

PROBLEM SET #3*Journal Article Databases: Multidiscipline Sources in Science*

DUE: 8:30 a.m. September 27, 2005

Activities dealing with your special topic

(Work with your partner)

For each step of the search process, **copy your search statement as it appears at the top of the results screen** and paste it into your problem set answer sheet. Include the number of records that result and describe the results in terms of relevancy and other characteristics, e.g., for a search in the ISI Web of Knowledge

Science Citation Index (SCI):

TS=((determination or measur* or flow injection) and (total phosphate or polyphosphate))

Result: 464 many papers that seem marginal, in journals that OC does not access

Limit this by typing "analys*s" in the Search within results box

Result: 128 better focused, some were online, others requested through ILL

1. Perform a *General* or *Keyword Search* in SCI, Applied Science and Technology Abstracts (ASTA) and the OhioLINK EJC, using a search strategy that incorporates the different keywords you identified through the exercises in weeks 1 & 2. Expand on your earlier searches, if you were using essentially the same approach in all other databases. Use synonyms, related terms, Boolean operators, and parenthetical phrasing appropriately. Remember that the truncation symbol in ASTA is \$. The other databases use * as the truncation symbol. It can be embedded within a word as a wild card character. Describe the results in each database.
2. (a) Select the most relevant article that you have found so far (either in these databases or earlier searches). Perform a *Cited Reference Search* in SCI for the article, to find other papers that have cited it. Look for possible errors in citing the paper, by carefully browsing the Cited Reference search results screen.

(b) If another author has not cited your selected article, search for other cited papers by your author. Describe the results. (Skip this if you were successful in 1.a.)

(c) Select the most relevant article that you found by citation search, and find others that cite this paper (if there are any). Describe the results.

(d) Look also at the "Related Records" of a paper that cites your original article or one of the other cited papers. Did you find additional papers that are relevant to your topic?
3. Compare all of the journal article databases you have searched to date in terms of the quantity and quality of the references returned by your search strategies. How does *SCI* compare with the *EJC*, *Academic Search Premier*, *ASTA*, and *ArticleFirst*? Give a brief narrative assessment of which database you felt was most useful or appropriate for your research topic.

Activities related to your chemical compound

(Work individually)

Consult handbooks, etc. on the reference shelves in the science library to find information about the chemical compound you have been assigned. Give references for the sources of the information in ACS style. Associate each piece of data with its source.

1. Common name, empirical formula, structure, and molecular weight of the compound.
2. Melting point and boiling point of the compound.
3. The current price for 1 g of the pure compound.
4. The enthalpy of formation from the elements for the compound.
5. Infrared, NMR, and mass spectra of the compound (do not copy the spectra, just give the source citation).
6. Some of the uses to which the compound is put.