

STYLE GUIDE FOR CONTRIBUTORS

Current Protocols in Bioinformatics

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Quick Guide to Article Structure

The standard elements listed below are fully described in the “Organization of the Manuscript” section of this guide

- Title Page
title, author, affiliation, phone/fax/e-mail contacts
- Abstract
brief overview of the article, do not include reference; maximum length 250 words
- Keywords
three to five keywords summarizing the principles of the article
- Article Title and Article Introduction
To maximize the discoverability of your article, please see Wiley’s Search Engine Optimization (SEO) guidelines [here](#). The title needs to be descriptive and must incorporate a key phrase related to your topic. Put your keywords within the first 65 characters of the title.
- Briefly introduce the purpose of the method, what problem(s) it addresses, and what data can be obtained by executing the protocols. The final paragraph of the introduction should, in sentence form, list all the protocols in the document and provide a brief summary of each one.
- Strategic Planning
procedural options (e.g., protocol selection) for complex methods
- Basic Protocol(s)
 - Title
 - Introduction
gives context of protocol with regard to manuscript as a whole; summary of procedure
 - Necessary Resources
Hardware; software (including availability); files (include format of input file)
 - Steps and Annotations
Numbered steps in active voice; details for novice, life science investigators
 - Tables and/or Figures
e.g. screen shots to illustrate protocol steps
- Alternate and/or Support Protocols (optional)
same elements as for Basic Protocol
- Guidelines for Understanding Results
general discussion goes here, specific discussion of worked-out example goes in the protocols; when possible, include examples of “Bad Results” here
- Commentary
 - Background Information
theory (suitable for molecular biologists), limitations, other options for similar analyses etc.
 - Critical Parameters
points to consider before beginning
 - Troubleshooting
suggestions for commonly encountered problems
 - Advanced Parameters (optional)
 - Suggestions for Further Analysis (optional)
- Literature Cited
follow Current Protocols style for journals/books in this guide
- Key References with Annotations (optional)
- Internet Resources with Annotations (optional)
- Appendix (optional)

Style Guide for Contributors

Objectives and Audience

Many subscribers to Current Protocols are trained in the subject covered, but are neither trained nor experienced in a large proportion of the procedures described. Therefore, sufficient detail must be provided to permit duplication of the protocols in any laboratory, whatever the disciplinary background or level of sophistication. For the benefit of the novice experimenter, very specific information should be included where it is important to the success of the protocol. It is preferable that you provide too much detail that can be edited at the discretion of the editorial board, rather than not enough detail.

The primary audience for Current Protocols in Bioinformatics consists of molecular biologists who have an interest in applying bioinformatics tools to their own work, but who may have little to no computational experience.

Submission of Manuscript

The manuscript should be submitted to Current Protocols via ScholarOne Manuscripts, our electronic manuscript submission system. You will receive instructions on how to use this system in emails from our editorial office.

If you have questions, the address and phone number of the Developmental Editor are listed on the cover page of this guide. Also listed are the email addresses of the editorial board members, whom you can contact regarding questions of scientific content or approach.

Role of Contributors

The procedure you provide should be reliable and efficient and should provide tips and expertise based on your experience.

As a contributor, you are responsible for submitting revisions or corrections to your published protocol to maintain its accuracy and timeliness. If you have improved the methods, contact the Developmental Editor, and your changes will be scheduled for a future update.

Organization of the Manuscript

Current Protocols uses two types of articles, the overview style and the protocol style. Sample published articles of the protocol style are available at <http://www.currentprotocols.com>. Contact the Developmental Editor for a sample overview article. **Unless stated otherwise in your invitation, please prepare your article using the protocol style.**

Protocol-style:

The Quick Guide to Article Structure outline on the previous page illustrates the required organization of the standard protocol article. Listed below, corresponding to each element in the outline, are descriptive passages of these elements, *listed in the order in which they should appear in your manuscript*. It is important that you include all the elements described herein (except those listed as optional). Contact the Developmental Editor with any questions regarding the format or style of your submission.

