STN® Library and Information Science Training Program

SUGGESTED SOLUTIONS TO SKILLS PRACTICE PROBLEMS

**note**

The answers you will find in the Suggested Solutions provided may not exactly match your search results for the following reasons:

1. Most STN databases are updated with new records often, so the number of answers retrieved from a search and which answer is first, fifth, etc. can change daily.

2. Searching is an art and there are lots of different ways to go about a search that may be equally valid. Just because you did not do the search exactly as we did or choose the terms we chose, does not mean that you are wrong.

The solutions are intended to give you a general set of steps that we believe best address the search questions asked, and maybe even teach you a few new things along the way. Your professor or the STN Helpdesk can be of help if you have additional questions. Good luck!
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STN LIS Skills Practice Problems

STN® on the WebSM – LIS Training Program web login site:
http://stnweb.cas.org/?USERTYPE=LIS

1. In CAplusSM, perform keyword searches on the following questions. Use D SCAN to evaluate some answers and determine some additional terms that could be added to the search strategies to improve their comprehensiveness. Display the bibliographic information and abstract from three records from each search.

A. Find information on the flavor or aroma components of blackberries.

B. What has been determined about the amount of ammonia or ammonium salts that was released by the 1906 eruption of Vesuvius?

C. Locate publications and patents dealing with research that Angela Belcher has done on nanowires that involve a virus known as M13 bacteriophage. What product is being targeted to use this new technology?

D. Retrieve literature on genetic engineering applied to developing tomatoes with increased freeze protection. Note that freeze protection is also talked about using the terms “antifreeze protein.”

E. What kinds of materials have been used to adulterate saffron?

F. A recent law requires mattresses to resist an open flame for at least 30 minutes before igniting in order to reduce the number of deaths from house fires. Locate patents on this technology issued after 2006. Brainstorm synonyms for your search terms to be as comprehensive as possible.

2. How many patents about hydrogen fuel cells does Takahiro Kuriiwa have?
   • Remember to review the article indexing to obtain additional search terms
   • Compare the results of at least two databases that contain patents (such as CAplus, USPAT2, LWPI, or USPATFULL)
   • Display three patent titles from each database

3. Find information in the MEDLINE® database on job stress in the dental profession.
   • Use various proximity operators to adjust the size and focus of your answer set
   • Use the appropriate no cost display format to evaluate and improve your answer set
   • Relevance rank the final answer set and display the titles of the five most relevant answers

4. Choose a company of interest to you and find a recent patent filed by this company.
   • Use the CAplus company name thesaurus and the Derwent Patent Assignee Codes (PACOs) in LWPI to identify variations on this company name and or subsidiaries
   • Using this information, perform a multifile patent search for this company in CAplus and LWPI
   • No solution for this is provided as the answers will vary, but check your process against the Syngenta example in the workbook

5. Find patents on golf ball covers held by Acushnet.
   • HINT: Search in at least three of the following databases: CAplus, LWPI, USPAT2, or EPFULL to compare your results
6. **What is the structure of the drug sumatriptan?**
   - What other names is this drug known by? (HINT: Remember to start in CAS REGISTRYSM then cross over to CAplus to find relevant references)
   - Are there any references discussing its preparation? (HINT: The preparation role (PREP) might be helpful here)
   - If so, what are the names of some companies who have reported methods of preparing it?
   - Have any of the companies received a patent for this?

7. **Find articles on the Type 2 diabetes drug Byetta and its effect on weight loss.**
   - What other names is this drug known by?
   - Search in both CAplus and MEDLINE (HINT: Remember to remove duplicates before displaying the first three answers from each database)

8. **In 2005, a number of petroleum companies announced their intent to eliminate MTBE from gasoline due to drinking and ground water contamination concerns and continuing liability exposure.**
   - Find three journal review articles on this topic in CAplus (HINT: Use both left and right truncation (SLART) to enhance your search retrieval for water)

9. **Choose a drug or chemical of your choice.**
   - Locate other names that the drug or chemical are known by, then search in relevant databases and find recent patents and journal articles
   - *No solution for this is provided as the answers will vary, but check your search strategy against the multifile substance-based search in the workbook*
Search Question 1A: In CAplus, perform keyword searches on the following question. Use D SCAN to evaluate some answers and determine some additional terms that could be added to the search strategies to improve their comprehensiveness. Display the bibliographic information and abstract from three records from each search.

- Find information on the flavor or aroma components of blackberries

The following is an example of a search strategy for this question including search tips:

=> FILE CAPPLUS

=> E FLAVOR/CT

Use EXPAND to see the terms near desired controlled term.

=> E E3+ALL

Remember your term should be in the third E# position. Use EXPAND to view all the associated terms.

