



STN[®]: Dealing with Large Answer Sets

Session Agenda

- Techniques to reduce the number of answers while retaining confidence in your search results
- Show use of STN[®] commands to manipulate large answer sets

Techniques for refining answer sets

- Removing duplicates
- Limiting by
 - Dates
 - CAS Roles
 - Free text
 - Index terms
 - Classification codes
- Highlighting
- Browsing formats
- Relevance ranking

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DUPLICATE REMOVE eliminates duplicate answers from a multifile search

- STN uses an algorithm to compare author names, titles, and source information to determine if a reference is duplicated in different databases
 - Entire documents are compared
- Works well with journal references, less so with patent references
 - Similar inventions are grouped into the same patent family

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FSORT is used to sort patent records by family

- Two patent records are considered to be members of the same family if any of the following are similar
 - Patent numbers
 - Application numbers
 - Priority numbers
- A and B, are considered to be members of the same family if any of the above appear in the PN or APPS of both A and B
- FSORT works in any of the databases included in the PATENTS or HPATENTS clusters

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Patents

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Remove duplicate answers after a multifile search with DUP REMOVE

```
=> FILE CAPLUS MEDLINE BIOSIS EMBASE SCISEARCH
...
=> SET MSTEPS ON
SET COMMAND COMPLETED

=> S (PHENYLKETONURIA OR PHENILPYRUVIC OLIGOPHRENIA OR PKU)
    AND (NEWBORN OR INFANT OR NEONATAL) AND (GENETIC OR GENOMIC)
    AND (?ASSAY? OR TEST)
...
TOTAL FOR ALL FILES
L6 533 (PHENYLKETONURIA OR PHENILPYRUVIC OLIGOP
    INFANT OR NEONATAL) AND (GENETIC OR GENO

=> SET DUPORDER FILE
SET COMMAND COMPLETED

=> DUP REMOVE L6
PROCESSING COMPLETED FOR L6
L7 407 DUP REMOVE L6 (126 DUPLICATES REMOVED)
    ANSWERS '1-18' FROM FILE CAPLUS
    ANSWERS '19-165' FROM FILE MEDLINE
    ANSWERS '166-333' FROM FILE BIOSIS
    ANSWERS '334-400' FROM FILE EMBASE
    ANSWERS '401-407' FROM FILE SCISEARCH
```

SET MSTEPS ON provides a separate L-number for each database searched.

SET DUPORDER FILE keeps answers in database order rather than in reverse chronological order.

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Use FSORT for the databases that contain patent information

```
=> FSORT L1
```

```
...
```

```
SEL L1 1- PN,APPS
```

```
L9          SEL L1 1- PN APPS :          24 TERMS
```

L1 is the answer set from
CAplusSM.

```
'L9' DELETED
```

```
L9          18 FSO L1
```

Only three records are patent
publications.

1 Multi-record Family	Answers 1-2
1 Individual Record	Answer 3
15 Non-patent Records	Answers 4-18

CAplus is the only database used
in the multifile search that
includes patent information.

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Patent databases contain many different publication date options

- Date information can be found in several fields in an STN record
 - Publication year and date (/PY, /PD)
 - Application year and date (/AY, /AD)
 - Priority year and date (/PRY, /PRD)
- Use /PY to limit answer sets from multifile searches
 - /PY.B - Patent Year Basic - for patent databases
 - Date associated with the patent indexed as the “basic” patent document
- Use /PD to find prior art published before an exact date
 - Format is YYYYMMDD

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Answer sets containing patent documents can be focused by using a date restriction

- Searches can be refined by date
- Searches can also be SORTed by date
 - Faster
 - Does not remove any answers

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Refine a multfile search by publication date

```
=> FILE CAPLUS MEDLINE BIOSIS EMBASE SCISEARCH
...
=> S (MARIJUANA OR CANNABIS) (S) CHEMOTHERAP? (S) NAUSEA?
L1          66 (MARIJUANA OR CANNABIS) (S) CHEMOTHERAP? (S) NAUSEA?

=> DUP REMOVE L1
PROCESSING COMPLETED FOR L1
L2          33 DUP REMOVE L1 (33 DUPLICATES REMOVED)

=> S L2 AND PD<=19920229
2 FILES SEARCHED...
L3          8 L2 AND PD<=19920229

=> S L2 NOT PD>19920229
L4          8 L2 NOT PD>19920229
```

Date searches can take some time...