Overview style:

On occasion, a contributor is asked to prepare an overview article. An overview article is presented as explanatory text with no protocol steps. It is not meant to be a thorough review of a subject, but rather an introduction to the major concepts and strategies; it is a useful format for summaries of key topics. You have a great deal of leeway in designing such an article.

Authors should bear in mind that many readers will be new to the subject matter and will be looking to the overview for a brief and accessible introduction to the topic of interest with a brief, targeted reference list that will help guide them to additional background in the literature. The reference list should contain a maximum of 25 to 30 references, of which the vast majority should be less than 5 years old and contain, when available, 2-3 review articles that have been published within the last 2 years.

1. Title Page. Include title of manuscript, all authors' names in the order in which they are to appear in the citation, all affiliations, phone numbers, and e-mail addresses. Please indicate the corresponding author.

2. Abstract. Provide a brief (1 paragraph, less than 250 words) informal summary of your manuscript without references. Please try to explain the importance of the article and its contents as well as possible.

3. Keywords. Provide three to five keywords which best summarize the principle topics of your manuscript. To make sure that you have an SEO-friendly title for your article, be sure that the important keywords are also in the title.

4. Article Title and Introduction. The article title succinctly describes the function of the protocol(s) in your manuscript.

The first few sentences of the article introduction provide a context for the article (why the protocol is performed and/or how it relates to other articles in the journal).

The introduction should provide only a brief context for the article (why the protocol is performed and/or how it relates to other articles in the journal). It should also describe the general approach of the methodology involved and briefly name and compare each of the protocols that are included.

The article introduction should not be confused with “Background Information” (see item 10 below, “Commentary”), which appears toward the end of an article; the purpose of the article introduction is to briefly orient the reader to the protocol steps.

If both Web and Unix protocols exist, please present both – one as the Basic Protocol and the other as the Alternate Protocol.

5. Strategic Planning (optional). Occasionally a protocol is sufficiently complex that a Strategic Planning section is required, either at the end of the article introduction (when pertinent to several protocols) or prior to the materials list and steps of an individual protocol. This describes in paragraph form various procedural options. The Developmental Editor can provide you with examples of Strategic Planning sections.

6. Basic Protocol. The Basic Protocol describing the recommended or most universally applicable approach(es). There can be more than one Basic Protocol. In that case they should be numbered sequentially.

Basic Protocol Title and Introduction: These are included when the manuscript has more than one protocol. The basic protocol title is more specific than the article title; it should describe the approach being used and differentiate the steps from other protocols (alternate and support) in the manuscript. Please note that the titles of all protocols should be parallel in construction.

The basic protocol introduction summarizes the specific approach of that protocol, mentioning important programs, data files, equipment, etc., that are employed. Occasionally a lead-in statement of context may also be appropriate, although this should not duplicate the contextual description in the article introduction.

7. Basic Protocol Necessary Resources List. The necessary resources list should consist of the following segments:

- *hardware*
- *software* – Please include where users can access or purchase the software.
- *files* – This should include the format of input files with references citing other protocols that generate such files. Please include a screen shot of the input file if it is **NOT** one of the following formats: FASTA, GENBANK, EMBL, PIR, PHYLIP, or PDB.
- where applicable, a third, single run-on entry, “*Additional hardware, software, and files for procedure (SEE AUTHOR, DATE);*” this entry is meant to avoid the listing of materials and steps for a procedure that can instead be cross-referenced to another Current Protocols article. Especially for common procedures, please check whether portions of your protocols can be effectively covered by such cross-references; be sure to provide appropriate connecting information (e.g., necessary changes to the file formats).

All resources are to be listed *in order of use* in their respective categories. In addition, recommendations regarding specific suppliers may be noted here (especially if the supplier is critical or if the item is difficult to obtain).

Sample File. If you have sample data that will be used in the worked-out example please provide an electronic version of the file. We will make the sample file available to our readers.