=> S E##-E##

Search the desired E# to obtain your first answer set, such as:

L1  65421 (FLAVOR/CT OR FLAVORS/CT OR FLAVOUR/CT OR BITTERNESS/CT OR RANCIDITY/CT OR SALTINESS/CT OR SOURNESS/CT OR SWEETNESS/CT OR ESSENCES/CT OR "FLAVORING MATERIALS"/CT OR "ODOR AND ODOROUS SUBSTANCES"/CT OR OLFACTION/CT OR TASTE/CT)

=> E AROMA/CT

Repeat for other desired search concepts.

=> E E88+ALL

E98  0  -->  Aroma/CT
E99  28691  USE  Odor and Odorous substances/CT
******* END *******

There will be times that your desired answer is not a controlled term.

=> S E99
L2  28691 "ODOR AND ODOROUS SUBSTANCES"/CT

=> E BLACKBERRY/CT

=> E E102+ALL

=> S E119-E120
Search for both single and plural version of your terms.

L3  706 (BLACKBERRY/CT OR BLACKBERRIES/CT)

(Continued on next page)
=> S L1 OR L2
Combine the controlled term answer sets.
L4  65421 L1 OR L2

=> S FLAVO? OR AROMA?
To make sure that you have not missed any pertinent articles, use truncation to broaden your search.
L5  661294 FLAVO? OR AROMA?

=> S L4 OR L5
Searching both controlled terms in the CA Lexicon and the basic index increases search results.
L6  688512 L4 OR L5

=> S L3 OR BLACKBERR?
L7  1216 L3 OR BLACKBERR?

=> S L6 AND L7
L8  217 L6 AND L7

=> FOCUS
Using the FOCUS command brings the most relevant records to the top
PROCESSING COMPLETED FOR L8
L9  217 FOCUS L8 1-

=> D SCAN
Use D SCAN to evaluate your search results.
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0
Remember to type 0 or END to exit a D SCAN.

=> D TI 1-5
Review the titles to the most recent answers.

=> D L9 1-5 ALL
Display the bibliographic information and abstract from three records of your choice.
**Search Question 1B**: In CAplus, perform keyword searches on the following question. Use D SCAN to evaluate some answers and determine some additional terms that could be added to the search strategies to improve their comprehensiveness. Display the bibliographic information and abstract from three records from each search.

- What has been determined about the amount of ammonia or ammonium salts that was released by the 1906 eruption of Vesuvius?

The following is an example of a search strategy for this question including search tips:

```plaintext
=> FILE CAPLUS  
=> E AMMONIA  
=> E AMMONIUM  
=> S AMMONI? AND VESUVIUS  
L1          17 AMMONI? AND VESUVIUS  
=> D SCAN  
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0  
=> S (AMMONI? OR NH3? OR NH4?) AND VESUVIUS  
Addition of “NH3” and “NH4” to the search query results in gives more answers.  
L2          39 (AMMONI? OR NH3? OR NH4?) AND VESUVIUS  
=> FOCUS L2  
FOCUS the answer set for the most relevant answers.  
PROCESSING COMPLETED FOR L2  
L3          39 FOCUS L3 1-  
=> D IBIB ABS 1-3
```
Search Question 1C: In CAplus, perform keyword searches on the following question. Use D SCAN to evaluate some answers and determine some additional terms that could be added to the search strategies to improve their comprehensiveness. Display the bibliographic information and abstract from three records from each search.

- Locate publications and patents dealing with research that Angela Belcher has done on nanowires that involve a virus known as M13 bacteriophage. What product is being targeted to use this new technology?

The following is an example of a search strategy for this question including search tips:

=> FILE CAPLUS

=> E BELCHER A/AU

A good habit to develop is to always EXPAND on the author's name. One cannot be sure how the author's first name appears – either using initials or spelled out.

E1  1  BELCHENKO YURI I/AU
E2  1  BELCHER/AU
E3  2  --> BELCHER A/AU
E4  1  BELCHER A I/AU
E5  1  BELCHER A J/AU
E6  7  BELCHER A M/AU
E7  2  BELCHER A R/AU
E8  1  BELCHER A S B/AU
E9  1  BELCHER ABIGAIL K/AU
E10 1  BELCHER ALAN/AU
E11 1  BELCHER ALAN E/AU
E12 1  BELCHER ALBERT L/AU

=> E

EXPAND as many times as needed to ensure that you have found the various author name variations.

E13 1  BELCHER ALBERT N/AU
E14 1  BELCHER ALISON J/AU
E15 6  BELCHER ANGELA/AU
E16 68  BELCHER ANGELA M/AU
E17 2  BELCHER ANN R/AU
E18 2  BELCHER ANNABELLE M/AU
E19 1  BELCHER ANNE/AU
E20 1  BELCHER ANNE C/AU
E21 3  BELCHER ANNE M/AU
E22 1  BELCHER ANNE MCGREGOR/AU
E23 1  BELCHER ANTHONY/AU
E24 1  BELCHER ARNOLD L/AU

=> S E3 OR E6 OR E15-E16

L1 83 "BELCHER A"/AU OR "BELCHER A M"/AU OR ("BELCHER ANGELA"/AU OR "BELCHER ANGELA M"/AU)

(Continued on next page)
=> E NANOWIRE

=> S E27-E31

L2 13380 (NANOWIRE/BI OR NANOWIREA/BI OR NANOWIRED/BI OR NANOWIREE/BI OR NANOWIRES/BI)

=> S L1 AND L2

Combine your concepts.