This alternate way of searching results in the same answers, but often runs faster.

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SORT your multfile answer set by date

```
=> SORT L2 PY A
SORT ENTIRE ANSWER SET? (Y)/N:Y
PROCESSING COMPLETED FOR L2
L5          33 SORT L2 PY A

=> D PY 1-
YOU HAVE REQUESTED DATA FROM 33 ANSWERS

L5 ANSWER 7 OF 33 MEDLINE on STN
PY 1985

L5 ANSWER 8 OF 33 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All
rights reserved on STN
PY 1991

-----
L5 ANSWER 9 OF 33 MEDLINE on
PY 1994
```

Sorting is often quicker than refining.

PY A means Publication Year in ASCENDING order (oldest to newest).

Sorting the answer set allows you to see where your critical date appears.

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Displays are in order from oldest to newest after SORTing

=> D BIB ABS

```
L5 ANSWER 1 OF 33 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN
AN 1980200205 EMBASE Full-text
TI How-to manual languishes in obscurity.
AU Korcok, M.
SO US Journal of Drug and Alcohol Dependence, (1979) Volume 3, Number 7, pp. 1-2.
CODEN: USJDDV
CY United States
DT Journal
FS 040 Drug Dependence, Alcohol Abuse and Alcoholism
LA English
ED Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991
AB Though therapeutic use of marijuana remains illegal in most of the country, there are growing legions of cancer patients turning to pot to ease the debilitating nausea that often accompanies chemotherapy and sometimes radiation therapy. A newly published manual, entitled Using Marijuana in the Reduction of Nausea Associated with Chemotherapy, might well eliminate a lot of this hesitancy if it ever gets the kind of distribution its author would like.
```

This 1979 journal article is the oldest publication related to the search.

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Elsevier

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Techniques for refining answer sets

- Removing duplicates
- Limiting by
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 - CAS Roles
 - Free text
 - Index terms
 - Classification codes
- Highlighting
- Browsing formats
- Relevance ranking

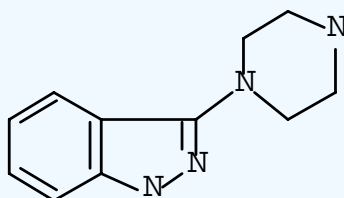
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Elsevier

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Refine the results of a structure search using CAS Roles

Search Problem: Locate references describing the therapeutic use of the following class of substances:



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CAS
Structure

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Adding CAS Roles to a structure search helps narrow a possibly large answer set

Steps for adding CAS Roles to a structure search

- Step 1. Run a structure search
- Step 2. Crossover the answer set to CPlus
- Step 3. Refine with CAS Roles (or keywords)
- Step 4. DISPLAY final answer set using IBIB, ABS, HITSTR

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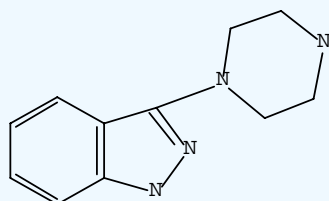
CAS
Structure

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Upload and DISPLAY structure

```
=> FILE REGISTRY
...
L1      STRUCTURE UPLOADED

=> D L1
L1 HAS NO ANSWERS
L1      STR
```



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PSEARCH

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Run the sample and full file substructure searches

```
=> S L1 SSS SAM
...
FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:   3152 TO   4848
PROJECTED ANSWERS:     376 TO   1104

L2      37 SEA SSS SAM L1

=> S L1 SSS FULL
FULL SEARCH INITIATED 13:16:42 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 4462 TO ITERATE

100.0% PROCESSED      4462 ITERATIONS
SEARCH TIME: 00.00.01

L3      645 SEA SSS FUL L1
```

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PSEARCH

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CAS Roles add precision to the search

```
=> FILE CAPLUS
```

```
...
```

```
=> S L3
```

```
L4          74 L3
```

```
=> D 7 TI
```

```
L4 ANSWER 7 OF 74 CAPLUS COPYRIGHT  
TI Preparation of quinoline derivati  
agents
```

```
=> S L3/THU
```

```
L5          53 L3/THU  
              (L3 (L) THU/RL)
```

```
=> S L4/THU
```

```
FIELD CODES CANNOT BE CHANGED HERE
```

```
You may have tried to apply a field co  
has a field code. You can only add a  
has no field code appended to it.
```

Some of the publications might be preparations or studies.