8. Basic Protocol Steps and Annotations. The numbered protocol steps should describe the actions performed, employing the **active tense** versus the passive: e.g., “View the structure in RasMol.” rather than “The structure is viewed in RasMol.” Additionally, when there are more than 10 steps to a protocol, provide **subheadings** to clarify the sequence of steps at each major juncture in the experiment; these headings do not affect the consecutive numbering of the protocol steps, but help organize a long protocol. These, too, should be in the active tense, e.g., “Construct the dendrogram...”

In most cases, an example should be incorporated with the step-by-step procedure. Please use “stable” protein families for database searches (to improve reproducibility) and cite the database version and date of search. Include screen shot figures of sample output. The specific results from the sample can be described in the steps or annotations.

Useful auxiliary information can be included after some protocol steps (as needed) in the form of italicized **annotations**. These may cover special tips for performing a step successfully, descriptions of *why* a step is performed, emphasis regarding crucial parameters, descriptions of expected results (e.g., expected statistics), alternate ways to perform the step, cautions regarding necessary assumptions, time considerations, storage information, and theoretical asides.

9. Alternate and/or Support Protocols. **Alternate protocols** are included when the basic protocol you have chosen is inappropriate for certain important applications, or if different processes are widely used in other labs. If both Web and Unix versions of the method exist, present one as the Basic Protocol and the other as the Alternate Protocol. **Support protocols** should be provided to supplement the basic protocol where necessary; it is preferable to list a separate protocol for, e.g., preparatory techniques, than to combine everything into one extremely long protocol. If the procedure is very short, you may employ a textual rather than a step-by-step format for the alternate/support protocols, although it is preferable, for clarity, to itemize steps whenever possible.

- a. Alternate/support protocol title and introductory text (statement of purpose).** Each alternate and support protocol should have a distinguishing title (parallel in construction to the basic protocol) and an introduction describing why the particular protocol is being included (for *alternate protocol*: why it is performed instead of the basic protocol and how the steps differ; for *support protocol*: description of its relation to the protocol it is supporting).
- b. Necessary Resources.** Alternate and support protocols should each have their own necessary resources list of hardware, software, data files, and special equipment.

10. Guidelines for Understanding Results. A discussion of the anticipated results, including expected statistical values (e.g., E-value), indications that the analysis was done correctly, or flags indicating that perhaps the results are not reliable. It should also mention what conclusions can reasonably be drawn from the analysis. General discussion should be included here; specific discussion of the worked-out example should be provided in the protocol steps or annotations. When possible, please include and discuss examples of “bad results” here.

11. Commentary. A complete commentary section should include at least a few sentences of discussion for each of the categories listed below.

- a. Background Information.** A brief discussion of the theory and applications of your procedure. Some or all of the following elements could be included in this section:
 - why the procedure is performed (historical development, where pertinent);
 - the central advantages (and disadvantages) of the technique chosen (with brief description and references for alternative methods);
 - comparison of basic and alternate protocols or comparison with other methods currently in use;
 - applications of methods;
 - citation of original or useful literature and brief discussion of primary references;

This section is not to be confused with the introduction at the beginning of the manuscript. The introduction is a practical organizational tool while Background Information helps the reader to develop an intuitive sense of the experimental design.

- b. Critical Parameters.** Information that is critical to the success of the experiment, supplementing or repeating comments in the protocols or annotations.
- c. Troubleshooting.** Discussion of problems that may be encountered in the procedure (including variations from anticipated results) with suggested remedies. Sometimes itemized in a 3-column table of Problem, Possible Cause, and Solution.

Optionally, the two preceding sections may be combined into one, titled “Critical Parameters and Troubleshooting.”

Critical Parameters and Troubleshooting are among the most popular features of Current Protocols. Remember, the commentary is being pitched to investigators who have never performed the technique.

d. Advanced Parameters (Optional.) *An optional section describing parameters that more advanced users may opt to modify.*

e. Suggestions for Further Analysis (Optional.) *This section provides researchers with a sense of how the results fit into the larger framework of bioinformatics tools that are available. Based on the results obtained from this protocol, suggest subsequent analyses that researchers might want to consider. Include appropriate cross-references to protocols in other Current Protocols articles.*

12. Literature Cited. Full references to any literature cited in the manuscript. Current Protocols follows standard APA style.

