Analytical chemistry

Literature search : the isomer separation project

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Kemicentrum library
Todays program:

– Introduction to chemical literature and the library

– How to find literature

– How to cite sources
http://www.bibliotek.kc.lu.se/english

All sources are available at the library website
The library for Chemistry and Chemical engineering at Kemicentrum

Most of our collections are available online via the library website, http://www.bibliotek.kc.lu.se/english/.

To access electronic resources from home: use your Student account.

You use your LU card to borrow printed books – create an account in the library catalogue.

Shelves in the library:
Analys lärobok – Analysis text books
543 Analysis
543.17 Analysis – biochemistry – organic chemistry
543.8 Chromatography and electrophoresis

Reference collection: encyclopedias, etc. on paper. New editions are often available online.
Journals: most of our journals are only available online, some in closed stack. Do not miss our List of journals.
Primary literature –
original publication of new research

– Original research articles - new original research is published in articles in scientific journals.
  The articles are peer-reviewed and have undergone an editorial process.

– Conference proceedings
  The proceedings keeps you up to date on current research but are not always peer-reviewed.

– Dissertations

– Patents
Find original articles in for example:

– Scifinder 1907-

Database with articles, conference proceedings, patents, substances and reactions and more. Scifinder is a way to explore the Chemical Abstracts databases, CAplus, with scientific information in the fields of chemistry and chemistry related topics.

– Web of Science

Multidisciplinary databases with articles, patents, conference proceedings etc.

– LUBsearch

LUBsearch is a common access point to Lund library resources, for example articles, journals, books etc. Very useful when you have a citation for a specific article.

– Springerlink

Articles and e-books from the publisher Springer and its partners. Possible to find terms in the full-text. An example of a publisher’s database.
Secondary literature etc.

– Review articles in scientific journals

Overview of a research field in a given time. Theories, applications in industry, past and future developments.

– Encyclopedias and books

Introductions to a specific field, basic data, historical development, theories.

– Handbooks

Data from primary literature, methodologies, experimental best practices etc.
Find secondary literature in:

- LUBsearch with links to LUBcat, the library catalogue
  books, handbooks, dissertations

- Online encyclopedias and handbooks
  Guide at the library website with selection of sources

- Review articles
  In the same databases as original articles
Secondary literature such as review articles, encyclopedias, handbooks and books are a great starting point for literature research.

For specific applications and up-to-date information you have to consult original articles in scientific journals.
To continue searching use this box.

Refine Search
Chiral Separations by High-Performance Liquid Chromatography

Update based on the original article by Timothy J. Ward and Tanya M. Oswald, Encyclopedia of Analytical Chemistry, © 2000, John Wiley & Sons, Ltd.

Liquid Chromatography

1 Other versions of this article

Timothy J. Ward. Karen D. Ward

First published: 17 December 2012 | https://doi.org/10.1002/9780470027318.a5905.pub2

Greek word 'cher', which means hand. Chiral molecules are mirror images of each other and are traditionally have been considered among the enantiomers have identical chemical and physical properties. In this article, we focus on techniques used for chiral separations, most commonly by high-performance liquid chromatography (HPLC). Most chiral separations by HPLC are achieved using a chiral stationary phase (CSP). In this technique, the analytes are immobilized to an appropriate support to make a chiral stationary phase (CSP).

Developed, including polysaccharide-based, macrocyclic antibiotic-based, protein-based, and synthetic stationary phases. The most commercially available CSPs, polysaccharide-based phases, consist of derivatized cellulose and amylose coated on silica gel and a new generation of polysaccharide-based phases, which is immobilized through covalent bonding to a silica gel. Generally, analytes separated using the cyclodextrins require the formation of an inclusion complex between the analyte and the cyclodextrin. Separation is most favorable when the analyte also interacts with the mouth of the cyclodextrin molecule via hydrogen bonding to the functional groups present. The cyclodextrin-based CSPs are the newest development in chiral HPLC technology.
LUBsearch

- LUBsearch is a common access point to library resources in the University libraries in Lund.

- It is a tool to locate articles, e-journals, books, databases etc.

- LUBsearch is very useful when you have a citation for a specific article.
When you have a reference to an article. Put the title in quotation marks and run the search in the title field.
Click on LU Full Text Finder and you will be taken to the full text or an intermediate page which will provide you with options for obtaining the full text at Lund University Libraries.
If you can’t find the article by title (or if the article title is unknown), try searching for the **journal title** instead in ePublications.
Truncation symbol/root expander

chem* = chemistry, chemist, chemical

- Truncation symbols/root expanders may vary by database
- Common symbols include: *, !, ?, or #
- Be careful with the truncation symbol.
  
  gen* = gene, genome, gender, General

Sometimes it is better to combine word variations with OR instead

- Some databases truncate your words automatically
Phrase search

Use **phrase search** when you want specific words to appear in a specific order. Usually you need to enclose the phrase in double quotes.

