

# STN<sup>®</sup>



## Getting the Most Out of the IFIAL Database on STN



## What is IFIALL?

- A new database on STN, since July 2013
- Includes chemical indexing content that was previously for IFICDB subscribers only
- Available to all STN customers without restriction
- Replaces IFIPAT, IFIUDB and IFICDB
- IFIREF and IFICLS remain available



## Why search IFIALL?

- Early and complete US patent coverage from 1950 - present
- Current - updated twice weekly
- Assignee standardization and probable patent assignees
- Chemical indexing
- US and IPC patent classifications
- Examiner citations for both patent (REP) and non-patent literature (REN)

## What do the IFI databases on STN offer?

Database Name	Coverage	Content	Use for
IFIALL	1950 – present: Chemical patents 1963 – present: General, mechanical and electrical patents December 1976 - present: Design and Plant patents 2001-present: - Patent applications	<ul style="list-style-type: none"><li>• Bibliographic data</li><li>• Abstracts</li><li>• Claims</li><li>• Chemical Indexing, including Fragments</li></ul>	<ul style="list-style-type: none"><li>• Text searches</li><li>• Patent classification searches (IPC and USNCL; CPC coming in 4Q2013)</li><li>• Uniterm chemical searches</li><li>• Chemical searches with fragments including rings</li></ul>
IFICLS	1980 to date	Post-issue actions, such as: <ul style="list-style-type: none"><li>• Reassignments</li><li>• Reexaminations</li><li>• Reissues</li></ul>	<ul style="list-style-type: none"><li>• Current patent status</li><li>• Current legal status</li><li>• Expirations</li><li>• Extensions</li><li>• Adverse decisions</li><li>• Disclaimers and dedications</li></ul>
IFIREF	Support file for IFIALL	<ul style="list-style-type: none"><li>• IFI Chemical Index terms</li><li>• USPTO Class Manual</li></ul>	Information on IFI's General Terms and Compound Vocabulary Identifying search terms, including rings and fragments for substructure searching



## What value-added features does IFIALL provide?

- Standardized and probable patent assignee information
  - Probable Patent Assignee (PPA) is assigned when no assignee is provided
  - Search both the PA and PPA fields for comprehensive patent assignee information
  - Displaying the PA field also provides:
    - the patent assignee in non-standardized format (PAF) – may include additional geographical information
    - the PPA, when available

=> D L1 1 PA

```
L1 ANSWER 1 OF 5808 IFIALL COPYRIGHT 2013 IFI on STN
    PAF PFIZER INC., New York, NY, US
    PA PFIZER INC (65376)
```

The IFIALL backfile thru January 2011 provides an abundance of value-added features

- Patent title enhancement for better indication of the patent's content

NEW COMPOSITIONS; **CATALYTIC SMECTITES BY ROASTING A CLUSTER COMPOUND AND REACTION PRODUCT OF A DI- AND TRIVALENT METAL SALT**

IFI title enhancements shown in bold for the original title "New Compositions."

- Value-added chemical indexing

## Uniterm indexing in IFIALL

- Uniterm indexing was based on the complete patent document and consisted of
  - **General terms**, e.g., CONDENSATION POLYMERS/CT/10201
  - **Compound terms**, e.g., SODIUM SULFIDE, NA2S 50598-70 90
  - **Fragment terms**, e.g., CARBOCYCLIC RING (P) 30035
  - **CAS Registry Number<sup>®</sup>** synonyms for some chemical compounds

## Value-added chemical indexing features in IFIALL

- Expand in the CT field to find Uniterms of interest, and their Uniterm codes

```
=> E ELECTRO/CT
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• • •
```

E3	IFIALL	0	-->	ELECTRO/CT
E4	IFIALL	146	1	ELECTROACOUSTICS/CT
E5	IFIALL	608	1	ELECTROCATALYSTS/CT
E6	IFIALL	453	1	ELECTROCHEMICAL MACHINING/CT
E7	IFIALL	260	1	ELECTROCHEMICAL POLYMERIZATION/CT

```
• • •
```

```
=> E E5+ALL/CT
```

E13	608	-->	ELECTROCATALYSTS/CT
			UN 08887

Search Uniterm codes in the /UN field.