Should you wish to use EndNote or Zotero, please download the corresponding output style from our [For Authors](#) page.

References in this section should be listed alphabetically according to the following style:

a. Journal article

Bell, R. T., Fu, B. X., & Fire, A. Z. (2015). Cas9 variants expand the target repertoire in *Caenorhabditis elegans*. *Genetics*, 202, 381-388. doi: 10.1534/genetics.115.185041.

b. Book

Celis, J. E., & Bravo, R. (Eds.) (1984). *Two-dimensional gel electrophoresis of proteins*. Orlando, FL: Academic Press.

c. Chapter in a book

Huynh, T., Young, R., & Davis, R. (1984). Construction and screening of cDNA libraries in λ gt 10 and λ gt 11. In D. M. Glover (Ed.), *DNA cloning, Vol. 1: A practical approach* (pp. 49-78). Oxford: IRL Press.

All references listed in this section must be cited in the manuscript or they will be removed. Entries should include the names of all authors. Citations in the text are according to the style “(Smith, 1989; Jones, 1992)” or “as described by Ausubel et al. (1991),” where “et al.” is employed for references with more than two authors.

Government regulations and protocols should be cited as described above at first mention but may thereafter be referred to by number, if applicable: “EPA Method 8080 (EPA, 1992)” ; later, “EPA Method 8080.”

13. Key References with Annotation. One (or more) key reference may be supplied. These may, but need not necessarily, be drawn from your literature-cited list. A key reference might be a seminal journal article, an elucidating review chapter or paper, or an important book. For each one, provide a one-sentence descriptive annotation beneath each key reference listing, explaining to the reader why you consider this reference to be of particular value.

Below is an example of a Key Reference and the annotation:

Bjerrum, O. J., & Schafer-Nielsen, C. (1986). Buffer systems and transfer parameters for semidry electroblotting with a horizontal apparatus. In M.J. Dunn, Ed., *Electrophoresis '86* (pp. 315-327). Deerfield Beach, FL: VCH Publishers.
Describes the semidry blotting system.

14. Internet Resources with Annotations. Listing of Web sites, FTP servers, and the like that are of particular interest or utility to the researcher. For each one, provide a one-sentence descriptive annotation signaling to the reader why you consider this resource to be of particular value.

<http://www.bbri.harvard.edu/rasmb/rasmb.html>

Web site for most recent programs and discussion group on analytical ultracentrifugation.

15. Appendix (Optional.) If a more detailed discussion of the technique's theoretical foundations is warranted, please present it in the Appendix separate from the commentary. Readers without a strong computational background should be able to perform and understand the protocol without relying on the Appendix.

Figures

Appropriate figures illustrate some aspect of the protocol (equipment, flow chart of steps, appearance of gradients, etc.) or expected results. Submit electronic files as individual image files during the manuscript submission process. See the *Guidelines for Current Protocols Illustrations and Photographs* that follow for details of acceptable image file formats.

All figures must be cited in the article and accompanied by a detailed figure legend. Figures should be referred to as Figure 1, Figure 2, etc. If previously published, cite the original source(s) and provide a Permission Request Form (see below). Contact the Developmental Editor if you have questions.

Tables

Tables should be self-explanatory and prepared on separate pages at the end of the manuscript. Include a table number, table title, and explanatory footnotes. Cite each table in the text of your manuscript. If previously published, cite the original source(s) and provide a copyright permission form (see below).

Videos/Movies

Current Protocols is now accepting videos/movies that enhance understanding of the procedures described in the protocols. Such a video would illustrate a process involved in carrying out a protocol, particularly if that process requires special skills.

If the video depicts animal research, a statement indicating that IACUC guidelines were followed must be included, preferably at the start of the video.

Videos acceptable for inclusion in an article must be of suitable quality for web publication. Videos will be used as submitted, if acceptable. We will do no editing. Video files should be submitted with the manuscript, but separate from it.