THU is the role for therapeutic use; note the search is linked to L3, the answer set from CAS REGISTRYSM.

53 of the 74 answers discuss the therapeutic use of the substances.

To avoid this possible error, use the (L) operator to search your L-number and THU/RL.

```
=> S L3 (L) THU/RL
```

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CAS
PUBLISHING

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You can also narrow your answer set with a keyword search

```
=> S L4 AND (PHARM? OR DRUG? OR DISEASE?)
```

```
718339 PHARM?
```

```
1006193 DRUG?
```

```
1253095 DISEASE?
```

```
L6          38 L4 AND (PHARM? OR DRUG? OR DISEASE?)
```

```
=> S L5 OR L6
```

```
L7          54 L5 OR L6
```

L4 contains 74 CPlus records indexed to the RNs for the substances of interest. The answer set can also be refined by adding keywords associated with the therapy concept. The keywords are searched in the CPlus Basic Index.

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One reference is identified in addition to the therapeutic role answer set

```
=> S L7 NOT L5; D
L8          1 L7 NOT L5
```

Search and display the record(s) in one step by stacking commands.

```
L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1989:553842 CAPLUS Full-text
DN 111:153842
OREF 111:25665a,25668a
TI Neuroleptic arylpiperazinylalkyl-substituted heterocycles and their
   pharmaceutical compositions and use
IN Lowe, John A., III.; Nagel, Arthur A.
PA Pfizer Inc., USA
SO U.S., 9 pp.
   CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1
PATENT NO.      KIND  DATE      APPLICATION NO.  DATE
-----
PI US 4831031    A    19890516   US 1988-146886  19880122
IN 173938      A1   19940813   IN 1988-DE139   19880219
US 4883795    A    19891128   US 1989-300995  19890123
PRAI US 1988-146886 A    19880122
OS CASREACT 111:153842; MARPAT 111:153842
```

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Use the IBIB format to see full field labels

```
=> D L7 50 IBIB ABS HITSTR
```

```
L7 ANSWER 50 OF 54 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1990:478418 CAPLUS Full-text
DOCUMENT NUMBER: 113:78418
ORIGINAL REFERENCE NO.: 113:13275a,13278a
TITLE:
Preparation of antipsychotic 3-
piperazinylbenzazoles and pharmaceutical
compositions containing them
INVENTOR(S): Kennis, Ludo Edmond Josephine; Vandenberk, Jan;
Mertens, Josephus Carolus
PATENT ASSIGNEE(S): Janssen Pharmaceutica N. V., Belg.
SOURCE: Eur. Pat. Appl., 27 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:
PATENT NO.      KIND  DATE      APPLICATION NO.  DATE
-----
EP 353821      A2   19900207   EP 1989-201981  19890728
...
```

The IBIB display format expands all of the two letter field codes.

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The ABS format displays abstract and any associated graphic

...

AB The title compds. [I; R = H, alkyl; R1, R2 = H, halo, OH, alkoxy, alkyl; X = O, S, imino; R3 = (substituted) quinazoliny, (substituted) pyridopyrimidinyl, Z = alkylene, etc.] were prepared Refluxing a mixt of pyridopyrimidinylethyl chloride QCH2CH2Cl.HCl, benzisoxazolylpiperazine II, Na2CO3, KI, and Me2CHCH2COMe for 20 h gave I [R = R1 = R2 = H, R3 = Q, X = O, Z = (CH2)2]. In rats, twenty tested I had ED50 values ranging from 0.005 to 0.08 mg/kg orally or s.c. against tryptamine-induced convulsions. Oral drops, oral solns., capsules, etc., containing I, were formulated.

This abstract describes some of the compounds associated with the patented preparation.