## IFIALL General Term Vocabulary indexed general concepts from US patents

- Properties of materials – e.g., impact strength and opacity
- Uses of the invention – e.g., emulsifiers, insecticides
- Chemical reactions – e.g., oxidation, copolymerization
- Physical processes – e.g., melting, hammer milling
- Polymer names – e.g., polystyrene, polyethylene terephthalate
- Biological concepts – e.g., leukemia, radioimmunoassay
- Apparatus and machinery – e.g., photoelectric cells, nuclear reactors
- Natural materials – e.g., cellulose, kaolin

# Use IFIREF to get complete information on General Terms for IFIALL search strategies

=> S NANOFILTRATION/CT

NANOFILTRATION 08449

L1 2 NANOFILTRATION/CT

=> D L1 1 ALL

L1 ANSWER 1 OF 2 IFIREF COPYRIGHT 2013 IFI on STN

AN 200133 IFIREF

UN 08449

CT NANOFILTRATION

NOTE New Term 1990

A Separation Process That Uses More Open  
Membranes and Operates At Lower Pressures  
Than Reverse Osmosis

Also Covered by Collection Term:

PURIFICATION OR SEPARATION/CT/

DBN UNITERM

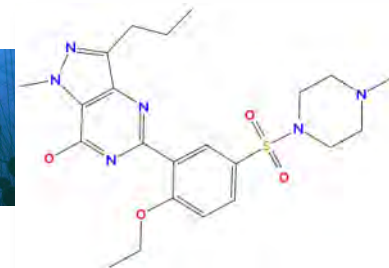
UF LOW PRESSURE REVERSE OSMOSIS

UN - Uniterm code

Notes include date of introduction,  
definition, and Broader Terms.

The Compound Term vocabulary contains >45K chemical substances

- Entries include
  - Compound name and synonyms
  - Uniterm number
  - Molecular formula
  - IFI structural fragmentation
  - Date of entry

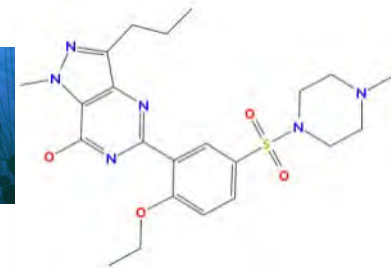


## IFIREF Compound Term entry helps you design the optimal IFIALL search

AN 102106 IFIREF  
 UN 82400  
 MF C22H30N6O4S  
 CT SILDENAFIL  
 NOTE New Term 2002 (Approx.)  
 DBN COMPREHENSIVE  
 CN DIHYDRO-1-METHYL-7-OXO-3-PROPYL-  
 ETHOXYPHENYL/SULFONYL/-4-METHYL-  
 PIPERAZINE, 1-//3-/4,7-DIHYDRO-1-METHYL-7-OXO-3-PROPYL-1H-PYRAZOLO/4,3-  
 D/PYRIMIDIN-5-YL/-4-ETHOXYPHENYL/SULFONYL/-4-METHYL-  
 FG 30035 \* CARBOCYCLIC RING (P); 30035 CARBOCYCLIC RING (P); 30036  
 CARBOCYCLIC RING (M); 30042 CARBON, 9-26 (M); 30063 F AMINE FG (M); 30574  
 F CN2 C=N-N (M); 30575 F CN2 C=N-N (P-1); 31209 F C2N2O O=C-N-C=N (P-1);  
 33000 F N TERTIARY AMINE FG, NR  
 (P-1); 33079 F

Sildenafil can be searched in the CT field of IFIALL for comprehensive results from the term's introduction in 2002, thru January 2011. Include **SILDENAFIL/BI** in your search to get the most recent patents.

