



GUIDELINE FOR WRITTEN REPORTS

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To users of the guide

A key goal of the teaching provided at the Aalto University School of Chemical Engineering is to train students in writing well-organised and intelligible texts in field of science and technology. Successful completion of the bachelor's and master's thesis requires practicing the skill of scientific writing throughout the university studies. It is an essential skill in your future duties as an expert with a Master of Science (Technology).

This guideline provides report writing instructions for students of the School of Chemical Engineering. It is recommended that it be applied on the courses of the School of Chemical Engineering. However, since different areas of chemical technology may have varying practices, instructions deviating from this guideline or supplementing it may be given on the courses.

The guideline is based on a similar guideline by the Department of Chemical Technology of Helsinki University of Technology, edited by Esa Uosukainen in 1999.

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1 Introduction

The purpose of a written report is for students to familiarise themselves with a given topic in more detail. At the same time, they get to know literature of that field in more depth and learn to retrieve information from scientific databases and libraries. The intended readership of the reports written in the Degree Programme in Chemical Engineering consists of people with a general knowledge of chemistry and the knowledge required of those with a Master of Science (Technology). The author shall assess the value and interestingness of the information presented in the report from the viewpoint of the intended reader. A written report is not a list of direct quotations from sources, but an analytical and summarising analysis of information published on a certain topic, which may serve, for instance, as a method of collecting a base of information to be used, for instance, as background information for a new research project.

Separate guidelines are issued on each course regarding the deadline for submission and the evaluation and correction of the reports. All written reports shall be submitted by the deadline in accordance with the instructions given on the course. As a rule, a half-completed work will not be accepted for correction, but returned as it is to the student. An exception to this rule is the bachelor's thesis, which is submitted in parts. The report will not be accepted before the required corrections have been made. Submitting the report after the deadline may lower the grade or, in some cases, lead to the report being failed.

2 Retrieval of information

Out of all the literature available, you should select the articles and publications most interesting and relevant for your topic. In addition, it is worth carefully studying articles dealing with a similar reaction or piece of equipment. A written report always takes a stand on the issue dealt with. The usefulness of the report to its reader

increases hand in hand with its reliability, extent and degree of criticism. An extreme example of lack of criticism (and thus uselessness) would be to present all the publications on the topic as a whole (as copies). Contrastively, a very valuable report is one where the author has knowledge and perspective on the topic and presents only relevant high-quality references on the topic and explains his or her choices. That is the whole purpose of reviews. The requirement of high-quality sources also explains why Wikipedia and similar sources of information (press releases from product manufacturers, newspapers etc.) are usually not acceptable sources of information.

Regardless of where and how information is retrieved, the search is always based on the use of search words, and a purposeful choice of search words is only possible when the author has at least an adequate command of the topic. That is why it is essential to get to know the topic first with the help of study books, reference works and review articles. When choosing search words, it is worth considering also other words and synonyms referring to the reactions or chemical compounds in question. For instance, distillation is not only distillation, but also fractionation when talking about the separation as a unit operation.

There are many methods for searching for source materials. As a student of the School of Chemical Engineering, you have various electronic resources available to you. You have, for instance, the right to use the SciFinder Scholar chemistry research tool (for the registration link, please go to <https://inside.aalto.fi/display/LibraryandInformation/SciFinder+Scholar>). Finna available through the Aalto University Learning Centre (<https://aalto.finna.fi/>) is a search engine able to search several databases at once. The Learning Centre and its website provides access to guides and instruction on the use of electronic resources, of the Library and its equipment (<http://libguides.aalto.fi/en>). Currently, the majority of publications is available in electronic format, but especially older articles may be available only in print.

The report must stay in the agreed topic and present the most recent information available. If problems arise, e.g. you find too few or too many sources, you should contact the thesis advisor to help you redefine the scope your thesis. You should always start reading articles starting from the abstract, which presents the key points of the article. Your report must not present anything you do not understand.

3 Writing a written report

This guideline assumes that students use the Microsoft Office software. Students using other software, such as LaTeX or OpenOffice, should follow the instructions as applicable. Appendix 1 contains useful resources for writing a report.

