

Instruction For Authors

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The *Laboratory Medicine and Quality Assurance* (Lab Med Qua Assur) is the official journal of the Korean Association of External Quality Assessment Service. It is published quarterly (on the last day of March, June, September, and December). The *Laboratory Medicine and Quality Assurance* aims to share knowledge in laboratory medicine and quality assurance. The *Laboratory Medicine and Quality Assurance* covers new scientific and scholarly content on laboratory medicine and quality assurance.

GENERAL CONSIDERATIONS

1. The manuscript should be written in Korean or English, and the authors should first refer to the Laboratory Medicine Terminology (published by the Korean Society for Laboratory Medicine in 2020) for the Korean terms. The journal publishes Original Articles, Case Reports, Brief Communications, Letters to the Editor, Reviews, Evaluation Briefs, and Reports on Proficiency Testing. Other manuscript types could be submitted with the approval of the editorial board. Case reports that had been reported more than three times domestically or internationally will be rejected. Brief Communications and Evaluation Briefs are intended for the presentation of brief observations that do not warrant full-length papers but have sufficient originality and utility to be considered for publication. The information must be presented in sufficient detail so that readers can understand and appreciate the material presented. Manuscripts are classified according to the following eight specific areas, and the authors should state the appropriate area of interest to which their manuscripts belong. However, the executive editor may request the author to change the area of interest and resubmit the manuscript, if necessary.

Specific areas include

Diagnostic Hematology
Clinical Chemistry
Clinical Microbiology

Diagnostic Immunology
Transfusion Medicine
Diagnostic Genetics
Laboratory Informatics
Laboratory Medicine General

2. Authorship

- (1) Manuscripts are accepted only on the understanding that they have not been published elsewhere. The manuscripts published in this journal cannot be submitted for publication elsewhere. If the author(s) wishes a duplicate or a secondary publication, for example, for the readers of a different language, the author must obtain approval from the editors-in-chief of both the first and second journals. Further, the conditions specified in the Uniform Requirements for Manuscripts Submitted to Biomedical Journals should be met, such as the insertion of a footnote in the title page of the second journal stating the primary reference and the duplicate nature of the paper (<http://www.icmje.org/icmje-recommendations.pdf>). Only those who have made significant contributions to the preparation and publication of the manuscript are eligible for authorship and should take responsibility for the same. Each author should sign a consent form, including a statement that copyright is transferred to the *Laboratory Medicine and Quality Assurance* after acceptance for publication.
 - (2) When a researcher involves minors (those aged 19 or younger) or family members (spouse, children, within cousinage) (hereinafter referred to as 'specially related persons') in research or writing paper, it must be notified to the editorial board in advance, and the reason for the participation of the relevant person as a co-author must be clarified. When submitting paper for a specially related person, prior consent is required to provide personal information.
3. **Disclosure of conflict of interest:** Each author is responsible for disclosing to the Publisher all potential conflicts of

interest regarding this manuscript (including sources of support, consulting fee or honorarium, stocks, etc.). Even in case the authors have no conflicts of interest, the authors should declare it: None declared. Each author also should sign a statement disclosing any conflicts of interest.

4. **Acknowledgements:** General acknowledgements and research grant are described between disclosure of conflict of interest and references.

RESEARCH PUBLICATION ETHICS

Each member should recognize that honesty, truth, and accuracy are essential for ensuring the reliability of research results and comply with the following in all research activities.

ETHICS FOR RESEARCHERS

Experiments conducted on human subjects should be performed according to the Declaration of Helsinki (<https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>; adopted in 1964, amended in 2013) and comply with Korea's Good Clinical Practice. The authors must demonstrate that the research ethics committee or institutional review board (IRB) of their institution approved the study. If necessary, the patient or guardian should be fully informed of the purpose, background, and methods of the study, as well as the potential mental and physical risks during research, and provide their signed informed consent. Identifying information, including names, hospital numbers, and photographs, should not be disclosed.

