

Reaxys (Beilstein) Assignment

- Preliminary Report Due: October 1st
- Final Report Due: November 7th

Reaxys (Beilstein) Assignment

- Preliminary Report Includes:
 - 1) Your name
 - 2) Your section number
 - 3) Your Beilstein assignment number (B=???)
 - 4) Reaxys registry number
 - 5) Name of compound
 - 6) May be handwritten

Reaxys (Beilstein) Assignment

- Final Report Includes:
 - 1) Your preliminary report
 - 2) The original journal reference in modern JACS format {*ex* Smith, J.; Jones, T., *J. Org. Chem.*, **61**, 820 (1996)}
 - 3) A brief synthesis of the compound by the method used by the correct author
 - 4) May NOT be handwritten

Reaxys (Beilstein) Assignment

- Website: www.reaxys.com
- You must be using a computer on campus for it to work
- You do not have to register for it to work

Sci-Finder (Chemical Abstracts) Assignment

- Preliminary Report Due: October 1st
- Final Report Due: November 7th

Sci-Finder (Chemical Abstracts) Assignment

- Preliminary Report Includes:
 - 1) Your name
 - 2) Your section number
 - 3) Your Chemical Abstracts assignment number
(C=???)
 - 4) CAS registry number
 - 5) Name of compound
 - 6) May be handwritten

Sci-Finder (Chemical Abstracts)

Assignment

- Final Report Includes:
 - 1) Your preliminary report
 - 2) The original journal reference in modern JACS format {*ex* Smith, J.; Jones, T., *J. Org. Chem.*, **61**, 820 (1996)}
 - 3) A diagram of the synthesis of the final product, continuing backwards until a purchasable compound is found, each step must be referenced
 - 4) Price, grade, and supplier for ALL reagents used in the synthesis
 - 5) Melting/boiling points of all organic intermediates, with references
 - 6) May NOT be handwritten

Sci-Finder (Chemical Abstracts) Assignment

- Website: scifinder.cas.org
- You must be using a computer on campus for it to work
- You must register and login for it to work
- Go through the MSU library website to do this <http://er.lib.msu.edu/subject.cfm?cat=0&type=All&Subject=Chemistry>

The Chemist's Library

The Most Useful Reference Materials
for the Chemist

Principle Reference Works

- 1) SciFinder Scholar (Chemical Abstracts)
- 2) Reaxys (Beilstein/Gmelin)

SciFinder Scholar (Chemical Abstracts)

Pros

- Up-to-date
- Comprehensive
- Entirely in English

Cons

- Not error-checked
- Data is in original form

Reaxys (Beilstein/Gmelin)

Pros

- Critically Reviewed
- Listing is by Compound

Cons

- Not up-to-date
- Parts in German

Smaller Reference Works

- 1) Catalogs
- 2) Handbooks, Encyclopedias, and Journals
- 3) Websites
- 4) Search Engines

Catalogs

- 1) Aldrich
- 2) Eastman
- 3) Alfa-Aesar
- 4) Matheson Gas Data Book

Aldrich Catalog

- 1) 37,000+ Products. Organics, Inorganics, Elements, Polymers, Organometallics.
- 2) Arranged by 'product name'
- 3) Includes physical properties, references to Aldrich Library of NMR or FT-IR spectra
- 4) Molecular Formula
- 5) CAS RN indexes
- 6) Online

<http://www.sigmaaldrich.com/Brands/Aldrich.html>

Alfa-Aesar

- 1) Includes physical properties
- 2) CAS RN indexes
- 3) MSDS' s embedded in description
- 4) Merck Index references
- 5) <http://www.alfa.com/alf/index.htm>

Eastman Catalog

Item descriptions include applications, MSDS, sales spec sheet, technical data sheets.

<http://www.eastman.com/>

Handbooks and Journals

- 1) Merck Index
- 2) Handbook of Chemistry and Physics (CRC)
- 3) Kirk-Othmer Encyclopedia of Chemical Technology
- 4) Ullmann's Encyclopedia of Industrial Chemistry
- 5) Organic Solvents
- 6) Journal of Physical and Chemical Reference Data
- 7) Fieser and Fieser
- 8) Organic Syntheses
- 9) Combined Chemical Dictionary

Merck Index

- 1) 13th edition 2002
- 2) 4000+ drugs and pharmaceuticals
- 3) 2000+ organics/ reagents
- 4) 2000+ naturally occurring substances
- 5) 1000+ elements/inorganic compounds
- 6) 1000+ agricultural compounds/biological agents
- 7) Name, Formula, CAS RN, and Therapeutic Category and Biological Activity Indexes, Organic Name Reactions, Miscellaneous Useful Tables(Latin Terms, Greek Alphabet, etc.)
- 8) Merck Index Online <http://products.camsoft.com/themerckindex.cfm>

Handbook of Chemistry and Physics

- 1) Huge number of useful data tables for all of the divisions of chemistry
- 2) www.hbcnetbase.com/

Websites

- 1) ChemINDEX
- 2) DIPPR
- 3) Solv-DB
- 4) BRENDA
- 5) NIST Critically Selected Stability Constants of Metal Complexes
- 6) NIST Webbook
- 7) Organic Syntheses

Search Engines

- 1) Google <http://www.google.com>
- 2) Yahoo <http://search.yahoo.com>
- 3) Lycos <http://www.lycos.com/>

Online Chemistry Sites

- 1) www.orgsyn.org
- 2) ChemINDEX chemindex.cambridgesoft.com/
- 3) www.chemfinder.com
- 4) dippr.byu.edu/
- 5) solvdb.ncms.org/index.html
- 6) www.brenda.uni-koeln.de/
- 7) www.syrres.com/esc/