3.1 Structure

A written report consists of the following sections:

- title page
- abstract
- index
- list of the symbols and abbreviations used
- introduction
- body of the report
- conclusions
- bibliography
- appendices
- list of the material studied

The report title page shall state the name of course, topic of the report, name of the author and student number, and the deadline for the thesis. See appendix 2 for a

sample title page. The title pages of bachelor's and master's thesis are written on a separate electronic title page template.

Written reports start with an abstract. It is an independent whole presenting briefly the contents and principal results of the report. The purpose of the abstract is to help interested readers to determine whether the contents of the report are such that they wish to read the entire work. In addition, the abstract gives those readers who are only somewhat interested in the topic the maximum amount of information in a concise form so that they do not have to read the entire report. The abstract contains no references and is no more than one page long. The abstract may also include a list of the key words of the report.

The list of symbols and abbreviations explains those abbreviations, symbols and terms which are not common knowledge. The symbols and abbreviations used must be explained when they are mentioned for the first time even if the symbol and abbreviation list was provided.

The introduction presents the background, the work and its purpose briefly. The presented matters may include for instance, the history of the topic, the first and other major studies on the topic, related theory, research problem and objectives of the report. The introduction should present the scope of the research briefly and clearly.

The body of the report consists of the necessary number of numbered chapters, which contain appropriate headings and subheadings grouped in a manner that makes their hierarchy easy to follow. Make the headings clear and informative. You should not put two consecutive headings without having any text between them. Do not use single sub-headings, for instance you cannot have a sub-heading numbered 2.1 without having another numbered 2.2. The headings of the abstract, index and bibliography are not numbered.

The conclusion summarises matters presented in the text and weighs their relevance for the research field. The bibliography is made in accordance with instructions in

3.6. On request, you must specify the databases, search words and reference works used to find the sources (List of the material studied) at the end of the report. To be able to do so, it is important that you keep a record of all used databases and search words and combinations of search words.

3.2 Language

In scientific writing, the style and correctness of language is important. The text must be short and concise as well as precise and objective. Use correct formal language and avoid colloquial expressions. Since unambiguity is key, you should avoid long, foreign or unusual words, and divide long and complex sentences into several shorter sentences. You should not start a sentence with an abbreviation or number.

The written report cannot be a direct copy or a word-for-word translation of somebody else's text. Word-for-word translation is considered plagiarism, and as such, is prohibited. For details on plagiarism, see the Aalto University Code of Academic Integrity: <https://into.aalto.fi/pages/viewpage.action?pagelId=1183861>.

3.2.1 Special terminology

When using professional terminology, use standard forms if possible and use them consistently throughout your text. Unnecessary synonyms complicate reading and decrease intelligibility. Although you should always try to use standard terminology also in Finnish texts, the most recent terms may not have a Finnish equivalent yet. To find translations for terms you can search the TEPA term bank of the Finnish Terminology Centre TSK (<http://www.tsk.fi/tepa/en/>).

Write the Latin-based scientific names of plants or microbes in italics. When the name is mentioned for the first time, give it in full, for instance *Saccharomyces cerevisiae* or *Tabernaemontana eglanulosa*. Later on, you may abbreviate the name in accordance with standard practice, so that only the initial letter is given of the genus: *S. cerevisiae* or *T. eglanulosa*. Do not inflect the names themselves; instead, add an

explanatory word to the name to help their use in sentences. Such words include species, yeast, bacterium, culture, plant. For instance, you could speak of the 'isolation of chlortetracycline from a *Streptomyces aureofaciens* culture' or 'an extract was obtained from the leaves of the *Tabernaemontana eglandulosa* plant'.

