

Hydrocarbon and Lipid Microbiology Protocols (Springer Protocols Handbooks)

Terry J. McGenity, Kenneth N. Timmis, Balbina Nogales (Eds.)

The **purpose of Springer Protocols** is to provide individual volumes that describe detailed practical procedures for a particular subject area. The individual volumes are offered in several formats as printed copy (eBook, ePub for iPad, Kindle edition etc.). This ensures that your work can be used according to your reader's preference and working environment. Each chapter can also be individually downloaded from SpringerLink and from the database "Springer Protocols".

In order to produce a book in several formats, we convert all manuscripts to XML and re-format them according to the Springer branded style. Converting a manuscript successfully into XML requires that it is clearly structured and that the authors adhere to some principal points, which are described below.

When writing your chapter, please don't spend your valuable time with formatting or be concerned with the final **layout**, which **will be performed by Springer**. Feel free to focus on the content and the structure. If you wish to get an idea of the final layout, please visit www.springerprotocols.com where you can find sample chapters of various books that have already been published.

Chapter Structure

Chapter Title

For clarity and completeness, and in order to enhance visibility on the internet, it is important that the chapter title stands alone. For example, a chapter on oil and gas reservoirs in the volume *Field and In-situ Studies*, should be called "*Protocols for Investigating the Microbiology of Oil and Gas Reservoirs*" and NOT "*Oil and Gas Reservoirs*".

Authors

After the chapter title please give the author(s) name(s), the institutional address(es), including the e-mail address(es). Please mark the corresponding author of each chapter.

Abstract

Each chapter needs to be preceded by an abstract (approx. 150-250 words) that summarizes the method described. The abstract will be available with unrestricted access to enable users to read the abstract as a teaser for the complete chapter.

Key Words

Please include 5-10 key words for referencing by electronic databases and search engines.

Main Chapter Body

1. Introduction

This section should provide general theoretical and practical context, highlighting the main issues being addressed, and outlining the major procedures involved in the protocol.

2. Materials

This section should list all buffers, reagents, solutions, etc. that are necessary for carrying out your technique. In particular, please stress any requirements relating to storage conditions and stability of solutions (e.g., light sensitive, make fresh as required, store at 4 °C, stable at 4 °C for up to 2 months, etc.), purity of reagents, suppliers (where important), etc. Also indicate any reagents that are particularly toxic, any radiation hazards, or special protection that needs to be observed. Do not list standard laboratory apparatus (e.g., centrifuge). Please try to define sub-headings that match the subheadings used in Section 3 “Methods”.

3. Methods

This is the main section and should explain in detail the individual steps necessary to carry out the technique. Where possible, please list the steps in numerical order. For techniques that comprise a number of separate major procedures, please indicate these separate procedures in the introduction, and then subdivide Section 3 into subheadings to cover each procedure. The steps in each subsection should then be numbered individually. Do take great care to try to indicate any little "tricks" or nuances that help improve your method by referring to relevant "notes" in Section 4 “Notes”. This sort of information rarely gets into the scientific literature. You may also find it useful to relate to some aspects of the theory in this section indicating the purpose of some of the major steps by cross-referencing to an appropriate “Note”.

Please avoid getting involved in the description of variations/alternatives to your technique in this section: this can be done in the "Notes" section. Stick to the basic procedure detailed in this section. **This section must be comprehensive.** Do not send the reader away to find information for a particular step in another reference. All relevant practical details must be given in this section.

4. Notes

Even the simplest techniques go wrong from time to time, and so please indicate any major problems or faults that can occur with your technique? Try to indicate the major sources of problems and how they can be identified and overcome. With reference to related techniques, any variations of the technique that you have described should also be made in this section, as well as, where relevant, an indication of the sensitivity of the method, timescale, replication required, need for statistical analysis, etc. This "Notes" section is a **hallmark of this series** and has been singled out for praise by a number of reviewers. Please try and make this section as extensive as possible by putting on paper all of your various experiences with the technique. Each ‘Note’ should be cross-referenced with the ‘Materials’ and ‘Methods’ sections, e.g. (see **Note 1**).