Each video should be cited within the manuscript at the step the video illustrates. And each video should be listed at the end of the submitted manuscript (after Figure Legends) with (1) an identifying file name, (2) a title for the video, and (3) a video legend describing the content. The title and legend will be used online, with the video identification, to help the reader find the appropriate video.

Abbreviations, Measurements, and Mathematical Notation

Current Protocols manuals follow the guidelines of the *American Society for Microbiology Style Manual for Journals and Books* (ASM, Washington, D.C., 1991). Please define all standard abbreviations at their first usage and clearly indicate the accepted style (bold, italics, upper- or lower-case, super- or subscript) for names of organisms, genetic elements, commercial products, etc.

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Wiley Policy Regarding the NIH Mandate

Current Protocols will support our authors by posting the accepted version of articles by NIH grant-holders to PubMed Central upon acceptance by Current Protocols. The accepted version is the version that incorporates all amendments made during peer review, but prior to the publisher's copy-editing and typesetting. The accepted version will be made publicly available 12 months after publication. The NIH mandate applies to all articles based upon research that has been wholly or partially funded by the NIH and that are accepted for publication on or after April 7, 2008. Please see www.wiley.com/go/nihmandate for details. The foregoing applies to NIH grantees, not NIH employees. For *NIH employees only*, we will accept the NIH Publishing Agreement.

To facilitate this process, please indicate on your Copyright Transfer Agreement whether the article you are writing for Current Protocols is based on research that has been wholly or partially funded by the NIH. A funding acknowledgement statement must be included in the manuscript in order to proceed with publication.

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Please do not hesitate to contact the Developmental Editor or our offices at any time. We would appreciate any suggestions you might offer.

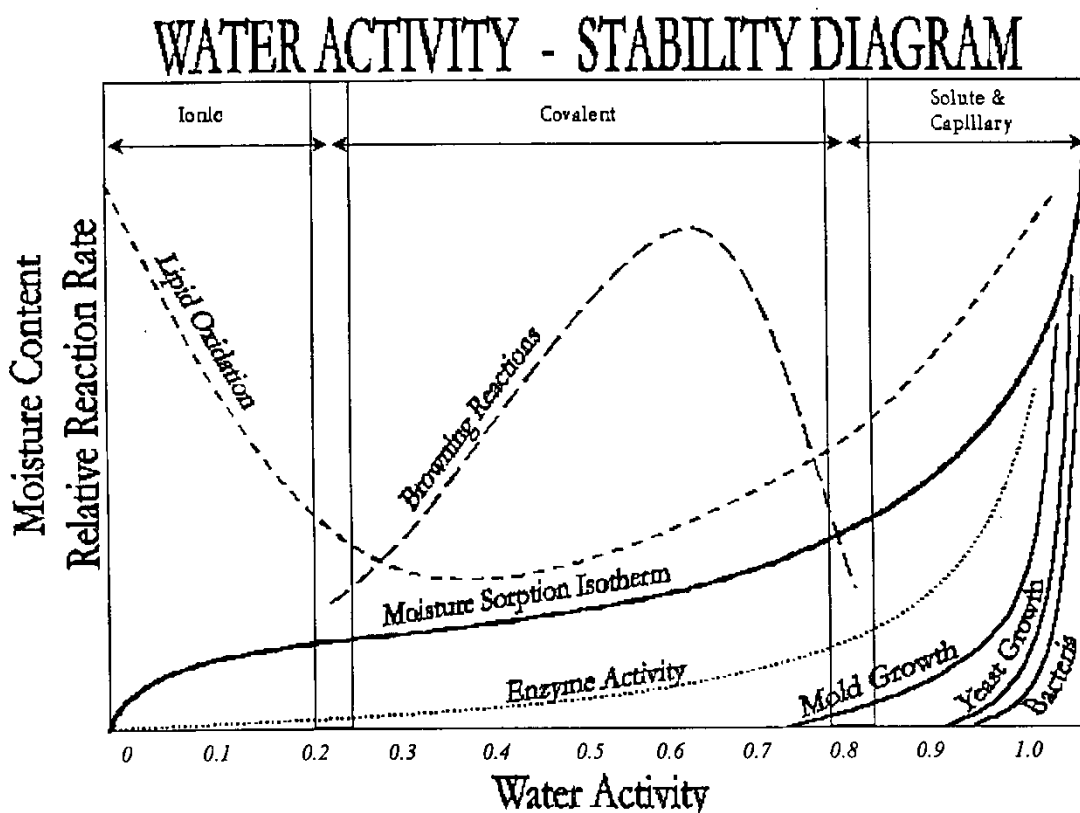
Current Protocols Art Guidelines for Authors