In the case of animal experiments, the author should describe the experimental procedures, such as raising and using experimental animals. The author should also state that they obtained approval from the research ethics committee of the institution where the experiment was performed and that they had not violated the regulations of the Research Ethics Committee or National Institutes of Health Guide for the Care and Use of Laboratory Animals (1996, Institute of Laboratory

Animal Resources, Committee on National Research Council, National Academic Press, <http://www.nap.edu/readingroom/books/labrats/index.html>).

The author should keep the original experimental data used for the manuscript for at least one year from the time of publication and present them at the request of the Editorial Committee. Research publication ethics not specified in this guideline adhere to the Publication Ethics Guidelines of the Korean Association of Medical Journal Editors.

MISCONDUCT IN RESEARCH AND PUBLICATION

Research misconduct occurs when, in designing, conducting, reporting, and presenting research, a researcher fabricates or falsifies data, plagiarizes, violates authorship rules, or simultaneously submits a manuscript.

- (1) Making up false data or results that do not exist (fabrication)
- (2) Manipulating research materials, equipment, or processes, or changing or omitting data or results so that the research is not accurately represented (falsification)
- (3) Appropriation of another person's ideas, processes, results, or words without proper authorization or citation (plagiarism)
- (4) Not granting authorship to a person who has contributed to research without a justifiable reason or granting authorship to those who have not contributed to research for reasons such as appreciation and honor (inappropriate authorship)
- (5) Publication of a paper that overlaps substantially with one already published in print or electronic media (redundant publication)

RESEARCH PUBLICATION ETHICS IMPLEMENTATION PLAN

- (1) The Association should inform its members regarding the research ethics norms, range of misconduct, means to respond to the misconduct, and verification procedures.

- (2) A statement on the cautions and restrictions regarding research misconduct and a research ethics compliance letter should be included in the submission of the manuscript for publication in the *Laboratory Medicine and Quality Assurance*.
- (3) The Association should organize and manage a Research Publication Ethics Committee (hereinafter referred to as the “Ethics Committee”) that can recognize, report, and investigate violations of research publication ethics and regulations.

PREPARATION OF MANUSCRIPTS

1. The manuscript must be typewritten double-spaced using a 12-point font size on A4-sized paper using Microsoft (MS) Word. The number of pages should be less than 20, excluding tables and figures. Case Reports should be less than 15 pages of A4-sized paper, and Letters to the Editor should be less than 10 pages of A4-sized paper. Brief Communications and Evaluation Briefs should be no more than 1,500 words in total.

Section headings should not be used in the body of Brief Communications and Evaluation Briefs, and the methods, results, and discussion should be combined in a single section. Methods should be described in detail in the text, and not in the table footnotes nor in the figure legends in the case of Brief Communications and Evaluation Briefs. Acknowledgments should be presented similar to that in full-length papers, but the title should not be included. The number of tables and figures should also be kept to a minimum.

2. The manuscript file should include the following in the given order.
 - 1) Title page: In the title page, indicate the manuscript type (Original Article, Case Report, Review, etc.), specific area, title, institutional affiliation(s), name of the author(s), and the corresponding author’s name and contact information (zip code, address, phone and facsimile numbers, and e-mail address). If the authors are affiliated

with different institutions, their names and affiliations should be stated using superscripts 1, 2, 3, etc., starting from the first author. A running title should be added if the title exceeds 30 characters in Korean or 40 characters in English, including spaces. Word count for the abstract is indicated. Information concerning sources of financial support and all potential conflict of interest should be placed as a footnote.