3.2.2 Abbreviations and units

All abbreviations have to be explained when they are mentioned for the first time in the text, for example 'yttria-stabilized zirconia (YSZ)' or 'atomic absorption spectroscopy (AAS)'. If the abbreviation is derived from foreign terms, also include the original term. Terms in foreign languages are written in italics in the text, for instance, kolmifaasiraja (three-phase boundary TPB) or 'This may be observed in Figure 7 showing an image of the surface of the material as seen with a pyyhkäisyelektronimikroskooppi (transmission electron microscope TEM). The inflection of abbreviations often presents some difficulties. The rule is that if there is not a word connected to the abbreviation that would reveal the intended case of the abbreviation, the abbreviation must be inflected.

In written reports, SI units are the primary units used. In certain cases, also SFS2300 units and other units of the decimal system are acceptable. Deviation from the SI units is only allowed for special reasons; for instance, μl is difficult to present as an SI unit 10^{-9} m^3 . When writing decimals in Finnish, always use a comma as the decimal separator in accordance with the ISO standard, and round off all numbers appropriately to match the accuracy of measurement. When writing in English, use the decimal point. The notation $5\text{E}-6$ used in some programmes is not to be used. Instead, write $5 \cdot 10^{-6}$. Any values taken from source literature given in other units than SI units are presented in parenthesis after the value in SI units, for instance $0 \text{ }^\circ\text{C}$ (32 F). Use 'to' to write out ranges given in numbers: from 1963 to 1971 or between -2 and -5 $^\circ\text{C}$. Write out the whole year without omitting any numbers.

3.3 Appearance

The correct layout and font settings give a text a clean, easily legible and correctable form. A customary layout for reports, used also in theses, may be achieved in the manner presented below. Use an easily legible basic font such as Calibri or Arial. Use a single column and line spacing 1.5 and justify the text. Set the left margin to 3.5 cm and others to 3 cm. Place the page numbering in either the top or bottom margin and start numbering on the introduction page. For practical tips on page numbering, see appendix 3. In the index, align the headings to the left and the page numbers to the right. All numbers are written in Arabic numerals unless specifically instructed otherwise.

The title is written in font size 16, bolded and justified (see appendix 2). The main heading for each chapter are written in font size 14, sub-headings in size 12 and the body text in size 12 (Calibri) or 11 (Arial). In chapter headings, use spacing 36 above the heading and 24 below it. In sub-headings use the spacing 24 above the heading and spacing 12 after it.

You may start a new chapter either in the middle of a page or always on a new page. Do not start subheadings on a new page. Only the heading of a chapter cannot be on a different page than the following text. Always leave a blank line between paragraphs and start the text from the start of the line. Figures, tables, schemes and equations are separated from the text with one blank line on each side.

3.4 Figures, tables, schemes and appendices

Figures, tables and schemes complement and enliven the contents of the work and enhance its intelligibility. Use a separate consecutive numbering series for each item type throughout the text. The text must refer to all the items presented (figures, tables, schemes and appendices) before they are presented for the first time. The reference may be made in one of two ways: 1) Uosukainen [1] used the Leitz filter

press to filter apple juice (Figure 1) or 2) Figure 1 illustrates the structure of the Leitz filter press.

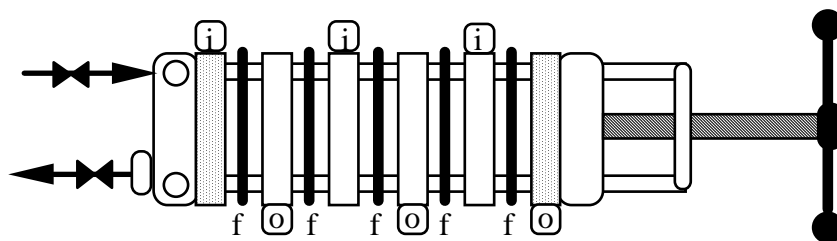


Figure 1. Structure of the Leitz filter press [1]. Changeable filter foils (f) are located between the feed liquid side (i) and the filtering side (o).

Place the tables and figures so that they fit on a single page instead of continuing on the following page. Place captions below the figure and headings of tables above the tables on the same page with the figure/table. The figure and table captions must be explanatory enough to be understood together with the figure or table without the surrounding text. Put a full point at the end of the captions, and as necessary, insert a reference at the end of the captions of figures and tables.