GENERAL REQUIREMENTS

- ❑ Publication quality digital files must be provided for all figures.
- ❑ If the figure requires a key (e.g., “◆ morphine, □ dexamethasone, ● nimesulide”), the key should be part of the figure (not the figure caption).
- ❑ Panel identifiers should be bold capital letters (**A, B, C**, etc.) and should appear in the upper left-hand corner of each panel.

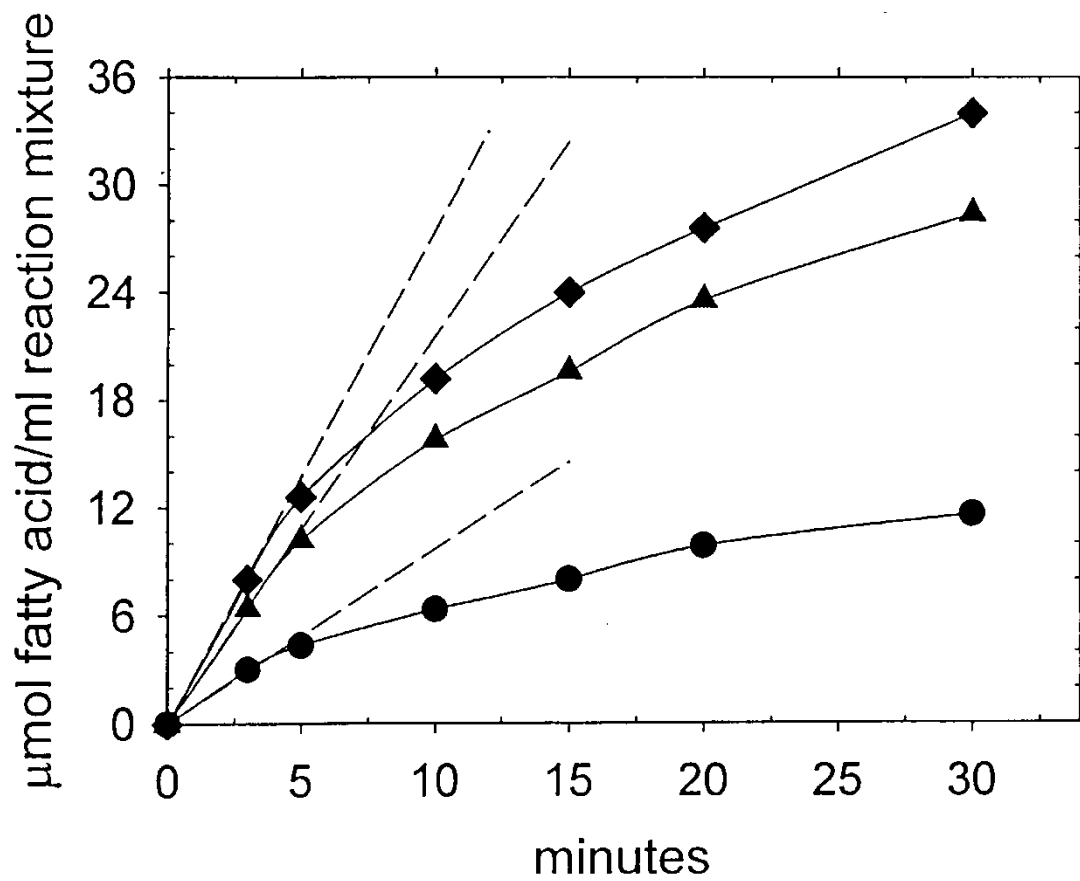
DIGITAL FILES

- ❑ **Preferred formats:** Digital files should be in EPS or TIF format. TIF format with a resolution of 266-300 dpi produces the best results for halftone images; EPS format produces the best results for line art and graphs.
- ❑ **Other acceptable formats:** If you are unable to supply files in a preferred format, we may be able to use files in other formats (e.g., JPG, Photoshop, Adobe Illustrator, PDF, and ChemDraw). Please be sure that the files are of print publication quality and to provide us with information about the file format and software version used to create the image. Corel Draw files for figures should be avoided.