Extra Information for the Introductory Chapter

In addition to the standard protocol chapters, each “*Hydrocarbon and Lipid Microbiology Protocols*” volume will start with an Introductory Chapter that highlights the principal questions, outlines the pertinent experimental approaches available, identifies the critical considerations, and discusses relevant strengths, weaknesses and limitations of individual methods. This chapter should just be structured by decimal headings and should also have a speaking title, i.e. “*Introduction to xxx ...*”

Heading Structure

Please use **headings** with decimal numbers, up to the third level, i.e. 1, 1.1, 1.1.1, 1.1.2. The chapters themselves will not be numbered.

References

Citations in the Text Number all references in order of use throughout the chapter, and indicate the reference by placing the number of the reference in bold, italicized parenthesis, like this **(6)**. All references are to be indicated like that **(7)** and should appear in numerical order throughout the text **(8)**.

Reference List The final section is the list of references. Please ensure that the references follow the New England Journal of Medicine style, as shown below in the *Appendix: Reference List – Examples*.

Figure Captions

After the reference list, which is the last section of the main text part, place the figure captions. Each figure should have a concise caption describing accurately what the figure depicts. Number the figures consecutively by chapter and ensure that all figures in the text are cited in the correct order.

Please note that in the final chapter, the figures and tables will be placed near their first citation in the text according to Springer's layout rules.

Tables

Tables provide an excellent means to: compare (aspects of) protocols, list key variables within a protocol, list reagents, summarize data etc., and their use is encouraged.

- Number the tables consecutively by chapter and ensure that all the tables are cited in the text in the correct order (e.g., Table 1, Table 2, ...).
- Give each table a short heading/ caption; other information should appear as footnotes to the table, indicated by superscript letters, starting with ^a.
- To format the table columns, please use the table function of Word.
- Do *not* use the space bar or tabulators to separate columns.
- If a table cell is to be left empty, please type a hyphen (-) in it.

Sometimes it may be appropriate to organize text parts in a table-like presentation within the running text; in this case, no table numbering and headings are required.

Figures //Illustrations

We particularly encourage authors to produce figures that help readers to understand the background and visualize the process, e.g. conceptual illustrations, protocol decision trees, protocol flow diagrams, line-drawings of the experimental set-up / uncommon apparatus, photographs of the same, chemical structures, reaction pathways, gene arrangements, phylogenetic trees for primer design, and importantly example outputs to illustrate data handling.

We recommend that **each figure** is prepared individually and saved **as a separate file**. For vector graphics, the preferred format is EPS; for halftones, please use TIF format. MS Office files are also acceptable. The published work will directly reflect the quality of the artwork provided.

General Notes

- Illustrations directly **taken from the Internet** produce a **low quality print** output, since for figures displayed on screen, a resolution of only 72–96 dpi is sufficient, but not for figures in a book (see below).

- The required resolutions have to be the original resolutions. If you just modulate the settings of a low resolution file, this will not improve the quality.
- If you scan illustrations, please do so in the same size as they should appear in print. If possible, do not scan printed material as this produces a lower contrast.

Line Art (Black and white graphics with no shading)

- Line drawings should have a **minimum resolution of 1200 dpi** in the final size.
- Check that all lines and lettering within the figures are legible at the final size. Lines should be at least 0.1 mm (0.3 pt) wide. *Note:* Finer lines (hairlines) produce broken lines after high resolution typesetting even if the printout looks fine.
- Vector graphics containing fonts must have the fonts embedded in the files.

Halftone Art (Photographs, drawings, or paintings with fine shading, etc.)

- Halftones should have a **minimum resolution of 300 dpi** in the final size.
- Indicate any magnification by using scale bars within the figures themselves.

Colour Art

- Colour printing is expensive in comparison to black and white. Thus, figures will only be printed in colour if black and white printing would cause a loss of information. The editors will finally decide whether it is essential for a figure to be printed in colour.
- If illustrations are to be printed in black and white, use screened areas with grey shades of 10%, 25%, and 50% instead of colour. For backgrounds we recommend a grey shade of 15-25%; any lettering on such areas must be clearly legible.