Present the structures of molecules as schemes in accordance with standard practice and add captions to them as with other figures, as seen in Figure 2. The reference may in such cases made as follows: Figure 2 shows the structures of eburnamonine and vincamene according to Lounasmaa and Tolvanen [2].

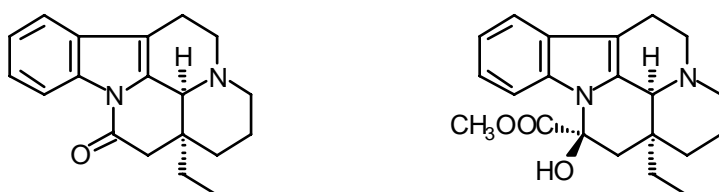
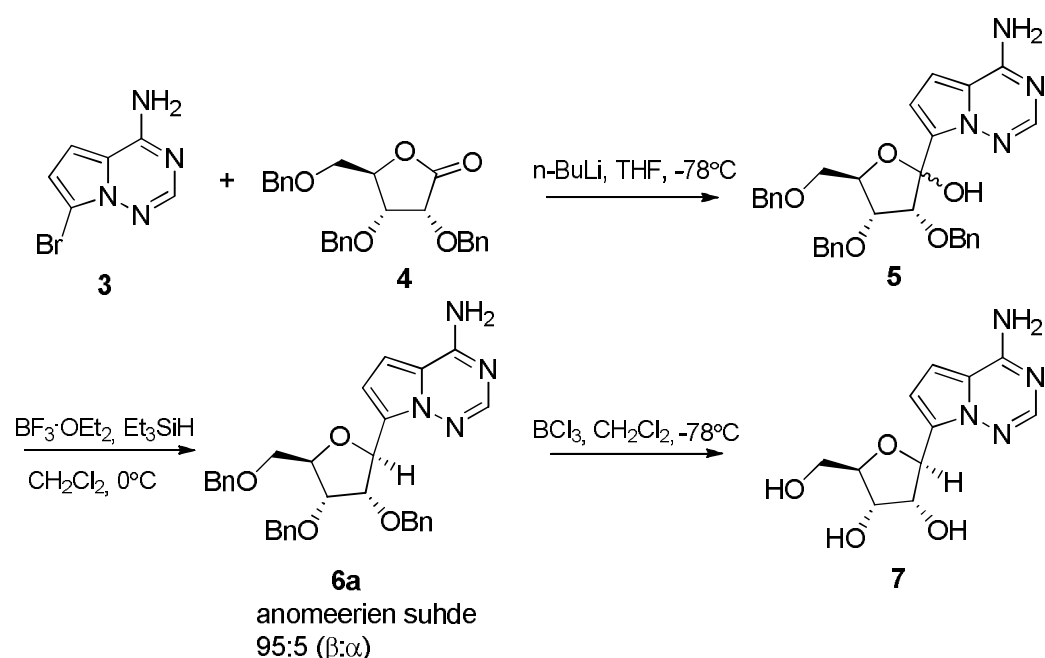


Figure 2. Structures of (-)-eburnamonine and (+)-vincamene [2].

A scheme refers to a graphic presentation containing the reaction equation or for instance, a description of a process. If the presentation consist of a single scheme, it may be treated as a figure, and also numbered in accordance with the consecutive numbering of figures. Particularly in organic chemistry, however, it is common to number schemes separately, as seen in Scheme 1. The steps of the partial reactions or the chemical intermediates presented in the scheme may also be numbered as necessary. To draw schemes of molecule structures, it is good to use the ChemBioOffice application (available on the workstations in the computer class) or other corresponding applications.



Scheme 1. Synthesis of analogues of Tubercidin C-nucleoside 7 [3]

In tables, give a heading for each column and row and specify the unit of measurement used in them. Present the units in an unambiguous manner. Do not use several units in the same column. Consider carefully the appropriate accuracy of the numerical values; you should not include too many significant digits. Align numbers in the same column by the decimal point to allow the reader to grasp the order of magnitude at a single glance. An example of an easily readable table is given in Table 1.