L3 18 L1 AND L2

=> S L3 AND M13 (10A) BACTERIOPHAGE

L4 9 L3 AND M13 (10A) BACTERIOPHAGE

=> D SCAN

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> FOCUS

PROCESSING COMPLETED FOR L4

L5 9 FOCUS L4 1-

=> D L5 1-3 BIB ABS

Display answers of your choice.
Search Question 1D: In CAplus, perform keyword searches on the following question. Use D SCAN to evaluate some answers and determine some additional terms that could be added to the search strategies to improve their comprehensiveness. Display the bibliographic information and abstract of three records from each search.

- Retrieve literature on genetic engineering applied to developing tomatoes with increased freeze protection. Note that freeze protection is also talked about using the terms “antifreeze protein.”

The following is an example of a search strategy for this question including search tips:

=> FILE CAPLUS

=> S TOMATO AND FREEZING

L1 657 TOMATO AND FREEZING

=> D SCAN

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1): 0

=> E ANTIFREEZE PROTEINS/CT

=> E E3+ALL

E13 0 --> Antifreeze proteins/CT
E14 USE Proteins (L) antifreeze/CT
********** END **********

=> E E14+ALL

=> S ANTIFREEZE (S) (PROTEIN? OR GENE OR THP OR THERMAL HYSTERESIS)

Develop a free text query from the controlled indexing terms.

L2 1114 ANTIFREEZE (S) (PROTEIN? OR GENE OR THP OR THERMAL HYSTERESIS)

=> E TOMATO/CT

E# FREQUENCY AT TERM
-- -------- -- ----
E25 0 2 TOMATILLO/CT
E26 0 1 TOMATIS/CT
E27 17246 9 --> TOMATO/CT
E28 0 3 TOMATO (L) CANNED/CT

(Continued on next page)
=> E E27+ALL

<table>
<thead>
<tr>
<th>Code</th>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E37</td>
<td>72359</td>
<td>BT3 Food/CT</td>
</tr>
<tr>
<td>E38</td>
<td>0</td>
<td>BT2 Plant-derived food (non-CA heading)/CT</td>
</tr>
<tr>
<td>E39</td>
<td>16651</td>
<td>BT1 Vegetable/CT</td>
</tr>
<tr>
<td>E40</td>
<td>17246</td>
<td>--&gt; Tomato/CT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HNTE Valid heading during volume 76 (1972) to present.</td>
</tr>
<tr>
<td>E41</td>
<td>6023</td>
<td>OLD Tomatoes/CT</td>
</tr>
<tr>
<td>E42</td>
<td></td>
<td>UF Lycopersicon lycopersicum/CT</td>
</tr>
<tr>
<td>E43</td>
<td></td>
<td>UF Solanum lycopersicum/CT</td>
</tr>
<tr>
<td>E44</td>
<td>1533</td>
<td>RT Tomato juice/CT</td>
</tr>
<tr>
<td>E45</td>
<td>692</td>
<td>RT Tomato products/CT</td>
</tr>
<tr>
<td>E46</td>
<td></td>
<td>RTCS Lycopene/CT</td>
</tr>
</tbody>
</table>

********** END **********

=> S E40-E46

<table>
<thead>
<tr>
<th>Code</th>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L3</td>
<td>29273</td>
<td>(TOMATO/CT OR TOMATOES/CT OR &quot;LYCOPERSICON LYCOPERSICUM&quot;/CT OR &quot;SOLANUM LYCOPERSICUM&quot;/CT OR &quot;TOMATO JUICE&quot;/CT OR &quot;TOMATO PRODUCTS&quot;/CT OR LYCOPENE/CT</td>
</tr>
</tbody>
</table>

=> S L2 AND L3

<table>
<thead>
<tr>
<th>Code</th>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L4</td>
<td>3</td>
<td>L2 AND L3</td>
</tr>
</tbody>
</table>

=> D IBIB ABS HITIND 1-3

=> E STRESS, PLANT/CT

<table>
<thead>
<tr>
<th>Code</th>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E47</td>
<td>0</td>
<td>5 STRESS, MICROBIAL (L) OSMOTIC/CT</td>
</tr>
<tr>
<td>E48</td>
<td>0</td>
<td>6 STRESS, MICROBIAL (L) TOXIC/CT</td>
</tr>
<tr>
<td>E49</td>
<td>18440</td>
<td>12 --&gt; STRESS, PLANT/CT</td>
</tr>
<tr>
<td>E50</td>
<td>0</td>
<td>6 STRESS, PLANT (L) ACIDITY/CT</td>
</tr>
</tbody>
</table>