- 2) Abstract: An abstract is not required for Letters to the Editor. In the case of all the other types of manuscripts, the abstract should be written in English. The English abstract should be written in 250 words or less and include the following subheadings: Background, Methods, Results, and Conclusions. Each subheading should be summarized in 1 paragraph (Uniform Requirements for Manuscripts Submitted to Biomedical Journals. *N Engl J Med* 1997;336:309-15). For Case Reports, Brief Communications, Evaluation Briefs, Reviews, and Reports, the abstract is limited to 250 words in a single paragraph without the subheadings. Select 3 to 10 keywords in English and insert them below the abstract. Where possible, the keywords should match those in the Medical Subject Heading (MeSH) of Index Medicus (<http://www.nlm.nih.gov/mesh/MBrowser.html>). When a reagent or instrument is described in the abstract, the author should only mention the manufacturer and country, and not the manufacturing city.
- 3) Introduction: The research background and objectives should be described briefly.
- 4) Materials and Methods: Research procedures, such as selection of research subjects, research methods, devices or apparatuses, experimental methods, statistical analysis methods, and IRB approval, should be described in detail. Ensure correct use of the terms sex (when reporting biological factors) and gender (identity, psychosocial or cultural factors) for the description of participants, and, unless inappropriate, report the sex or gender of study participants, the sex of animals or cells, and describe the methods used to determine sex or gender (<https://researchintegrityjournal.biomedcentral.com/articles/10.1186/s41073-016-0007-6>).

- 5) Results: Important observational findings should be described using tables and figures. If possible, present the absolute and relative values (percentage) of the data. Nos. 3 to 5 can be combined in Case Reports.
- 6) Discussion: Describe the novelty and significance of the study and conclusions from the results. However, the content in either the introduction or the results should not be repeated. Summarize the main results, describe the meanings, and compare them with similar research results. The limitations of the study are also explained.
*In Reports on Proficiency Testing, the Results and Discussion sections may be combined.
- 7) Disclosure of conflict of interest: Disclose any conflict of interest, including research funding, consulting fee, stocks, and concurrent jobs, etc.
- 8) Acknowledgments: General acknowledgments are described.
- 9) References: Serially number the references in the order of citation in the text with numbers in brackets. Refer to all necessary literature, but indicate 30 references at the most. Not more than 20 references should be inserted for Case Reports, Brief Communications, and Evaluation Briefs.
- 10) Tables and Figures: Each table and figure should be written concisely, and the content of the tables and figures should not overlap. Photographs should be clear. Submit colored and black-and-white photographs to print colored and black-and-white photographs, respectively. The image files can be in Joint Photographic Experts Group (JPEG) or Tagged Image File Format (TIFF) file format. However, files containing the figures should be uploaded in JPEG or Graphics Interchange Format (GIF) file formats for the first online manuscript submission. TIFF or bitmap (BMP) files can be uploaded for the accepted manuscript. The print resolution should be 300 dots per inch (dpi) or higher. If necessary, figures can be mailed. If the figures are delivered by mail, the photographs should have a separate label on the reverse side, indicating the Fig. numbers, name of the author, an arrow indicating the top, and whether it should be printed in color or not. After attaching the photographs

on blank paper, write the photograph description at the bottom and specify whether the photographs should be printed in color. For the citation of the contents of tables or figures, indicate them with Table 1 or Fig. 1. If there are more than one insets in the figure, each one of them should be identified alphabetically, i.e., (A), (B), (C), etc., with a corresponding legend. See Section 5 for details.

- 11) Insert the page number in series at the bottom of each page in the manuscript file.
3. Observe the following points when preparing the contents of your manuscript.
 - 1) Academic terms should be written in Korean. The terms included in Laboratory Medicine Terminology (2020), published by the Korean Society for Laboratory Medicine, or Essential Medical Terminology, published by the Korean Medical Association (2005), should be used. If terms are not included in the above documents, the terms described in Medical Terminology (5th edition, 2009) should be used. Special medical terms, proper nouns, drug names, and units that are difficult to be translated can be written in English. If there is a translation for a term but the meaning is not clear, its original language is written in parentheses following the translation when the term first appears in the manuscript, and then only the translation is used. In the case of new translations, the terms recommended by the editorial committee of the Association should be used during manuscript revision.
 - 2) The name of a person or a place and other proper nouns should be given in the original language, and Arabic numerals should be used. For weights and measures, the metric system should be used; International Standard (SI) units should be used. Indicate liters with a capital L.
 - 3) The name of a microorganism should be spelled out at the first mention in the English and Korean abstracts and original text (example: *Escherichia coli*), and the names of the genus can be abbreviated subsequently (example: *E. coli*). However, do not abbreviate the name of the genus if two or more genera starting with the same letter are being referred to. Scientific names should always be italicized. However, unscientific names are not italicized.