Fragment codes (FG) can be used for substructure searches indexed to US patents from 1950 to January 2011.



## The Fragment Term vocabulary is used to index the structural characteristics of chemical compounds

- The IFI fragmentation system applies to Markush structures, generic classes of compounds, and specific structures not in the IFI Compound vocabulary
- Structural characteristics identified include:
  - Functional groups – e.g., amines, esters, ketones
  - Atoms present in the structure – e.g., halogens, metals
  - Ring structures – e.g., pyrazines, quinolines

# EXPAND in the /CT field in IFIALL or IFIREF to find rings for your searching

=> E R II C5N/CT ( R = ring; II = Roman numeral for # of rings in system; C5N = first ring's formula)

E#	FREQUENCY	AT	TERM
--	-----	--	----
E1	2	1	R II C5BNO2.C6BNO2 GEN
E2	2	1	R II C5BO3.C5BO3 GENE
E3	0	-->	R II C5N/CT
E4	2	1	R II C5N.C10 GENERIC
E5	2	1	R II C5N.C10N GENERIC RING/CT
• • •			
E99	2	1	R II C5N.C4O2SI GENERIC RING/CT
E100	2	1	R II C5N.C5N 1,5-NAPHTHYRIDINE RING/CT
E101	2	1	R II C5N.C5N 1,7-NAPHTHYRIDINE RING/CT
E102	2	1	R II C5N.C5N 1,8-NAPHTHYRIDINE RING/CT
E103	2	1	R II C5N.C5N 1-AZABICYCLO(3.3.1)NONANE RING/CT
E104	2	1	R II C5N.C5N 9-2

EXPAND is sorted character by character. C1 (in C10) comes before C2, C3, C4, etc.

Specifically defined rings and ring systems are also provided.

## EXPAND in the /CT field of IFIALL or IFIREF to find fragments for your searching

=> E F C2N/CT (F = fragment; C2N = non-Hydrogen atoms in the fragment)

=> E#	FREQUENCY	AT	TERM
-----	-----	---	-----
E1	25447	1	F C2 TRIPLE BOND FG, C*C (P-2+)/CT
E2	4	1	F C2BO6 GENERIC FG/CT
E3	0	-->	F C2N/CT
E4	53	1	F C2N C=C=N/CT
E5	31	1	F C2N GENERIC FG/CT
E6	28	1	F C2N10 GENERIC FG/CT
• • •			

- For the most precise results, search fragments and/or rings together with (L) proximity
- Use the NOT operator to exclude specific fragments and/or rings from your answer sets

## IFIALL provides CAS Registry Numbers<sup>®</sup> as synonyms to terms in the IFI Compound Vocabulary

- Unique to STN
- SEARCH Registry Numbers in the /URN field
- CAS RNs are displayed in the Compound Uniterms portion of the IFIALL record when displayed in IIND format

=> D IIND

### Compound Uniterms:

SUBSTANCE NAME	UNITERM CODE	CAS REGISTRY NUMBER
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HYDROCHLORIC ACID, HCL	50344 - 10 20	7647-01-0
PHOSGENE	50523 - 10 20	75-44-5
SODIUM HYDROXIDE, NAOH	50594 - 10	1310-73-2
TRIMETHYLAMINE	50740 - 10	75-50-3
CHLOROFORMIC ACID, TRICHLOROMETHYL ESTER	55952 - 10 20	503-38-8
TRIPHOSGENE	56562 - 10 20	



## Summary

- IFIALL is a new patent database on STN covering US patents from 1950 to the present
- Key value-added features within IFIALL are
  - Standardized and probable patent assignee names (all years)
  - Chemical indexing (1950 – early 2011)
- User aids include updated HELP messages and the IFIALL Database Summary Sheet