Table 1. Oxide ion conductivity of compounds at certain temperatures

Compound	Temperature (°C)	Oxide ion conductivity (S/cm)	Reference
ZrO ₂ -Y ₂ O ₃	1000	0.16	[24]
	800	0.04	[24]
CeSmO _{2-δ}	1000	0.25	[22]
	800	0.16	[21]
(Bi _{0.9} Cu _{0.1}) ₄ V ₂ O ₁₁	800	0.20	[14]
LaGa _{0.9} Mg _{0.1} O _{3-δ}	1000	0.25	[25]
	800	0.10	[26]
La _{0.9} Sr _{0.1} Ga _{0.9} Mg _{0.1} O ₃	800	0.13	[26]
(La _{0.92} Ba _{0.08}) ₂ Mo ₂ O _{9-δ}	800	0.05	[30]
La ₁₀ Si ₆ O ₂₇	800	0.02	[32]
	600	0.01	[32]

The appendices of a written report must be numbered and titled. The appendices are placed at the end of the report and they are numbered and marked as appendices by writing in capital letters on the top right corner of the page (APPENDIX 1, APPENDIX 2 etc.) Also in appendices, the figures and tables presented have to include captions and references to source literature. Since each appendix is an independent whole, the consecutive numbering starts from 1 for all the items (figures, tables etc.) and pages in each appendix. If the appendix contains several pages, they are numbered as follows: APPENDIX 1 (1/3). The index of appendices is placed immediately after the

index of the report. You can use this guideline as an example of the appropriate formation of a list of appendices and the headings for appendices.

3.5 Quantities and equations

In all equations, use the standard symbols for quantities given in SFS2300 wherever possible. You can find them in the above-mentioned standard, in the IUPAC tables [4] and the book by Keskinen [5]. Write the symbols of the equations in italics and the vector quantities in bold. Number the equations with consecutive numbering placed on the right of the page in parentheses.

Equations may be presented in two ways a) quantity equation + dimensional list of symbols immediately after the equation or b) a dimensional equation. If the report contains several equations, you should provide a separate list of the symbols used in them. This reduces the risk for using the same symbol in the different parts of the presentation with different meaning, which may easily lead to confusion.

Explain all equations in the text before presenting them. Put their numbering in parentheses in the text. As necessary, refer to literature as explained in 3.6. Naturally, any equations you have derived yourself will not have a reference. Below is an example of the possibilities for presenting equations. The heat balance of a system may be presented either with a quantity equation (1) or with a dimensional equation (2). The method in equation (1) is preferred.

$$Q = c_p m (T_2 - T_1) \tag{1}$$

where Q is the transferred thermal energy (J)
 c_p specific heat capacity of water (J/kg K)
 m mass of water (kg)
 T_1 temperature of water at the start (K)
 T_2 temperature of water at the end (K)

$$\frac{Q}{\text{kJ}} = \frac{c_p}{\text{kJ}/(\text{kg K})} \frac{m}{\text{kg}} \left(\frac{T_2}{\text{K}} - \frac{T_1}{\text{K}} \right) \quad (2)$$

A dimensional equation should, however, always be used when the equation is not dimensionally homogenous, meaning that the dimensions cannot be reduced, like in equation (3).

$$\frac{h}{\text{W}/(\text{m}^2\text{°C})} = 0,89 \cdot \left(\frac{t}{\text{°C}} \right)^{1/3} \quad (3)$$

where h is heat-transfer coefficient
 t temperature

Particularly with more complex equations, it is worth using the in-built equation editor in Word.

3.6 References and bibliography

In a written report, particular attention must be paid to the use of references in text and to their presentation in the bibliography. You must include a reference for everything mentioned in the text, unless the matter is considered to be basic knowledge to those with a Master of Science (Technology) or to others with a good command of the field. You cannot copy or translate a whole paragraph from another text and transfer it to your own without modification. Direct quotes of individual sentences must be clearly marked as such (with the help of quotation marks, for instance). Copying directly from a source or translating text word-for-word without a reference constitutes plagiarism.