(Example 1) To be italicized: *E. coli*, *Papovaviridae*, *Hepadnavirus*, *Herpesviridae*

(Example 2) Not italicized: streptococci, coagulase-negative staphylococci, Epstein-Barr virus, hepatitis B virus, herpes simplex virus

4) The names of the genes, and not the proteins should be italicized:

The names of genes should be italicized.

(Example) *BCR-ABL* mutations, *HER2* gene

The proteins of corresponding genes are not italicized.

(Example) BCR-ABL kinase domain, HER2-positive

5) When using English abbreviations, spell out the abbreviation at first mention along with the abbreviation in the English and Korean abstracts and original text. Do not use an abbreviation in the title. The terms listed in "Abbreviations" at the end of the website of Korean Society for Laboratory Medicine (<http://www.kslm.org/>) need not be spelled out.

6) In the case of spacing between words and parentheses or brackets, a space should be inserted when English text or a number is placed before the parentheses. However, a space is not needed before Korean text. Brackets [] that indicate citations should be always written without spaces. (Example) heparin-induced thrombocytopenia/thrombosis (HITT)의 비구조단백질(nonstructural protein)이란

7) For an instrument or equipment, mention the name of its model, manufacture, city, (state), and country in parentheses. The general name of a reagent should be used. If a trade name is expressed with a general name, the trade name should be placed after the general name in parentheses. When using a trade name, indicate the manufacturer, city, (state), and country in parentheses. Do not use the symbols TM or [®] unless necessary. In subsequent mentions after the first, instruments and equipment can be referred to by indicating only the manufacturer in parentheses. In the English and Korean abstracts, indicate only the manufacturer and country.

(Example) Coulter STKS (Coulter Electronics Inc., Hialeah, FL, USA), vancomycin (Sigma Chemical Co., St. Louis, MO, USA)

8) *P*, which indicates reliability, should be italicized and in

uppercase.

9) In the case of numbers greater than threedigits, a comma should be inserted after every third digit from right to left (e.g., 5,431), but a comma should not be inserted when indicating years (e.g., 2013).

4. References should be presented in the following style.

1) References should be presented in English.

2) Articles: Names of the authors. Title. Name of the journal-year published; volume number: and the first and last page numbers.

List all the authors if the number of authors is less than seven, and list the first six authors followed by "et al." if there are more than seven. Journal names are to be abbreviated in accordance with the style of Index Medicus, which can be found in the journal database of PubMed (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=PubMed>). In the case of a supplementary volume of a journal, record it in parentheses, such as 15(S). All references in languages other than English should be translated to English.

(Example) Ji M, Chung HJ, Kim GY, Lee W, Lee S, Chun S, et al. Performance evaluation of chemiluminescent immunoassay for erythropoietin and establishment of reference interval in Korean population. *J Lab Med Qual Assur* 2011;33:83-8.

(Example) Kwon SW. Automation of blood bank tests: an overview. *J Lab Med Qual Assur* 2008;30(S1): S127-9.

3) Books: Name of the authors, editor(s). Title of the book. Edition. Place published: publishing company, published year.

(Example) Roback JD, Combs MR, Grossman BJ, Hillyer CD. Technical manual. 17th ed. Bethesda (MD): American Association of Blood Banks, 2011.

