upper case and second is lower case, for example Retention time (min).

Tables: The format is Table I, II, III, and so on—using Roman numerals. All tables must include an explanatory caption. Tables should be provided as Word or Excel tables (in editable format), not as images. The first column should be left justified and text and titles in all other columns should be centered.

Captions: Figures should not have subtitles or excessive extraneous labels or notations—it is preferred to share as much of the information as possible within the caption for figures and tables.

Scientific unit nomenclature, and usage: Our format does not use g L^{-1} or mg mL^{-1} nomenclature, but rather g/L or mg/mL . Do not use the form of unit^{-1} , except for cm^{-1} . Please do not use ‘&’ but rather ‘and’. Please do not use i.e. or e.g. abbreviations, but rather ‘that is’ or ‘for example’. Also do not use a forward slash (/) but rather ‘or’ except for MS/MS and specified scientific nomenclature.

Equations: All mathematical variables within the manuscript text and for equations are *italicized*. Equations are centered on the page with numerical designations for equations using Arabic numbering in brackets as [1], [2], [3], and so on. All variables must be explained within the text, most often immediately following the equation.

References: References are numbered as (1), (2), (3), and so on using Arabic numbering and following the formatting styles described below. Authors are not required to use automated reference management software, and it is preferred that it is not used.

Document format: Word as .docx is preferred.

Font and font size: Times New Roman at 11 or 12 font size is preferred.

General: Please use precise language, terminology, and hyphenation of terms per *The American Chemical Society (ACS) Style Guide*. We use American English for all publications.

Note: We follow *The ACS Style Guide (from the American Chemical Society)*, *Webster's International Dictionary*, and *The Chicago Manual of Style*, except where expanded upon or superseded by our in-house style guide.

Scientific Paper Structure

Most articles, other than review articles or tutorials, should follow the structure of a standard scientific paper, as described below.

1. Every paper should have an **Abstract** of one or two short paragraphs describing what the paper is about and its significance to the field of analytical measurements. Do not include any references in this section.
2. In the **Introduction**, provide a detailed technical overview of the technique described (what it is and how it differs from traditional techniques) and the relevance of the application to which it is being applied, if pertinent. What was the thought process (or theory) that led to the discovery or development of this method? What references from the literature would be appropriate to cite related to this discussion (such as previous work leading to this development as papers or patents)? Feel free to use schematics or equations to compare and contrast the theory of the described measurements with other similar techniques.
3. The **Materials and Methods** section should include as much detail about the method as possible, such as instrument name and type, sample containers, instrument preparation, sample preparation, specific details for making instrument measurements, data processing and algorithms, and data acquisition software used. Elaborate and describe these in sufficient detail so that anyone reading the paper would be able to replicate the method without asking the author(s) additional questions. We recommend including a table (with table number and caption) of performance data or comparison features to help readers understand the specifics of the actual differences between analytical methods, such as sample preparation time, resolution, or analytical performance errors (expand to include all known factors). To be clear, we do not publish comparisons of instrument performance from different manufacturers, so any discussion of performance comparisons must be specifically in regard to methods or techniques, not commercial instrument brands.
4. The **Results** section should include all measurement results and a description of what the results mean. This section could include most figures and figure captions with some additional details and explanations of the meaning of each of the figures. The Results section could include subsections such as *Collection of Data* and *Data Analysis*.
5. A final section named **Conclusion** would include the summary information and a stated argument that the results attained were meaningful and significant. This should be very specific information and include only provable claims that are based on the reported results and substantiated by available reference literature as patents, patent applications, or papers.
6. The **References** section should include all relevant reference papers and patents. One may also include personal communications with noted individuals in the field as part of the reference collection.

Author Guideline URLs for Manuscripts

LCGC: <http://www.chromatographyonline.com/lcgc-author-guidelines>

Spectroscopy: <http://www.spectroscopyonline.com/spectroscopy-author-guidelines>

Reference Style

BOOKS

- Author(s): C. Barnes and R.G. Eames, *A Computer Perspective* (Harvard University Press, Cambridge, Massachusetts, 1973).
- Editor(s): G.E. Brown and P.H. Ribbe, Eds., *Reviews in Mineralogy* (Mineral Society of America, Washington, D.C., 1982), vol. 5.
- Author(s) and editor(s): V. Filatov, B.G. Hickman, and D.L. Klein, *Global International Economic Models*, R.S. Bar, Ed. (Elsevier, Amsterdam, 1983).
- Chapter in a book: J.L. Goldstein and M.S.D. Bodie, in *The Metabolic Basis of Inherited Disease*, J.M. Stanbury, J.R. Wyngarden, D.O.J. St. James, and R.Y. Browne, Eds. (McGraw-Hill, New York, 5th ed., 1984), pp. 672–684.

JOURNALS AND MAGAZINES

- A.A. Holder and R.R. Freeman, *J. Exp. Med.* **156**, 1528–1537 (1982).
- N. Simionescu, M. Simionescu, and G.F. Palade Jr., *Am. Lab.* **64**(13), 586–672 (1980).
- Y. Li, C. Gu, J. Gruenhagen, K. Zhang, P. Yehl, N.P. Chetwyn, and C.D. Medley, *J. Chromatogr. A* **1393**, 81–88 (2015). <https://doi.org/10.1016/j.chroma.2015.03.027>

[DOI may also be written in this format: DOI: 10.1016/j.chroma.2015.03.027].

CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Part 1910.101 (U.S. Government Printing Office, Washington, D.C, YEAR), pp. XX–XX.

GOVERNMENT REPORTS & PROJECTS

Office of Policy, Planning, and Analysis, *Energy Projections to the Year 2010* (DOE/PE-0029/2, Department of Energy, Washington, D.C., October 1983), pp. 7–10.

EPA DOCUMENTS

B. Wrights and R.D. Smith, *Supercritical Fluid Extraction of Particulate and Adsorbent Materials: Part II* (U.S. Environmental Protection Agency, Washington, D.C., EPA Report 600/4-87/040, 1987).

EU GMPs

European Commission Health and Consumers Directorate-General, *EudraLex: The Rules Governing Medicinal Products in the European Union. Volume 4 , Good Manufacturing Practice Medicinal Products for Human and Veterinary Use.* (Brussels, Belgium, 2010).

EU ANNEX 11

European Commission Health and Consumers Directorate-General, *EudraLex: The Rules Governing Medicinal Products in the European Union. Volume 4 , Good Manufacturing Practice Medicinal Products for Human and Veterinary Use. Annex 11: Computerised Systems* (Brussels, Belgium, 2010).

EUROPEAN PHARMACOPOEIA (Ph. Eur.)

General Text 5.2.8, "Minimizing the Risk of Transmitting Animal Spongiform Encephalopathy Agents Via Medicinal Products," *European Pharmacopoeia* (European Directorate for the Quality of Medicines, Strasbourg, France, YEAR), pp. xx-yy.

FDA GUIDANCE DOCUMENTS

US Food and Drug Administration, *Guidance for Industry: Sterile Drug Products Produced by Aseptic Processing— Current Good Manufacturing Practice* (FDA, Rockville, MD, 2004), pp. 12-13.

FDA: PROPOSED REGULATIONS OR GUIDANCE DOCUMENTS

FDA, "Medical Devices: Good Things to Have," proposed, *Federal Register*, **41**(106), 1 June 1976, pp. 22,202–22,219.

GMPs

See US GMPs or EU GMPs

GAMP Guides

ISPE, *Good Automated Manufacturing Practice (GAMP) Guide, version 5* (International Society of Pharmaceutical Engineering, Tampa, Florida, 2008).

ISPE, *GAMP Good Practice Guide Validation of Laboratory Computerized Systems, 1st Edition* (International Society of Pharmaceutical Engineering, Tampa, Florida, 2005).

ISPE, *GAMP Good Practice Guide: A Risk Based Validation of Laboratory Computerized Systems, 2nd Edition* (International Society of Pharmaceutical Engineering, Tampa, Florida, 2012).

INTERNATIONAL CONFERENCE ON HARMONIZATION (ICH)

International Conference on Harmonization, *ICH Q3C, Impurities: Guidelines for Residual Solvents* (ICH, Geneva, Switzerland, 1997).

USP, ENTIRE BOOK (though it is better to name a specific chapter or page):

United States Pharmacopeia 35–National Formulary 30 (United States Pharmacopeial Convention, Rockville, MD, 2011).

USP, SPECIFIC CHAPTER, tied to a specific edition:

General Chapter <233> "Elemental Impurities – Procedures," in *United States Pharmacopeia 35–National Formulary 30* (United States Pharmacopeial Convention, Rockville, MD, 2011).

Note: If you have several USP citations in a single article, in subsequent references you can shorten the book name to *USP 35–NF 30*.

USP, SPECIFIC CHAPTER, not tied to a specific edition:

United States Pharmacopeia General Chapter <233> "Elemental Impurities – Procedures" (United States Pharmacopeial Convention, Rockville, MD).

USP – Articles in Pharmacopeial Forum about proposed changes:

USP Proposed General Test <429>, "Light Diffraction Measurement of Particle Size," *Pharmacopeial Forum* **28**(4), 1293–1298 (year).

US GMPS (these are published in the Code of Federal Regulations)

Current Good Manufacturing Practice Regulations for Finished Pharmaceutical Goods, in 21 *CFR* 211.68(b) (U.S. Government Printing Office, Washington, DC, 2008).

United States Laws (see Chicago for more details)

Uniting (and) Strengthening America (by) Providing Appropriate Tools Required (to) Intercept (and) Obstruct Terrorism Act of 2001 (USA PATRIOT Act), Public Law 107-56, 107th Cong. (26 October 2001).

CONFERENCE PAPERS

B.L. Hawkins, A. Baxter, and G.E. Masters, "NMR Preview: A Look to the 1990's," paper presented at the 25th Experimental NMR Conference, Wilmington, Delaware, 1984.

ACADEMIC PAPERS

D.R. Lee, Ph.D. dissertation, University of Wisconsin, Madison (1975).

CATALOGS, COMPANY LITERATURE & PATENTS

"Bio-Radiations," Bio-Rad Laboratories (Richmond, California, 1975).

J.W. Vanderhoff, U.S. patent 4,177,166, 4 December 1979.

M. Huchette and F. Davos (Roquette Frères S.A.), German patent application 3,009,875, 25 September 1980.