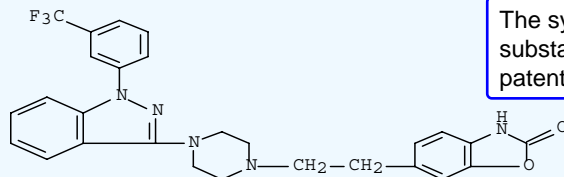
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SciSearch

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HITSTR shows the hit structure that retrieved the answer

IT 118289-91-1P 118289-92-2P
RL:BAC (Biological activity or effector, except adverse);
BSU (Biological study, unclassified); SPN (Synthetic
preparation); THU (Therapeutic use); BIOL (Biological
study);
PREP (Preparation); USES (Uses)
(preparation of, as antipsychotic)
RN 118289-91-1 CAPLUS
CN 2(3H)-Benzoxazolone, 6-[2-[4-[1-[3-(trifluoromethyl)phenyl]-
1H-indazol-3-yl]-1-piperazinyl]ethyl]- (CA INDEX NAME)



The synthetic preparation of this substance was described in this patent.

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Techniques for refining answer sets

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Refine search results with index terms

- CAS controlled vocabulary found in the Index Term fields in CASM/CAplus records
- Facilitates precision refinement of an answer set

Steps for refining using index terms

- Step 1. Run a text search
- Step 2. DISPLAY relevant answers in the IND format
- Step 3. Search the answer set in CAplus

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FORUMS

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Run a text search in BIOSIS® to acquire an answer set

Search Question:

Find references discussing tests available for determining the sex of fetuses.

```
=> FILE BIOSIS
...
=> S ((NUCLEIC ACID OR POLYNUCLEOTIDE OR
      DNA) (W) PROBE?) AND (PRENATAL OR FETUS OR FETAL)
      AND (SEXING OR DETERMIN? (2A) (SEX? OR GENDER?))
...
L1 36 ((NUCLEIC ACID OR POLYNUCLEOTIDE OR DNA) (W) PROBE?) AND
      (PRENATAL OR FETUS OR FETAL) AND (SEXING OR
      DETERMIN? (2A) (SEX? OR GENDER?))
```

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Scan the titles of references to acquire potentially useful information

```
=> D 1- TI
YOU HAVE REQUESTED DATA FROM 36 ANSWERS - CONTINUE? Y/(N):Y
...
L1 ANSWER 1 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson
  Corporation on STN
TI Y-chromosome specific polynucleotide probes for prenatal
  sexing.
...
L1 ANSWER 19 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson
  Corporation on STN
TI DETERMINATION OF THE SEX OF THE FETUS BY DNA ANALYSIS FROM
  CHORIONIC VILLUS SAMPLES.
```

Display only the titles to limit the size of your transcript.

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DISPLAY in the IND format to see the different indexing terms and codes

=> D IND 1

```
L1 ANSWER 1 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
NCL 435006000
CC Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Development and Embryology - General and descriptive 25502
Reproductive system - General and descriptive 16501
Pathology - Diagnostic 12504
Genetics - Human 03508
Methods - Laboratory methods 01
IT Major Concepts
Biochemistry and Molecular Biophysics; Development; Genetics; Methods and Techniques; Pathology; Reproductive System (Reproduction)
IT Miscellaneous Descriptors
BIOTECHNOLOGY; DIAGNOSTIC TESTING; GENDER DETERMINATION; GENETICS
```

The IND display in BIOSIS includes the NCL, CC, IT, GT, ORGN, RN, and GEN fields.

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CCS
Thomson

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Further refine your search using additional controlled terminology

=> D IND 19

```
L1 ANSWER 19 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
CC Genetics - Human 03508
Genetics - Sex differences 03510
Biochemistry methods - Nucleic acids, purines and pyrimidines 10052
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Reproductive system - General and methods 16501
Reproductive system - Pathology 16506
Development and Embryology - Pathology 25503
IT Major Concepts
Biochemistry and Molecular Biophysics; Development; Genetics; Reproductive System (Reproduction)
IT Miscellaneous Descriptors
HUMAN DNA PRENATAL DIAGNOSIS X-LINKED
...
=> S L1 AND (GENDER DETERMINATION/CT OR 03510/CC)
3 GENDER DETERMINATION/CT
166164 03510/CC
L4 17 L1 AND (GENDER DETERMINATION/CT OR 03510/CC)
```

Append the search with the concept code associated with sex differences.