Figure Size

- When preparing your figures, size them to fit in the page width and if possible, submit them in their final size. For Springer Protocols volumes, the print area of a page is 140 x 211 mm, with a major text column of 102 mm width. The entire book format is 178 x 254 mm (7 x 10 inches).
- Save each individual illustration in the size that it should be in print.
- If **reduction** is required, please make sure that the **lettering is still readable** after reduction, i.e. capitals 2 mm, small letters 1.5 mm as minimum in the final size.

Figure Lettering

- Keep lettering consistently sized throughout your final-sized artwork, usually about 2–3 mm (8–12 pt).
- To add lettering, it is best to use *Helvetica* or *Arial* (sans serif fonts) and avoid effects such as shading, outline letters, etc.
- Lettering should not be added to photos until after scanning, i.e. to the graphics file.
- Figure parts should be denoted by lowercase letters (a, b, c, etc.).

Permissions

Please remember that if you intend to use any figure, table, or lengthy text passage which has been previously published, you will need to formally request permission to use the material from the original publisher. This also applies to material previously published by Humana Press and Springer, and previously published material that is your own work. Please keep in mind that it can sometimes take a while for requests to process, and you should start this process as soon as possible. Grant letters for any necessary permissions should be submitted to your book's editor with your final chapter manuscript. If the figures have been redrawn so as to be "significantly different" from the original, then no permission is needed.

All reproduced figures should be cited in the text by either using the wording supplied by the original publisher, or by using a standard format such as "Reproduced from [Name Year] with permission from [Publisher]." The full citation should be included in your References.

Note: Most Permissions can be obtained by going to the publisher's website and filling out an online form. This is usually the easiest and quickest way to obtain permissions!

Submission

Please submit your chapter via the manuscript tracking system Editorial Manager. Authors can access the site at: www.editorialmanager.com/hlmp. With your invitation, you have already received the instructions to register.

(See also the instructions "Submitting your Chapter via Editorial Manager".)

Appendix: Reference List – Examples

Type	Example
Journal article	Smith J, Jones M Jr, Houghton L et al (1999) Future of health insurance. <i>N Engl J Med</i> 341:325-329
Inclusion of issue number (optional)	Saunders DS (1976) The biological clock of insects. <i>Sci Am</i> 234(2):114-121
Journal article with DOI (and with page numbers)	Slifka MK, Whitton JL (2000) Clinical implications of dysregulated cytokine production. <i>J Mol Med</i> 78:74-80. doi:10.1007/s001090000086
Journal article by DOI (before issue publication with page numbers)	Slifka MK, Whitton JL (2000) Clinical implications of dysregulated cytokine production. <i>J Mol Med</i> . doi:10.1007/s001090000086
Article in electronic journal by DOI (no paginated version)	Slifka MK, Whitton JL (2000) Clinical implications of dysregulated cytokine production. <i>Dig J Mol Med</i> . doi:10.1007/s801090000086
Journal issue with issue editor	Smith J (ed) (1998) Rodent genes. <i>Mod Genomics J</i> 14(6):126-233
Journal issue with no issue editor	<i>Mod Genomics J</i> (1998) Rodent genes. <i>Mod Genomics J</i> 14(6):126-233
Book chapter	Brown B, Aaron M (2001) The politics of nature. In: Smith J (ed) <i>The rise of modern genomics</i> , 3rd edn. Wiley, New York
Book, authored	South J, Blass B (2001) <i>The future of modern genomics</i> . Blackwell, London
Book, edited	Smith J, Brown B (eds) (2001) <i>The demise of modern genomics</i> . Blackwell, London
Book, also showing a translated edition [Either edition may be listed first.]	Adorno TW (1966) <i>Negative Dialektik</i> . Suhrkamp, Frankfurt. English edition: Adorno TW (1973) <i>Negative Dialectics</i> (trans: Ashton EB). Routledge, London
Chapter in a book in a series without volume titles	Schmidt H (1989) Testing results. In: Hutzinger O (ed) <i>Handbook of environmental chemistry</i> , vol 2E. Springer, Heidelberg, p 111
Chapter in a book in a series with volume titles	Smith SE (1976) Neuromuscular blocking drugs in man. In: Zaimis E (ed) <i>Neuromuscular junction. Handbook of experimental pharmacology</i> , vol 42. Springer, Heidelberg, pp 593-660
OnlineFirst chapter in a series (without a volume designation but with a DOI)	Saito Y, Hyuga H (2007) Rate equation approaches to amplification of enantiomeric excess and chiral symmetry breaking. <i>Top Curr Chem</i> . doi:10.1007/128_2006_108
Proceedings as a book (in a series and subseries)	Zowghi D et al (1996) A framework for reasoning about requirements in evolution. In: Foo N, Goebel R (eds) <i>PRICA'96: topics in artificial intelligence</i> . 4th Pacific Rim conference on artificial intelligence, Cairns, August 1996. <i>Lecture notes in computer science (Lecture notes in artificial intelligence)</i> , vol 1114. Springer, Heidelberg, p 157
Proceedings with an editor (without a publisher)	Aaron M (1999) The future of genomics. In: Williams H (ed) <i>Proceedings of the genomic researchers</i> , Boston, 1999