=> E E49+ALL

<table>
<thead>
<tr>
<th>Code</th>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E59</td>
<td>0</td>
<td>BT2 Biological processes and phenomena (non-CA heading)/CT</td>
</tr>
<tr>
<td>E60</td>
<td>21476</td>
<td>BT1 Stress, biological/CT</td>
</tr>
<tr>
<td>E61</td>
<td>18440</td>
<td>--&gt; Stress, plant/CT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HNTE Valid heading during volume 116 (1992) to present.</td>
</tr>
<tr>
<td>E62</td>
<td>8432</td>
<td>OLD Plant stress/CT</td>
</tr>
<tr>
<td>E63</td>
<td>2516</td>
<td>OLD Plant stress and adaptation/CT</td>
</tr>
<tr>
<td>E64</td>
<td>366</td>
<td>OLD Stresses (biological)/CT</td>
</tr>
<tr>
<td>E65</td>
<td>420</td>
<td>NT1 Hypoxia, plant/CT</td>
</tr>
<tr>
<td>E66</td>
<td>4477</td>
<td>RT Adaptation, plant/CT</td>
</tr>
<tr>
<td>E67</td>
<td>2665</td>
<td>RT Atmosphere (environmental)/CT</td>
</tr>
<tr>
<td>E68</td>
<td>885</td>
<td>RT Chlorosis (plant)/CT</td>
</tr>
<tr>
<td>E69</td>
<td>5240</td>
<td>RT Fatigue, biological/CT</td>
</tr>
<tr>
<td>E70</td>
<td>46119</td>
<td>RT Oxidative stress, biological/CT</td>
</tr>
</tbody>
</table>

********** END **********

(Continued on next page)
=> S STRESS (S) PLANT (S) (FREEZING OR FROST)
L5 929 STRESS (S) PLANT (S) (FREEZING OR FROST)

=> S L5 AND (TOMATO OR L3)
L6 38 L5 AND (TOMATO OR L3)

=> S L6 AND (GENE OR GENETIC OR TRANSGENIC)
L7 32 L6 AND (GENE OR GENETIC OR TRANSGENIC)

=> S L7 NOT L4
L8 32 L7 NOT L4

=> D IBIB ABS HITIND 2
Search Question 1E: In CAplus, perform keyword searches on the following question. Use D SCAN to evaluate some answers and determine some additional terms that could be added to the search strategies to improve their comprehensiveness. Display the bibliographic information and abstract from three records from each search.

- What kinds of materials have been used to adulterate saffron?

The following is an example of a search strategy for this question including search tips:

=> FILE CAPLUS

=> SET ABB ON PERM  SET command used to retrieve abbreviations.
SET COMMAND COMPLETED

=> SET PLURALS ON PERM  SET command used to retrieve plural versions of words.
SET COMMAND COMPLETED

=> E SAFFRON

E1  10  SAFFROL/BI
E2  8  SAFFROLE/BI
E3 1076  -->  SAFFRON/BI
E4  1  SAFFRONED/BI

=> S E3

L1  1078  SAFFRON/BI
     ((SAFFRON OR SAFFRONS)/BI)

=> S L1 AND ADULTERAT?

L2  64  L1 AND ADULTERAT?

=> D SCAN

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> S (SAFFRON OR SAFFRON) (L) (ADULTERAT? OR AUTHENTIC? OR GENUIN? OR FALSIF?)

Use alternative terms and truncation to represent the “saffron” and “adulterate” concepts. (L) proximity operator is used for a more precise search.

L3  78 (SAFFRON OR SAFFRON) (L) (ADULTERAT? OR AUTHENTIC? OR GENUIN? OR FALSIF?)

=> FOCUS L3

=> D L4 IBIB ABS 1-3
Search Question 1F: In CAplus, perform keyword searches on the following question. Use D SCAN to evaluate some answers and determine some additional terms that could be added to the search strategies to improve their comprehensiveness. Display the bibliographic information and abstract from three records from each search.

- A recent law requires mattresses to resist an open flame for at least 30 minutes before igniting in order to reduce the number of deaths from house fires. Locate patents on this technology issued after 2006. Brainstorm synonyms for your search terms to be as comprehensive as possible.

The following is an example of a search strategy for this question including search tips:

=> FILE CAPLUS

=> E MATTRESS

E2  1  MATTRE/BI
E3  838  -->  MATTRESS/BI
E4  724  MATTRESSES/BI

=> S E3-E4

L1  1185  (MATTRESS/BI OR MATTRESSES/BI)

=> S (FLAME? OR FIRE?) (2A) (RETARD? OR RESIST?)

L2  67814  (FLAME? OR FIRE?) (2A) (RETARD? OR RESIST?)