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Thomson

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Analyze the titles to acquire additional search terminology

=> D TI 1-5

L4 ANSWER 1 OF 17 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI Birth of a healthy girl after preimplantation **gender determination**
using a combination of polymerase chain reaction and fluorescent in situ
hybridization analysis.

L4 ANSWER 2 OF 17 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI **Sexing** of human embryos and **fetuses** by fluorescent in situ
hybridization (FISH) to paraffin-embedded tissues with sex
chromosome-specific **DNA probes**.

L4 ANSWER 3 OF 17 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI **Sexing** of human embryos and **fetuses** by fluorescent in situ
hybridization (FISH) to paraffin-embedded tissues with sex
chromosome-specific **DNA probes**.

L4 ANSWER 4 OF 17 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI **Sexing** of human embryos and **fetuses** by fluorescent in situ
hybridization (FISH) to paraffin-embedded tissues with sex
chromosome-specific **DNA probes**.

L4 ANSWER 5 OF 17 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI **PRENATAL** DIAGNOSIS OF DUCHENNE MUSCULAR DYSTROPHY BY RESTRICTION
FRAGMENT LENGTH POLYMORPHISM ANALYSIS WITH PERT 87 INTRAGENOMIC **DNA**
PROBES.

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Full-Text

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Techniques for refining answer sets

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Full-Text

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Use CA Classification (Section) Codes (/CC) to focus your answer set

- 80 CA Section Codes
- Each CA section covers only one broad area of technology
- Each abstract in CA appears in only one section
- Abstracts are assigned to a section according to the novelty of the process or substance that is being reported in the literature

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PentaCare

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Refine the results of a structure search using CAS Classifications

Technology	Sections
Biochemistry	1-20
Organic Chemistry	21-34
Macromolecular	35-46
Applied Chemistry and Chemical Engineering	47-64
Physical, Inorganic, and Analytical Chemistry	65-80

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PentaCare

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Use CAS Classification Codes to ensure you find the most relevant area of chemistry

Steps to limit a search by CAS Section Code

- Step 1. Run a structure search
- Step 2. Crossover the answer set to CPlus
- Step 3. Explore appropriate CAS Classification Codes
- Step 4. Refine with CAS Section Codes
- Step 5. DISPLAY using IBIB ABS HITSTR

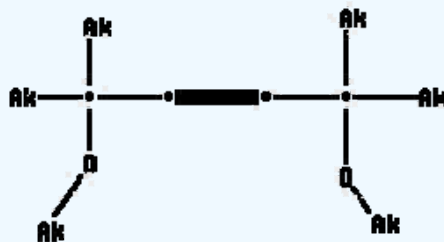
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PASCAL

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Search Question:

Locate references describing the following class of substances as a coating:



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PASCAL

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Refine the search with the Classification Codes associated with coatings

```
=> S L4 AND COATINGS+ALL/CC
      237589 COATINGS+ALL/CC (2 TERMS)
L5      728 L4 AND COATINGS+ALL/CC
```

```
=> S L5 NOT PY>2001
      8513197 PY>2001
L6      161 L5 NOT PY>2001
```

```
=> SORT L8 PY A
SORT ENTIRE ANSWER SET? (Y)/N:Y
PROCESSING COMPLETED FOR L8
L9      161 SORT L8 PY A
```

Further narrow the search by publication date.

To review potential prior art, refine the initial answer set by desired application or publication date range and then sort by date, in ascending order.

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Chemical Coatings Society

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Display references to show relevant abstracts and hit structures

AB Polyethylene glycol 2,4,7,9-tetramethyl-5-decyne-4,7-diol ether (I) [9014-85-1] was added to dodecanedicarboxylic acid-2-ethylhexyl methacrylate-glycidyl methacrylate- β -hydroxyethyl methacrylate-methacrylic acid-Me methacrylate-styrene copolymer (II) [73048-33-6], acrylic acid-2-ethylhexyl acrylate-2-ethylhexyl methacrylate-2-hydroxypropyl methacrylate-Melan 27-Me methacrylate-styrene copolymer [73048-14-3], or a similar polymer to improve coating properties. Thus, a water-containing powdered cake of II (58% solids) 84, I 1, Emulgen 0.3, a bentonite thickening agent 0.1, and water 16 parts were mixed, diluted, (100 parts) with 10 parts water, and coated on iron to give a surface which was smoother than the surface coated in the absence of I.