“gas chromatography“

A useful way to limit your search results.
Book search in LUBsearch

Find books and dissertations/thesis

Link to full text
Book search in LUBsearch

6. Chiral Separations: Methods and Protocols [Elektronisk resurs]
   Subjects: Biochemistry; Life Sciences; Biochemistry, general; Springer Protocols

   eBook

   Online Access  View in Library Catalogue (LUBcat)

7. Chromatographic chiral separations / edited by Morris Zief, Laura J. Crane
   Subjects: Liquid chromatography; Enantiomers -- Analysis; Kromatografi; Separeringsteknik; teknisk kemio

   View in Library Catalogue (LUBcat)

   Subjects: Chiral drugs -- Separation; Enantiomers -- Separation; Electronic books; Electronic resource

   eBook

   Online Access  View in Library Catalogue (LUBcat)
Library catalogue - LUBcat

Chromatographic chiral separations / edited by Morris Zief, Laura J. Crane

Contributor(s): Crane, Laura [edt] | Zief, Morris [edt].

Material type: Book
Series: Chromatographic science 40.
Publisher: New York : M. Dekker, c1988
Description: vii, 410 p. : ill., diagr., tab.
ISBN: 0824777867

Subject(s): Liquid chromatography; Enantiomers — Analysis; Kromatograf; Separeringsteknik: teknisk kemi

DDC classification: 543 | 543 | 541 225.2 | 543.089
Other classification: U

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Request from stacks

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https://lubcat.lub.lu.se/cgi-bin/koha/opac-search.pl?q=pssu:Kromatograf
• Comprehensive with a very broad coverage of chemistry and chemistry related research.

• Document types: scientific journals, conferences, patents, substances and reactions.

• Contains the Chemical abstracts (CA) which has been compiled since 1907 by the Chemical Abstract Service (CAS) which is a division of the American Chemical Society (ACS).

• Also retrieves records from Medline, a large database for medical research.
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Scifinder – search by research topic

• Enter the research topic in plain English, using prepositions and other parts of speech to separate the topic concepts
  – effect of penicillin on milk production in dairy cows

• Use singular forms of words, unless the plural is an index term

• SciFinder automatically truncates the terms in your query and searches for plural forms, past tense verbs, and other word forms. Do not include truncation or wildcard symbols (such as ! or *) in your search terms.

• SciFinder is designed to recognize and accept:
  – Commonly used abbreviations, such as BTU and Prep
  – Commonly misspelled words (affect instead of effect)
  – Words spelled according to either British or American English (colour or color)

• You may enter synonyms with your research topic. Place synonyms in parentheses next to the topic you entered.
  – Example: milk production of cows (bovines)

• Do not use quotation marks for phrases
  – Words entered next to each other are treated as phrases and concepts
You may categorize the search results list.
3. The state of the art in chiral capillary gas chromatography

By: Beesley, Thomas; Majors, Ronald E.

A review. The state-of-the-art in chiral capillary gas chromatography (GC) is reviewed. Provided is a short historical overview of phase development followed by comparison of GC and high performance liq. chromatog. (HPLC) chiral phases. After a short discussion of mechanisms of the most popular cyclodextrin phases, practical recommendations are provided on how to select the best stationary phase and then how to use it to optimize chiral GC separations. Examples of elution order reversal of racemates, injection of large vols. of diluted sample using retention gaps, and other applications are also provided.

Indexing

Organic Analytical Chemistry (Section 80-0)

Concepts

- Capillary gas chromatography
- Resolution (separation)
- Chiral capillary gas chromatography
- Chiral capillary gas chromatographic stationary phases
- Chiral, chiral capillary gas chromatography

Supplementary Terms

Review chiral capillary gas chromatography

Citations

Schurig, V, LGC Amer 2007, 25, 382
Gil-Av, E, Tetrahedron Lett 1966, 7, 1009
He, L, J Liq Chromatog & Related Tech 2005, 28, 1075
Frank, H, J Chromatogr Sci 1974, 15, 147
Casal, S, J Agric Food Chem 2003, 51, 6495
Tang, Y, J Chromatogr A 1994, 666, 147
Duchateau, L, Chiral GC Analysis of Aqueous Samples by On-Column Derivatization: Application for Enzyme Reactions 2006
Explore – Substances – Substance identifier

SUBSTANCES: SUBSTANCE IDENTIFIER

ibuprofen

Enter one per line.
Examples:
50-00-0
999815
Acetaminophen

Search
CAS registry number: a unique numeric identifier, designates only one substance, a very useful number when you conduct searches in databases and on the web.

Much more information