=> L1 AND L2

L3  175  L1 AND L2

=> D SCAN

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1): 0

=> S BEDDING OR L1

L4  5682  BEDDING OR L1

=> S L4 AND L2

L5  264  L4 AND L2

=> S L5 AND PATENT/DT

L6  200  L5 AND PATENT/DT

=> S L6 AND PY>2006

L7  32  L6 AND PY>2006

(Continued on next page)
=> D SCAN

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1): 0

=> FOCUS L7

PROCESSING COMPLETED FOR L7
L8       32 FOCUS L7 1-

=> D 1-3  Assumes default print format.
Search Question 2: How many patents about hydrogen fuel cells does Takahiro Kuriiwa have?

- Remember to review the article indexing to obtain additional search terms
- Compare the results of at least two databases that contain patents (CAplus and USPATFULL should be included)
- Display three patent titles from each database

The following is an example of a search strategy for this question including search tips:

=> FILE CAPLUS

=> E KURIIWA T/AU

E1 2 KURIIWA KAZUKO/AU  
E2 7 KURIIWA NOBUO/AU  
E3 6 --> KURIIWA T/AU  
E4 65 KURIIWA TAKAHIRO/AU  
E5 2 KURIIWA YOSHIAKI/AU

=> S E3-E4

L1 71 ("KURIIWA T"/AU OR "KURIIWA TAKAHIRO"/AU)

=> S (HYDROGEN FUEL CELL?)

L2 1402 (HYDROGEN FUEL CELL?)  
   (HYDROGEN(W)FUEL(W)CELL?)

=> S L1 AND L2

L3 1 L1 AND L2

=> D SCAN

=> INDEX CAPLUS USPATFULL LWPI EPFULL

Use the INDEX command to search multiple databases at one time.

INDEX 'CAPLUS, USPATFULL, LWPI, EPFULL' ENTERED ON  
4 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view search error messages that display as 0* with SET DETAIL OFF.

=> SET DETAIL ON

SET COMMAND COMPLETED

=> S (FUEL CELL?) AND HYDROGEN AND (KURIIWA T?/AU)

L4 QUE (FUEL CELL?) AND HYDROGEN AND (KURIIWA T?/AU)

(Continued on next page)
=> FIL HITS

=> SET MSTEPS ON

SET COMMAND COMPLETED

=> S L4

FILE 'CAPLUS'
L5  40 (FUEL CELL?) AND HYDROGEN AND (KURIWA T?/AU)

FILE 'USPATFULL'
L6  14 (FUEL CELL?) AND HYDROGEN AND (KURIWA T?/AU)

FILE 'EPFULL'
L7  3 (FUEL CELL?) AND HYDROGEN AND (KURIWA T?/AU)

TOTAL FOR ALL FILES
L8  57 L4

=> S L5 AND PATENT/DT

Limit the answer set to patents only.

FILE 'CAPLUS'
L9  39 L5 AND PATENT/DT

FILE 'USPATFULL'
L10 14 L5 AND PATENT/DT

FILE 'EPFULL'
L11 3 L5 AND PATENT/DT

TOTAL FOR ALL FILES
L12 56 L5 AND PATENT/DT

=> SET DUPORDER FILE

SET COMMAND COMPLETED

=> DUP REM L9 L10 L11

DUPLICATE REMOVE removes duplicate answers from the selected databases.

L13  50 DUP REM L9 L10 L11 (6 DUPLICATES REMOVED)
     ANSWERS '1-39' FROM FILE CAPLUS
     ANSWERS '40-47' FROM FILE USPATFULL
     ANSWERS '48-50' FROM FILE EPFULL

=> D TI HIT 1

=> D TI 1-3 FROM EACH
Search Question 3: Find information in the MEDLINE database on job stress in the dental profession.

- Use various proximity operators to adjust the size and focus of your answer set
- Use the appropriate no cost display format to evaluate and improve your answer set
- Relevance rank the final answer set and display the titles of the 5 most relevant answers

The following is an example of a search strategy for this question including search tips:

=> FILE MEDLINE

=> S DENTAL OR DENTIST?
L1 320684 DENTAL OR DENTIST?

=> S JOB STRESS###

Implied proximity operator.

L2 776 JOB STRESS###
  (JOB(W)STRESS###)

=> S L1 AND L2

L3 14 L1 AND L2

=> D TRIAL 1-6  D TRIAL is the free display format in MEDLINE.

=> S (JOB? OR WORK OR OCCUPATION?) (2A) STRESS###
L4 3913 (JOB? OR WORK OR OCCUPATION?) (2A) STRESS###

=> S L1 AND L4

L5 96 L1 AND L4

=> FOCUS  FOCUS sorts by most relevant answers.

PROCESSING COMPLETED FOR L5
L6 96 FOCUS L5 1-

=> D TI 1-5  Displays titles of the first five references.
**Search Question 4:** Choose a company of interest to you and find a recent patent filed by this company.

- Use the CAplus company name thesaurus and the Derwent Patent Assignee Codes (PACOs) in LWPI to identify variations on this company name and or subsidiaries
- Using this information, perform a multifile patent search for this company in CAplus and LWPI

No solution for this is provided as the answers will vary by company, but check your process against the Syngenta example in the workbook.
Search Question 5: Find patents on golf ball covers held by Acushnet.