In referencing, use either the numeric reference system or the author-date system (the Harvard system). As a student, it is your responsibility to check which system is used on the course in question. The reference has to be given in an unambiguous

format in accordance with these instructions so that those willing to check the original source can do so easily on the basis of the details given. The references have to be uniform throughout the text.

In the numeric reference system, the reference is noted in the text using a number, preferably in square brackets, for instance [1]. Works with more than two authors are referred to using only the name of the first author and the expression *et al.* (*et alii* = and others (Latin); note the use of italics). You should also note that the expression *et al.* requires a plural verb. If the name of the author has not been given, use *Anon.* (abbreviation for anonymous). Here is an example of a typical reference made in accordance with the numeric reference system: 'The phenomenon was first observed by Stieg [10], and later confirmed by the findings of Hill *et al.* [13]. Others have published results indicating the opposite [8, 14-16].'

In the author-date system, the in-text reference consists of the author and the year in parentheses. When using several works by the same author published in the same year, include also a letter beside the year. In the author-date system, consecutive in-text references are separated by a semi-colon. An example of a reference: 'Microbe cells in a state of arrested growth are naturally more resistant to various environmental stresses than actively dividing cells (Rees *et al.*, 1995a, 1995b; Dodd and Aldsworth, 2002).'

If the same finding is referred to in several publications, choose 2 to 5 key publications and include them all in the reference. The weight of finding increases when it is confirmed by more than one source. In extensive works with a large number of references it is worth considering using a reference management programme.

There are several ways to make in-text references. The location of the reference reveals its scope.

- A reference within a sentence before the full stop refers to only the sentence in question.

- A reference at the end of a paragraph after the full stop refers to the whole preceding paragraph.

The bibliography presents the references as follows:

Numbered in the order of appearance (numeric referencing style) or in alphabetical order in accordance with the last name of the first author (author-date system).

- The last names and initials of authors. All the authors must be mentioned in the bibliography. The expression et al. is only reserved for in-text references. In the case of several authors, the word 'and' may be placed between the last two names. Add a comma after the name of the last author.
- The full name of the article followed by a comma.
- The name of the journal or book in italics. The names of journals are abbreviated in accordance with the Chemical Abstracts Service Source Indexin (CASSI) (<http://cassi.cas.org/search.jsp>). You can also find several sources online with the search word 'journal abbreviations'. Do not put a comma after the name of a journal, but put one after the name of a book.
- The volume of the journal followed by the year in parentheses, without a separating comma. Write the volume number in bold. Of books, mention the edition (if not the first) and publisher separated by a comma, and the printing location and year without a comma. Of journals, mention the issue number immediately after the volume in parenthesis only if the page numbering does not continue consecutively throughout the volume but restarts for each issue, for instance 2 (5) (1978).
- The first and last page number of the article and separated by a hyphen. For books, reports etc., mark the numbers of the page(s) used, or if referring to the entire work, the total number of pages. pp. 37–98 (range of pages used), 196 p. (when the work referred to has a total of 196 pages).
- End the reference with a full stop.

If the source is an electronically published article still in press (article in press) without the volume and page details, include the DOI number in the reference.

Examples of references:

Journal article:

Kim, K., Interactions in dilute fluids, *Chem. Eng. Sci.* 64 (1987) 143-156.

Liukkonen, K., Montfoort, A. and Laakso, S., Water-induced lipid changes in oat processing, *J. Agric. Food Chem.* 40 (1992), 126-130.

Fagerholm, A.E., Habrant, D. and Koskinen, A.M.P., Calyculins and related marine natural products as serine-threonine protein phosphatase PP1 and PP2A inhibitors and total syntheses of calyculin A, B, and C, *Marine Drugs* 8 (2010) 122-172.

Chapter from an edited book:

Galliard, T., 'Enzymatic degradation of cereal lipids', in P.J. Barnes (ed.) *Lipids in Cereal Technology*, Academic Press, London 1983, pp. 111-147.

Book, when reference to the whole book:

Little, D.J., Raffle, J.F., *An Introduction to Reactors Physics*, 2nd edn, Pergamon Press, London 1957, 196p.