- ❑ **Screenshots** should be JPG, GIF, or TIF files saved at screen resolution (i.e., 72-96 dpi).
- ❑ **PowerPoint:** If you have created a graph or flowchart in PowerPoint, submit the images as PowerPoint files. However, images created with other software (e.g., Illustrator) should be submitted as TIF, EPS, or the original application format. Importing those images into PowerPoint will significantly reduce their print quality.
- ❑ **PDF and Microsoft Word:** Figures converted to PDF or imported to Microsoft Word will usually produce very poor results and sometimes be unusable by production. These formats can be useful during manuscript review, but for final submission figures should be in one of the preferred formats listed above.



Bad Graph

This is a sample of a bad graph. Please note, the low quality resolution of the entire figure. Also the fonts are not Helvetica.



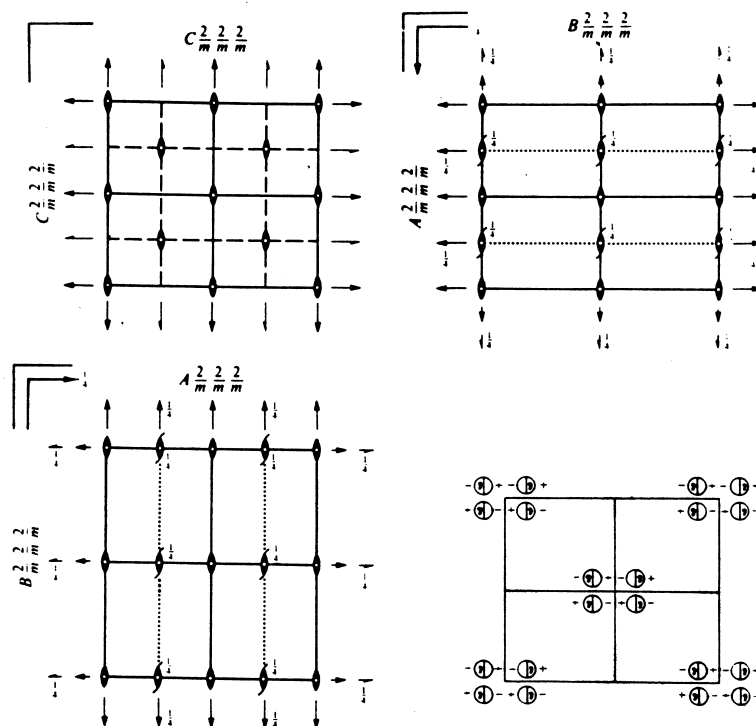
Good Graph

This is a sample of a good graph. Please note, the high quality the entire figure. Also the fonts are Helvetica. Such a figure can easily be reduced in order to fit the page.