IT 9014-85-1

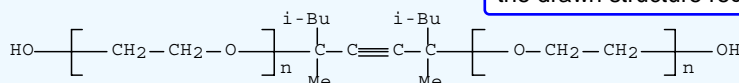
RL: USES (Uses)

(acrylic polymers containing, for improved coating properties)

RN 9014-85-1 CAPLUS

CN Poly(oxy-1,2-ethanediy), α, α' -[1,4-di(methylpropyl)-2-butyne-1,4-diyl]bis(ω -

Note that the substance associated with this record meets the drawn structure requirements.



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Chemical Coatings Society

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Browsing large answer sets

- Removing duplicates
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Control highlighting in the answers

The Problem: Certain words can appear over and over in a reference, causing **KWIC** or **HIT** displays to show irrelevant parts of the record.

The Solution: Target certain search terms with hit-term highlighting to make browsing easier and faster.

Narrow an initial broad search to focus on novel aspects of invention

Steps to control term highlighting

- Step 1. **SET HIGHLIGHT OFF**
- Step 2. Search the “background” of the invention (broad search)
- Step 3. **SET HIGHLIGHT ON**
- Step 4. Search for the “novelty” (narrow search)
- Step 5. **D HIT** or **D KWIC**

Only terms used in novelty search will be highlighted!

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Run the broad search first followed by the narrow search addressing the novelty

```
=> FIL CAPLUS
...
=> SET HIGHLIGHTING OFF
SET COMMAND COMPLETED

=> S HAIR?(S) (PREPARATION? OR FIX!TIVE OR SHAMPOO?
OR ?CONDITION? OR ?TREATMENT? OR GEL? OR
MOUSSE? OR DYE# OR COLOR? OR COLOUR? OR
COMPOSITION OR CREAM? OR WAV?)
...
L1      40433 HAIR?(S) (PREPARATION? OR FIX!TIVE OR SHAMPOO? OR ?CONDITION?
OR ?TREATMENT? OR GEL? OR MOUSSE? OR DYE# OR COLOR? OR
COLOUR? OR COMPOSITION OR CREAM? OR WAV?)

=> SET HIGHLIGHTING ON
SET COMMAND COMPLETED

=> S JOJOBA (S) L1
      2918 JOJOBA
L2      155 JOJOBA (S) L1
```

Turn highlighting on before you search for the novel aspects of the invention.

Jojoba is the narrow, novel aspect of the broad search.

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Only the “novelty” words are highlighted

L2 ANSWER 1 OF 155 CAPLUS COPYRIGHT 2008 ACS on STN
IT INDEXING IN PROGRESS
IT **Jojoba** oil
Olive oil
•••

This record still incorporates the terms from the broad search but only highlights our novel aspect, jojoba.

L2 ANSWER 2 OF 155 CAPLUS COPYRIGHT
AB The invention relates to a 2-agent-type cosmetic compn. consisting of a 1st agent containing a higher fatty acid salt, especially **jojoba** oil fatty acid salt, and a 2nd agent containing an acidic component, e.g. a carboxylic acid, wherein the 1st and 2nd agents are sequentially applied to the **hair** or skin. The 1st agent may further contain an oily component. The cosmetic provides excellent **hair**/skin-conditioning effect or emollient effect through covering the surface of the **hair**/skin with the component. For example, a 1st agent containing potassium oleate 1 and water 90 %, and a 2nd agent containing citric acid 2, and water 98 % were formulated, and sequentially applied to the **hair**

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Browsing large answer sets

- Removing duplicates
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Browse answers efficiently with D HIT or D KWIC

- Assess the relevance of the answers by reviewing the search terms in the context of each answer record
 - **D HIT** displays entire hit term field
 - **D KWIC** displays hit term and 20 terms on either side
- Screen answers offline

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Using D HIT and D KWIC allows you to quickly browse answer sets

Steps for browsing a large answer set

- Step 1. Run the search
- Step 2. **D HIT TOT** or **D KWIC TOT**
- Step 3. **LOGOFF HOLD**
- Step 4. Review the answers offline
- Step 5. Log on to STN and display only desired answers in BIB ABS format

LOGOFF HOLD holds your search for 2 hours.