Summary (the information of the original publication is accessed with the help of a later publication and summarised):

Yamauchi, T., Kimura, T., Umezawa, K. and Ohtake, Y., Fatty acid compositions of cellular lipids of yeast grown on bone fat and glucose as a sole carbon source (in Japanese), *Nippon Shokuhin Kogyo Gakkaishi* 33 (1986), 256-262. Ref. Ratledge, C., *Biotechnology of oils and fats*. In C. Ratledge and S.G. Wilkinson (eds.) *Microbial Lipids*, vol. 2, Academic Press, London 1989, pp. 567-668.

Conference proceedings:

Kivisaari, T., Simulation of fuel cell power plants using chemical flowsheeting programs, in L. Langemyr (ed.) Proceedings of the 36th SIMS Simulation Conference, Scandinavian Simulation Society, Stockholm 1994, pp. 144-149

Patent publications:

Laakso, S., Vahvaselkä, M., Jaakola, S. Lehtinen, P., Process for esterifying fatty acids, WO 2006035107, 2006.

Theses:

Helisevä, M., Säiliön sisäisten räjähdysten huomioiminen suunnittelussa, Master's thesis, Helsinki University of Technology, Degree Programme in Chemical Technology, Espoo 2009, 99 p.

Myllymäki, P., High- κ Ternary Rare Earth Oxides by Atomic Layer Deposition, Doctoral dissertation, Aalto University, Degree Programme in Chemical Technology, Espoo 2010, 50 p.

Wirtanen, G., Biofilm formation and its elimination from food processing equipment, Doctoral dissertation, VTT Publications 251, Espoo 1995, 106 p.

Standards:

SFS-EN 81-80. Hissien suunnittelua ja rakentamista koskevat turvallisuusohjeet. Käytössä olevat hissit. Osa 80: Säännöt käytössä olevien henkilö- ja tavarahenkilöhissien turvallisuuden parantamiseksi. Helsinki: Suomen standardisoimisliitto, 2004. 72 p.

Internet references:

In internet references, include the name of the author and of the page, the complete Internet address and the access date. If the author's name is unknown, write

'Anonymous' in the bibliography but Anon. in the in-text reference when using the author-date system. Mention each web page you have used separately.

Anonymous, The EU biodiesel industry, <http://www.ebb-eu.org/stats.php> , 31 January 2012.

3.7 Material studied

In some reports, the thesis advisor may require that you list the names of the summary publications, journals and electronic databases you have used to find the actual sources used in your report. You should also mention the search words used. The list of material studied to find sources may be required, for instance, in limited literature searches or reviews.

You may list them, for example, as follows:

Electronic databases

Beilstein (CrossFire), 14 May 2009

ScienceDirect (Elsevier), 13 May 2009

Knovel, 13 May 2009

Chemical Abstracts SciFinder Scholar, 15 May 2009

Google Scholar 16 May 2009

Search words

propionibacterium, propionic +acid +bacteria

Bibliography

1. Uosukainen, E., Omenamehun valmistus, Written report, Helsinki University of Technology, Department of Chemical Technology, Laboratory of Bioprocess Engineering, Espoo 1998, 12 p.
2. Lounasmaa, M. and Tolvanen, A., The Eburnamine-vincamine alkaloids, in G.A. Cordell (ed.) *The Alkaloids*, vol. 42, Academic Press, New York 1992, pp. 1-116.
3. Metobo, S.E., Xu, J., Saunders, O.L., Butler, T., Aktoudianakis, E., Cho, A., Kim, C.U., Practical synthesis of 1'-substituted Tubercidin C-nucleoside analogs, *Tetrahedron Lett.* 53 (2012), 484-486.
4. *Quantities, Units and Symbols in Physical Chemistry – the IUPAC Green Book*, E.R. Cohen, T. Cvitaš, J.G. Frey, B. Holmström, K. Kuchitsu, R. Marquardt, I. Mills, F. Pavese, M. Quack, J. Stohner, H.L. Strauss, M. Takami, A.J. Thor (eds.), RSC Publishing, Cambridge 2007, 134 p.
5. Keskinen, K.I., *Kemian laitetekniikan taulukoita ja piirroksia*, Otakustantamo, hand-out n:o 845, Espoo 1989, 76 p.