- HINT: Search in at least three of the following databases: CAplus, LWPI, USPATFULL, or USPAT2 to compare your results

The following is an example of a search strategy for this question including search tips:

=> FILE USPAT2  Try out your search strategy in a low cost database.

=> S ACUSHNET/PA

L1  410 ACUSHNET/PA

=> S GOLF BALL COVER?  Implied proximity.

L2  573 GOLF Ball COVER?
   (GOLF(W)BALL(W)COVER?)

=> S (GOLF BALL) (4A) COVER?

L3  863 (GOLF BALL) (4A) COVER?

=> S L2 OR L3

L4  863 L2 OR L3

=> S L1 AND L4

L5  305 L1 AND L4

=> D SCAN

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> D HIT 1

=> INDEX USPAT2 CAPLUS LWPI  INDEX conducts a multifile search.

INDEX 'USPAT2, CAPLUS, LWPI' ENTERED

3 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view search error messages that display as 0* with SET DETAIL OFF.

(Continued on next page)
=> SET DETAIL ON

SET COMMAND COMPLETED

=> S ((GOLF BALL) (4A) COVER?) AND ACUSHNET/PA

L6 QUE ((GOLF BALL) (4A) COVER?) AND ACUSHNET/PA

=> D RANK

F1 305 USPAT2
F2 136 CAPLUS
F3  4 LWPI

=> SET MSTEPS ON

SET COMMAND COMPLETED

=> FIL HITS

=> S L6

FILE 'USPAT2'
L7 305 ((GOLF BALL) (4A) COVER?) AND ACUSHNET/PA

FILE 'CAPLUS'
L8 136 ((GOLF BALL) (4A) COVER?) AND ACUSHNET/PA

FILE 'LWPI'
L9  4 ((GOLF BALL) (4A) COVER?) AND ACUSHNET/PA

TOTAL FOR ALL FILES
L10  445 L6

=> D TI HIT 1 FROM EACH  Review one record from each database.
Search Question 6: What is the structure of the drug sumatriptan?

- What other names is this drug known by? (HINT: Remember to start in REGISTRY then cross over to CAplus to find relevant references)
- Are there any references discussing its preparation? (HINT: The preparation role (PREP) might be helpful here)
- If so, what are the names of some companies who have reported methods of preparing it?
- Have any of the companies received a patent for this?

The following is an example of a search strategy for this question including search tips:

=> FILE REGISTRY

=> E SUMATRIPTAN/CN

E1 1 SUMATRA YELLOW X 1940/CN
E2 1 SUMATRANOSIDE/CN
E3 1 --> SUMATRIPTAN/CN
E4 1 SUMATRIPTAN HEMISUCCINATE/CN

=> S E3

L1 1 SUMATRIPTAN/CN

=> D DISPLAY the REGISTRY record to see structure and chemical names.

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2012 ACS on STN
RN 103628-46-2 REGISTRY
ED Entered STN: 09 Aug 1986
CN 1H-Indole-5-methanesulfonamide, 3-[2-(dimethylamino)ethyl]-N-methyl-(CA INDEX NAME)
OTHER NAMES:
CN 3-[2-(Dimethylamino)ethyl]-N-methyl-1H-indole-5-methanesulfonamide
CN GR 43175
CN GR 43175X
CN Sumatriptan
MF C14 H21 N3 O2 S
CI COM
SR CA
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, DDFU, DRUGU, EMBASE, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK*, PATDPASPC, PIRA, PS, RTECS*, SCISEARCH, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: WHO

(Continued on next page)
**PROPERTY DATA AVAILABLE IN THE ’PROP’ FORMAT**

1071 REFERENCES IN FILE CA (1907 TO DATE)
17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1076 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> FILE CAPLUS

=> S L1/PREP

Use the PREP role to find all types of preparations.

1076 L1
4425242 PREP/RL
L2 22 L1/PREP
   (L1 (L) PREP/RL)

=> D L2 CS 1-10

Use CS to DISPLAY the CS (Corporate Source) field.

L2  ANSWER 10 OF 22  CAPLUS  COPYRIGHT 2008 ACS on STN
PA  Knoll Aktiengesellschaft, Germany

=> ANALYZE

ANALYZE is a useful command that allows for a statistical analysis of an answer set by up to 5 fields. Type the entire word at the arrow prompt, and then answer the prompts from STN:
L2 is the answer set that discusses preparations of sumatriptan.
1- Denotes that all of the answers will be analyzed.
CS indicates that the Corporate Source field will be analyzed.

ENTER ANSWER SET OR ANALYZE L# OR (L2):L2
ENTER ANSWER NUMBER OR RANGE (1-):1-
ENTER DISPLAY CODE (TI) OR ?:CS
L3  ANALYZE L2 1- CS :  25 TERMS

(Continued on next page)
<table>
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<th># OCC</th>
<th># DOC</th>
<th>% DOC CS</th>
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<td>1</td>
<td>1</td>
<td>4.55</td>
</tr>
</tbody>
</table>

15 MORE TERMS WITH AN OCCURRENCE COUNT OF 1

=> S L2 AND PATENT/DT  Refine the answer set to contain only patents.