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COS
Purdue

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Search Problem:

An invention involves a series of acids used in semiconductor etching. Two of the acids must be present, and a number of steps must be involved (e.g., washing, neutralizing, etc.).

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Chemical Online Search

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Search for different acids in the /CN field and the Basic Index of CAplus

```
=> FILE CAPLUS
...
=> S PHOSPHORIC OR PHOSPHORIC ACID/CN/REG
REGISTRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.
...
L3      123118 PHOSPHORIC OR L2

=> S PHOSPHORUS OR PHOSPHOROUS ACID/CN/REG
...
L6      354046 PHOSPHORUS OR L5

=> S NITRIC OR NITRIC ACID/CN/REG
...
L9      218103 NITRIC OR L8

=> S SULFURIC OR SULFURIC ACID/CN
...
L12     176049 SULFURIC OR L11

=> S CARBONIC OR CARBONIC ACID/CN
...
L15     53639 CARBONIC OR L14
```

If you don't append your chemical name search in CA with /REG, STN will do it automatically.

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Search the answer sets with other terms related to the search question

```
=> S L3 (L) ETCH? (L) SEMICONDUCT?
...
L16      640 L3 (L) ETCH? (L) SEMICONDUCT?

=> S L6 (L) ETCH? (L) SEMICONDUCT?
...
L17      243 L6 (L) ETCH? (L) SEMICONDUCT?

=> S L9 (L) ETCH? (L) SEMICONDUCT?
...
L18      581 L9 (L) ETCH? (L) SEMICONDUCT?

=> S L12 (L) ETCH? (L) SEMICONDUCT?
...
L19      444 L12 (L) ETCH? (L) SEMICONDUCT?

=> S L15 (L) ETCH? (L) SEMICONDUCT?
...
L20      17 L15 (L) ETCH? (L) SEMICONDUCT?
```

The L-numbers being searched are the answer sets which incorporate both the acid term in the Basic Index of CAplus and the name in the /CN field of REGISTRY.

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Chemical & Process

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Search the answer sets together by ANDing and ORing all of the possible combinations

```
=> S (L16 AND L17) OR (L16 AND L18) OR (L16 AND
L19) OR (L16 AND L20) OR (L17 AND L18) OR (L17
AND L19) OR (L17 AND L20) OR (L18 AND L19)
OR(L18 AND L20) OR (L19 AND L20)

L21      265 (L16 AND L17) OR (L16 AND L18) OR (L16 AND
L19) OR (L16 AND L20) OR (L17 AND L18) OR
L17 AND L19) OR (L17 AND L20) OR (L18 AND
L19) OR (L18 AND L20) OR (L19 AND L20)
```

This search incorporates all of the possible combinations of L-numbers from L16 to L20.

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Chemical & Process

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DISPLAY the total amount of hit terms in the answer set to view the relevant portions

```
=> D HIT TOT; LOGOFF HOLD
```

```
...
```

```
L21 ANSWER 3 OF 265 CAPLUS COPYRIGHT 2008 ACS on STN
```

```
AB Significant progress has been made in the
characterization of the zinc-oxide (ZnO) semiconductor as a
new semiconductor layer to be used instead of the amorphous
Si semiconductor used in thin-film transistors due to its
high electron mobility at low deposition temperature, which
is quite suitable for flexible displays and OLED devices.
The wet patterning of ZnO is another important issue with
regard to mass production of ZnO thin-film transistor (TFT)
devices. However, the wet behavior of ZnO thin films in the
aqueous wet etching solns. conventionally used in TFT
industry has not been reported yet. So in this work, the
wet etch behavior of RF-magnetron-sputtered ZnO thin films
in various wet solns., such as phosphoric and nitric acid
solns., was studied by using an electrochem. anal.
```

```
...
```

Browse your transcript offline then
log back on to continue searching.