Books:

Hirsjärvi, S., Remes, P. and Sajavaara, P., Tutki ja kirjoita, 10th partially revised edition, Tammi, Helsinki 2004, 436 p.

Kauppinen, A., Tekniikan viestintä: kirjoittamisen ja puhumisen käsikirja, 3rd revised edition, Edita, Helsinki 2002, 301 p.

Mäkinen, O., Tieteellisen kirjoittamisen ABC, Tammi, Helsinki 2005, 215 p.

Nykänen, O., Toimivaa tekstiä: opas tekniikasta kirjoittaville, Tekniikan akateemisten liitto, Helsinki 2002, 212 p.

Kauranen, I., Mustakallio, M. and Palmgren, V., Tutkimusraportin kirjoittamisen opas opinnäytetyön tekijöille, Helsinki University of Technology, Helsinki 2006, 109 p.

Iisa, K., Piehl, A. and Oittinen, H., Kielenhuollon käsikirja, 5th expanded and changed edition, Yrityskirjat, Helsinki 2002, 357 p.

Iisa, K., Piehl, A. and Kankaanpää, S., Tekstintekijän käsikirja, 3rd edition, Yrityskirjat, Helsinki 1999, 451 p.

Itkonen, T. and Maamies, S., Uusi kieliopas, 2nd edition, Tammi, Helsinki 2000, 456 p.

Quantities, Units and Symbols in Physical Chemistry – the IUPAC Green Book, E.R. Cohen, T. Cvitaš, J.G. Frey, B. Holmström, K. Kuchitsu, R. Marquardt, I. Mills, F. Pavese, M. Quack, J. Stohner, H.L. Strauss, M. Takami, A.J. Thor (eds). RSC Publishing, Cambridge 2007, 134 p.

Links:

Aalto University Finna <https://aalto.finna.fi/>

Useful resources

APPENDIX 1 (2/2)

Instructions of the library:

Self-study guide to information retrieval

<http://libguides.aalto.fi/informationretrieval>

RefWorks guide

<http://libguides.aalto.fi/c.php?g=410674&p=2797646>

Abbreviations of journals:

<https://woodward.library.ubc.ca/research-help/journal-abbreviations>

<https://www.library.caltech.edu/journal-title-abbreviations>

<https://www.cas.org/support/documentation/references/corejournals>

Language guidelines

TEPA term bank (in English) <http://www.tsk.fi/tepa/en/>

Kielijelppi (in Finnish) <http://kielijelppi.fi/>

Kirjoittajan ABC (in Finnish) <http://webcgi.oulu.fi/oykk/abc/>

Introduction to LaTeX 2e (in Finnish) www.ntg.nl/doc/hellgren/lyhyt2e.pdf

OpenOffice instructions <https://wiki.openoffice.org/wiki/Documentation>

Miscellaneous

Aalto University library guidance and information services

<https://learningcentre.aalto.fi/en/help-and-guidance-in-information-search/>

Sample title page

APPENDIX 2

AALTO UNIVERSITY SCHOOL OF CHEMICAL ENGINEERING

CHEM-A0000 Xxxx (Code and name of the course)

DISTILLATION OF A WATER/ACETONE MIXTURE

(Full title of the written report)

Keijo Kemisti

123456

Report submitted 20 January 2012

To start page numbers on the introduction page in MS Word 2016:

Click the page after the index and the possible list of abbreviations and symbols. Add a break (Layout → Breaks → Next Page). Double-click in the header or footer area on the page depending on where you want to display page numbers. This will open the Design tab under Header & Footer Tools. Click Link to Previous to turn it off and unlink the header or footer from the previous section. (Header & Footer tools → Navigation → Link to previous). When the link is removed, right-click the page number and select Format page numbers. Set the page numbers to start from 1 in the section containing the introduction. After that, you may remove the page numbers in the first section.