(Example) Clinical and Laboratory Standards Institute. Defining, establishing, and verifying reference intervals in the clinical laboratory: approved guideline. 3rd ed. C28-A3C. Wayne (PA): Clinical and Laboratory Standards Institute, 2010.

4) Book chapter: Name of author of the chapter. Title of the chapter. In: name of authors, editor(s). Name of the book.

Edition. Place published: publishing company, published year:and page number.

(Example) Bylund DJ, Nakamura RM. Organ-specific autoimmune diseases. In: Henry JB, editor. Clinical diagnosis and management by laboratory methods. 22nd ed. Philadelphia (PA): WB Saunders, 2011:1003-20.

5) Online reference: Name of authors. Website address. Uniform resource locator (URL) and date of recent visit.

(Example) Huret JL. Atlas of genetics and cytogenetics in oncology and hematology. <http://atlasgeneticsoncology.org/Anomalies/tri8ID1017.html> (Accessed December 22, 2011).

6) An abstract is not permitted to be cited as a reference. If a paper is accepted but not published yet, it should be cited and described as “in press.” In this case, the author should have a letter permitting the citation from the author(s) of the cited paper. If an author would like to cite a paper that has been submitted but has not been accepted yet, this papershould be described as unpublished observation in the text, and the author should obtainpermission from the author(s) of the cited paper. We do not recommend citing personal communications; however, if cited, cite the name of the information provider and date of communications in parentheses in the text. The author should confirm the accuracy of the personal communication from the author(s) and obtain a letter from the author(s) authorizing the citation. If the editorial board cannot find the reference paper, this reference can be requested to be deleted from the reference list even after acceptance of the paper.

5. Tables and Figures should be prepared in accordance with the following guidelines:

- 1) Number the tables and figures according to their order of citation in the text. The heading should be inserted above the tables, but the legends should be located below the figures. Periods should not be used in the headings of tables but are required at the end of figure legends.
- 2) Only the first letter and proper nouns of the headings and legends of tables and figures should be in capital letters.
- 3) Vertical and horizontal lines should be omitted as much as possible. Text in the first column of a table should be

aligned to the left. Single letters should be aligned centrally from the second column. If numbers are of the same unit, the decimal point should be the datum point. If there are symbols such as “-” indicating ranges, \pm and \times symbols should be the datum point. Numbers with different units should be aligned to the right in all columns. If there are parentheses, the start of the parentheses and the last letter before it should be the datum point.

4) Only numbers can be used without parentheses or a period if it represents a case in a table.

5) Explanations below should be in the order of superscripts and abbreviations. There should be a line break between the explanations of each superscript and/or abbreviations.

6) Superscripts should be placed on the right side of a word and should be used in the following order: *, †, ‡, §, ||, ¶, **, ††, ‡‡, etc. Numbers or alphabets are not used in this case. The description of the various superscripts follows the format of the following example.

(Example) *Not tested. † $P < 0.05$.

7) All non-standard abbreviations should be explained below the table/figure. Define them as indicated in the following examples (Abbreviations: abbreviation, description; abbreviation, description).

(Example) Abbreviations: NT, not tested; SAA, severe aplastic anemia.

8) If a figure is a microphotograph, the staining methods and magnification should be indicated.

9) If a figure comprises two or more pictures, each should be explained either separately as “(A), explanation and (B), explanation” or together in parentheses.

(Example of Table)

Table 1. Precision of the erythropoietin with access EPO assay

Level	Mean (IU/L)	SD	Within-run CV (%)	Total CV (%)
Low (n=80)	11.5	0.8	4.1	4.1
Medium (n=80)	37.7	1.4	2.1	3.7
High (n=80)	112.4	5.3	2.2	2.6

Abbreviations: SD, standard deviation; CV, coefficient of variation.