$C m m m$ D_{2h}^{19} $m m m$

Orthorhombic

No. 65

 $C 2/m 2/m 2/m$ Patterson symmetry $C m m m$ Origin at centre ($m m m$)Asymmetric unit $0 \leq x \leq \frac{1}{2}; 0 \leq y \leq \frac{1}{2}; 0 \leq z \leq \frac{1}{2}$

Symmetry operations

For $(0,0,0)+$ set

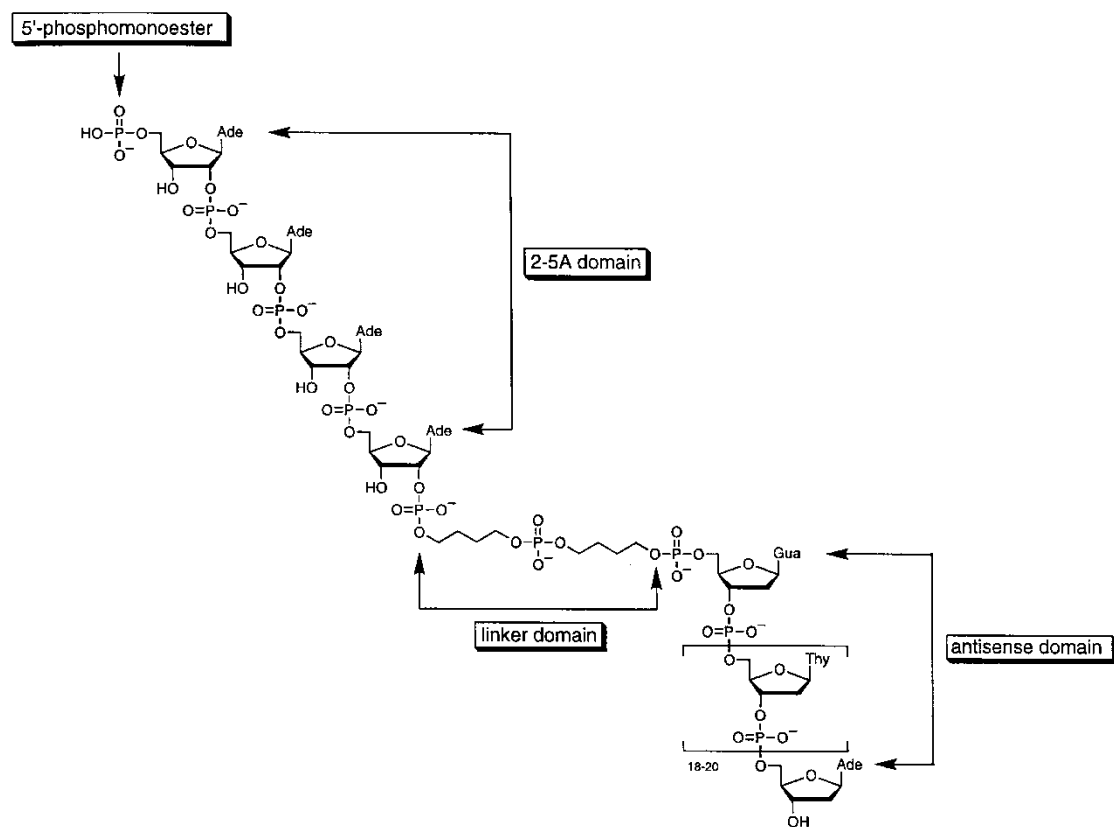
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|---------------------------|---------------------|---------------------|---------------------|
| (1) $\bar{1}$ | (2) $2 \quad 0,0,z$ | (3) $2 \quad 0,y,0$ | (4) $2 \quad x,0,0$ |
| (5) $\bar{1} \quad 0,0,0$ | (6) $m \quad x,y,0$ | (7) $m \quad x,0,z$ | (8) $m \quad 0,y,z$ |

For $(\frac{1}{2},\frac{1}{2},0)+$ set

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| (5) $\bar{1} \quad \frac{1}{2},\frac{1}{2},0$ | (6) $n(\frac{1}{2},\frac{1}{2},0) \quad x,y,0$ | (7) $a \quad x,\frac{1}{2},z$ | (8) $b \quad \frac{1}{2},y,z$ |

Bad Figure

This is a sample of a bad figure. Please note, the poor quality resolution of the entire figure. Also the fonts are not Helvetica and so small they are almost illegible.



Good Figure

This is a sample of a good figure. Please note, the high quality resolution of the entire figure. Also the fonts are Helvetica and legible.