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SEARCHERS

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Reconnect to STN within 2 hours with the LOGOFF HOLD command

```
=> D HIS
```

```
(FILE 'CAPLUS' ENTERED AT 16:17:12 ON 24 NOV 2008)
```

```
L17 243 S L6 (L) ETCH? (L) SEMICONDUCT?
```

```
L18 581 S L9 (L) ETCH? (L) SEMICONDUCT?
```

```
L19 444 S L12 (L) ETCH? (L) SEMICONDUCT?
```

```
L20 17 S L15 (L) ETCH? (L) SEMICONDUCT?
```

```
L21 265 S (L16 AND L17) OR (L16 AND  
L19) OR (L16 AND...
```

After reconnecting, display your
history to see what each of your
previous L-numbers incorporated.

```
=> D L21 IBIB ABS HITRN 80-85
```

```
L21 ANSWER 80 OF 265 CAPLUS COPYRIGHT 2008 ACS on STN
```

```
ACCESSION NUMBER: 2004:943568 CAPLUS
```

```
DOCUMENT NUMBER: 142:160658
```

```
TITLE: Aluminum etchant co
```

```
INVENTOR(S): Choi, Dong Uk; Kim  
Jin
```

```
Su; Park, Min Chun; Song, Hyeong Su
```

```
PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea
```

```
SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given
```

```
CODEN: KRXXA7
```

```
DOCUMENT TYPE: Patent
```

```
LANGUAGE: Korean
```

For a detailed history of your last
session, use the D HIS FULL
command.

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DISPLAY the relevant hits in the abstract using the ABS display

AB An aluminum **etchant** composition is provided to alter original property of combined acids used in **semiconductor** and LCD production by adding fluorine based surfactant and non-silicone based anti-foaming agent, in order not to generate Al residue even at the execution of Al wet **etching** process. The aluminum **etchant** composition comprises 40-100ppm fluorine based surfactant and 40-100ppm of non-silicone based anti-foaming agent. The surfactant may be tetra-Et ammonium-perfluoro octylsulfonate as an anionic surfactant having pH3-4 and a m.p. ranged of 170-190deg C. The surfactant serves to improve wettability of combined acids usually used in production of **semiconductor** and LCD in order not to generate Al residue after the **etching** process. The anti-foaming agent is preferably polypropylene oxide base polymer. The combined acids comprise 63.71% 0.17% of **phosphoric** acid, 8.31% 0.17% of **nitric** acid and 10.13% 0.22% of acetic acid and the balance of DI water.

Hits in fields other than the TI, ST and IT fields cannot be reviewed with the **D SCAN** format.

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COS
Fulltext

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Browsing large answer sets

- Removing duplicates
- Limiting by
 - Dates
 - CAS Roles
 - Free text
 - Index terms
 - Classification codes
- Highlighting
- Browsing formats
- Relevance ranking

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Fulltext

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Use the FOCUS command to rank answers by relevance

- How close are the search terms to one another in a record?
- How many times do the search terms appear in the same record?
- Where do search terms appear in the online record?

Search Question:

Locate references mentioning pectin as a fat replacement in ice cream.

The most relevant record is the first answer in the FOCUSed L-number

```
=> FILE CAPLUS USPATALL WPINDEX
...
=> S (FAT? or OIL?) (2A) (SUBSTITUT? OR REPLAC?) AND
    PECTIN? and ICE CREAM?
L1      426 (FAT? OR OIL?) (2A) (SUBSTITUT? OR REPLAC?) AND PECTIN? AND
        ICE CREAM?

=> FOCUS L1
PROCESSING COMPLETED FOR L1
L2      426 FOCUS L1 1-
=> D KWIC

L2      ANSWER 1 OF 426 CAPLUS COPYRIGHT 2008 ACS on STN
TI      New applications and possibilities of pectin as fat replacer
AB      A review with 5 refs. on fat replacers (fat substitutes and fat
        mimetics), a pectin-based product (Splendid manufactured by Sansho Co.)
        as a fat replacer, and applications to low-fat ice cream, mayonnaise,
        cheese, sausage, and baked goods.
ST      review pectin fat replacer
IT      Food
        (low-fat; pectin as fat replacer for)
IT      Fat substitutes
```

The KWIC display format shows
your highlighted hit terms plus 20
additional words to either side.

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Summary

- Refine answer sets by removing duplicates and limiting by dates, CAS Roles, free text, index terms or classification codes
- Browse large answer sets more effectively by setting highlighting off and on, using the **HIT** and **KWIC** display formats followed by offline browsing, and relevance ranking with **FOCUS**

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