SUBMISSION, PEER-REVIEW, EDITING, AND PUBLICATION OF MANUSCRIPTS

1. Every manuscript should be submitted as an electronic file through the journal website (<http://www.jlmqa.org/submission/Login.html>). Anyone can create an account but must fill in the required fields. Each author should upload two separate files: a full manuscript and a manuscript file for peer-review that excludes information regarding the authors and their affiliations, such as the manuscript cover page (first page). To submit a manuscript, after logging in and uploading the two manuscript files, the author should fill in the manuscript title and author information and check the Author's Checklist. After the acceptance, each author should sign the form "Author's Assurances and Assignment of Copyright Transfer and Disclosure of Conflict of Interest" (<http://www.jlmqa.org/for/sub01.html>).
2. A manuscript copyeditor first reviews the format of the submitted manuscript. If there is an issue with the format, the manuscript copyeditor may request the author to revise and resubmit the manuscript via e-mail within one week after receipt. After the format review process is completed, the manuscript is delivered to the executive editor, and the author is notified of the receipt of the manuscript. If the submitted manuscript is not appropriate for review or the scope of the journal, the executive editor can determine that the manuscript is not acceptable before delivering the manuscript to peer reviewers. The executive editor sends the manuscript to two or more peer reviewers with expertise in the field or area indicated.
3. All manuscripts submitted to this journal are subject to independent and professional review by peers. The reviewer must examine the manuscript fairly and accurately and should not disclose the contents of the manuscript before publication nor contact the author directly. If there is any conflict of interest with the contents of the manuscript, the reviewer should immediately notify the executive editor of their inability to review the manuscript. The review letter should be submitted within 14 days and contain comments to help improve the quality of the manuscript.

The following aspects should be reviewed:

- Importance of this research in the corresponding field
 - Significance and originality of the research
 - Appropriateness of research plans and methods
 - Appropriateness of statistical analysis
 - Validity of the derived conclusions and interpretations
 - Validity of discussion
 - Usage of correct academic terms
 - Appropriateness of reference
 - Compliance with submission guidelines
 - Appropriateness of title and abstract
 - Appropriateness of tables and figures
 - Compliance with manuscript volume
4. In principle, the editorial board should notify the concerned author of the acceptance, rejection, or revision of the manuscript by e-mail and online system within 21 days after receipt of the manuscript. The revised manuscript should be reviewed within 14 days.
 5. Every author can check the status and results of the review on the journal's website. If revision of the manuscript has been requested, the concerned author should resubmit the revised manuscript through the online system or withdraw submission within 60 days from the date of notification. All requests, (revised) manuscripts, and response letters are delivered through the website.
 6. The executive editor or editor-in-chief can send manuscripts that require statistical editing to a biostatistics expert before acceptance. If necessary, the executive editor returns the manuscript and requests the author to revise the manuscript.
 7. The executive editor notifies the author of the acceptance of the manuscript, and the manuscript undergoes reference, Korean, and English editing. After the editing process is completed, the publisher asks the concerned author to check the edited manuscript before publication. The edited manuscript is sent to the author in PDF format by e-mail, and the concerned author should perform final proofreading and reply within 48 hours.

8. Manuscripts like the following are rejected. The author is notified of the rejection.
 - 1) The manuscript is rejected by two reviewers.
 - 2) The author does not respond to the executive editor within three months after the request for revision without any specific reason.
 - 3) The originality or scientific contribution of the research is significantly low.
 - 4) The research seriously violates publication ethics.
9. Publication of an article is mainly decided by the executive editor after considering the comments of the reviewers. The final decision of publication is the duty of the editor-in-chief. Any manuscript that does not observe these policies and instructions will have to be revised and supplemented, and can be withheld from publication.
10. Addition or exclusion of any author will have to be approved by the editor-in-chief after the submission of a written request signed duly by all authors.
11. Any errors discovered in the articles after publication should be sent to editor-in-chief in printed version and be inserted in erratum in a future issue.

OTHERS

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