Proceedings without an editor (without a publisher)	Chung S-T, Morris RL (1978) Isolation and characterization of plasmid deoxyribonucleic acid from <i>Streptomyces fradiae</i> . In: Abstracts of the 3rd international symposium on the genetics of industrial microorganisms, University of Wisconsin, Madison, 4-9 June 1978
Paper presented at a conference	Chung S-T, Morris RL (1978) Isolation and characterization of plasmid deoxyribonucleic acid from <i>Streptomyces fradiae</i> . Paper presented at the 3rd international symposium on the genetics of industrial microorganisms, University of Wisconsin, Madison, 4-9 June 1978
Patent. Name and date of patent are optional	Norman LO (1998) Lightning rods. US Patent 4,379,752, 9 Sept 1998
Dissertation	Trent JW (1975) Experimental acute renal failure. Dissertation, University of California
Institutional author (book)	International Anatomical Nomenclature Committee (1966) <i>Nomina anatomica</i> . Excerpta Medica, Amsterdam
Non-English, Latin alphabet publication cited in an English publication. NB: Use the language of the primary document, not that of the reference for "vol" etc.!	Wolf GH, Lehman P-F (1976) <i>Atlas der Anatomie</i> , vol 4/3, 4th edn. Fischer, Berlin
Non-Latin alphabet publication cited in an English publication. Optional are the title of the publication in the original language (and alphabet) and an English translation, which are placed in parentheses when they are present.	Marikhin VY, Myasnikova LP (1977) <i>Nadmolekulyarnaya struktura polimerov</i> (The supramolecular structure of polymers). Khimiya, Leningrad
Online document	Doe J (1999) Title of subordinate document. In: The dictionary of substances and their effects. Royal Society of Chemistry. Available via DIALOG. http://www.rsc.org/dose/title of subordinate document . Accessed 15 Jan 1999
Online database	Healthwise Knowledgebase (1998) US Pharmacopeia, Rockville. http://www.healthwise.org . Accessed 21 Sept 1998
Supplementary material/private homepage	Doe J (2000) Title of supplementary material. http://www.privatehomepage.com . Accessed 22 Feb 2000
University site	Doe J (1999) Title of preprint. http://www.uni-heidelberg.de/mydata.html . Accessed 25 Dec 1999
FTP site	Doe J (1999) Trivial HTTP, RFC2169. ftp://ftp.isi.edu/in-notes/rfc2169.txt . Accessed 12 Nov 1999
Organization site	ISSN International Centre (2006) The ISSN register. http://www.issn.org . Accessed 20 Feb 2007

Always use the standard abbreviation of a journal's name according to the *ISSN List of Title Word Abbreviations*, see <http://www.issn.org/2-22661-LTWA-online.php>.

For references that contain more than 3 authors, it is not necessary to list all names in your reference, but just list the name of the first author followed by 'et al.'.

Hydrocarbon and Lipid Microbiology Protocols

Isolation and Cultivation

McGenity, T.J.; Timmis, K.N.; Fernandez, B.N. (Eds.)

2017, X, 319 p. 50 illus., 20 illus. in color., Hardcover

ISBN: 978-3-662-45178-6