L4 15 L2 AND PATENT/DT

=> D TI 1-5
Search Question 7: Find articles on the Type 2 diabetes drug Byetta and its effect on weight loss.

- What other names is this drug known by?
- Search in both CAplus and MEDLINE. (HINT: Remember to remove duplicates before displaying the first three answers from each file)

The following is an example of a search strategy for this question including search tips:

=> FILE REGISTRY

=> E BYETTA/CN

E1 1 BYELYANKACIN/CN
E2 1 BYESUKAR/CN
E3 1 --> BYETTA/CN
E4 1 BYF 1047/CN

=> S E3

L1 1 BYETTA/CN

=> D L1

L1 1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2012 ACS on STN
RN 141758-74-9 REGISTRY
ED Entered STN: 12 Jun 1992
OTHER CA INDEX NAMES:
CN Exendin 3 (Heloderma horridum), 2-glycine-3-L-glutamic acid-
CN Exendin 4 (Heloderma suspectum) (9CI)
OTHER NAMES:
CN 12: PN: WO0041546 FIGURE: 2 claimed protein
CN 1: PN: US20060171920 SEQID: 1 claimed protein
CN 2: PN: WO0066629 FIGURE: 2 unclaimed protein
CN 3: PN: WO0041548 PAGE: 65 unclaimed protein
CN 3: PN: WO2005019262 SEQID: 3 claimed protein
CN 476: PN: WO2005019262 PAGE: 46 claimed protein
CN 4: PN: DE102004043153 PAGE: 14/17 claimed protein
CN 7: PN: WO2005019262 SEQID: 3 claimed protein
CN AC 2993
CN AC 2993A
CN Byetta
CN Exenatide
CN Exenatide LAR

(Continued on next page)
FS  PROTEIN SEQUENCE
DR  286014-72-0, 335149-21-8
MF  C184 H282 N50 O60 S
CI  COM, MAN
SR  CA
LC  STN Files:  ADISINSIGHT, AGRICOLA, BIOSIS, CA, CAPLUS, CASREACT,
       CHEMCATS, CIN, CSCHEM, EMBASE, IMSPATENTS, IMSRESEARCH, IPA, PATDPASPC,
       PS, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
       (*File contains numerically searchable property data)

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
*** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***

**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

257 REFERENCES IN FILE CA (1907 TO DATE)
12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
261 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> SEL CHEM L1  Selects all the chemical names from REGISTRY.
E13 THROUGH E29 ASSIGNED

=> D SEL E13-E29  Displays all the chemical names with assigned E-numbers.
E13  1   AC 2993/BI
E14  1   AC 2993A/BI
E15  1   BYETTA/BI
E16  1   EXENATIDE LAR/BI
E17  1   EXENATIDE/BI
E18  1   EXENDIN 4 (HELODERMA SUSPECTUM)/BI
E19  1   1: PN: US20060171920 SEQID: 1 CLAIMED PROTEIN/BI
E20  1   12: PN: WO0041546 FIGURE: 2 CLAIMED PROTEIN/BI
E21  1   141758-74-9/BI
E22  1   2: PN: WO0066629 FIGURE: 2 UNCLAIMED PROTEIN/BI
E23  1   286014-72-0/BI
E24  1   3: PN: WO0041548 PAGE: 65 UNCLAIMED PROTEIN/BI
E25  1   3: PN: WO2005019262 SEQID: 3 CLAIMED PROTEIN/BI
E26  1   335149-21-8/BI
E27  1   4: PN: DE102004043153 PAGE: 14/17 CLAIMED PROTEIN/BI
E28  1   476: PN: WO2004005342 PAGE: 46 CLAIMED PROTEIN/BI
E29  1   7: PN: WO2005019262 SEQID: 3 CLAIMED PROTEIN/BI

=> FILE CAPLUS MEDLINE

=> SET MSTEPS ON
SET COMMAND COMPLETED

(Continued on next page)
=> S E13-E29

L2  323 FILE CAPLUS
L3  486 FILE MEDLINE

TOTAL FOR ALL FILES

=> S WEIGHT LOSS

L5  54372 FILE CAPLUS
L6  38738 FILE MEDLINE

TOTAL FOR ALL FILES
L7  93110 WEIGHT LOSS

=> S L4 AND L7

L8  38 FILE CAPLUS
L9  62 FILE MEDLINE

TOTAL FOR ALL FILES
L10 100 L4 AND L7

=> SET DUPORDER FILE

SET COMMAND COMPLETED

=> DUP REM L8 L9

PROCESSING COMPLETED FOR L8
PROCESSING COMPLETED FOR L9
L11 78 DUP REM L8 L9 (22 DUPLICATES REMOVED)

22 duplicate answers are removed and records are sorted by designated file order.

    ANSWERS '1-38' FROM FILE CAPLUS
    ANSWERS '39-78' FROM FILE MEDLINE

=> D 1-3 FROM EACH  Displays 3 answers from each database.
Search Question 8: In 2005, a number of petroleum companies announced their intent to eliminate MTBE from gasoline due to drinking and ground water contamination concerns and continuing liability exposure.

- Find three journal review articles on this topic in CAplus. (HINT: Use both left and right truncation (SLART) to enhance your search retrieval for water)

The following is an example of a search strategy for this question including search tips:

=> FILE REGISTRY

=> E MTBE/CN

E1 1 MTBA PROTEIN (SINORHIZOBIUM MELILOTI STRAIN 1021 GENE SMA1328)/CN
E2 1 MTBD/CN
E3 1 --> MTBE/CN
E4 1 MTBHQ/CN

=> S E3

L1 1 MTBE/CN

=> D L1

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS on STN
RN 1634-04-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN Propane, 2-methoxy-2-methyl- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Ether, tert-butyl methyl (6CI, 7CI, 8CI)
OTHER NAMES:
CN 1,1-Dimethylethyl methyl ether
CN 2-Methoxy-2-methylpropane
CN 2-Methyl-2-methoxypropane
CN Methyl 1,1-dimethylethyl ether
CN Methyl tert-butyl ether
CN Methyl tertiary butyl ether
CN MTBE
CN t-Butyl methyl ether
CN tert-Butoxymethane
CN tert-Butyl methyl ether
MF C5 H12 O
CI COM

(Continued on next page)
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

7883 REFERENCES IN FILE CA (1907 TO DATE)
21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7917 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> SEL CHEM L1

E13 THROUGH E23 ASSIGNED

=> D SEL E13-E23

E13  1  METHYL TERT-BUTYL ETHER/BI
E14  1  METHYL TERTIARY BUTYL ETHER/BI
E15  1  M ETHYL 1,1-DIMETHYLETHYL ETHER/BI
E16  1  MTBE/BI
E17  1  T-BUTYL METHYL ETHER/BI
E18  1  TERT-BUTOXYMETHANE/BI
E19  1  TERT-BUTYL METHYL ETHER/BI
E20  1  1,1-DIMETHYLETHYL METHYL ETHER/BI
E21  1  1634-04-4/BI
E22  1  2-METHOXY-2-METHYLPROPANE/BI
E23  1  2-METHYL-2-METHOXYPROPANE/BI

=> FILE CAPLUS

caplus supports SLART (simultaneous left and right truncation) and allows you to search for variations of water, i.e., groundwater and drinking-water.

=> S E13-E23

L2  8891 ("METHYL TERT-BUTYL ETHER"/BI OR "METHYL TERTIARY BUTYL ETHER"/BI OR "METHYL 1,1-DIMETHYLETHYL ETHER"/BI OR MTBE/BI OR "T-BUTYL METHYL ETHER"/BI OR TERT-BUTOXYMETHANE/BI OR "TERT-BUTYL METHYL ETHER"/BI OR "1,1-DIMETHYLETHYL METHYL ETHER"/BI OR 1634-04-4/BI OR 2-METHOXY-2-METHYLPROPANE/BI OR 2-METHYL-2-METHOXYPROPANE/BI)

=> S ?WATER?

L3  2853616 ?WATER?

(Continued on next page)
When you Expand (E) on the Data Type (DT) field, you are able to locate the field name that covers review articles = General Review or GR.

**** START OF FIELD ****
E24  0  -->  A/DT  
E25  272590  B/DT  
E26  11432  BIO/DT  
E27  11432  BIOGRAPHY/DT  
E28  272590  BOOK/DT  
E29  43196  BOOK REVIEW/DT  
E30  43196  BR/DT  
E31  1156193  C/DT  
E32  121  COMPUTER MAGNETIC DISK/DT  
E33  120192  COMPUTER OPTICAL DISK/DT  

=> E

E34  1156193  CONFERENCE/DT  
E35  413714  D/DT  
E36  413714  DISSERTATION/DT  
E37  19750  ED/DT  
E38  19750  EDITORIAL/DT  
E39  13174  ER/DT  
E40  13174  ERRATA/DT  
E41  2044284  GENERAL REVIEW/DT  
E42  2044284  GR/DT  
E43  19934381  J/DT  
E44  19934381  JOURNAL/DT  
E45  23717  LE/DT  

=> S L6 AND GENERAL REVIEW/DT

L7  109  L6 AND GENERAL REVIEW/DT


  2055867  PY=>2006
L8  4  L7 AND PY=>2006

=> D SCAN

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> D BIB  ABS 1-4
Search Question 9: Choose a drug or chemical of your choice.

- Locate other names that the drug or chemical are known by, then search in relevant databases and find recent patents and journal articles.

No solution for this is provided as the answers will vary, but check your search strategy against the multifile substance based search in the workbook.