



(<http://www.cas.org/SCIFINDER/SCHOLAR/index.html>)

SciFinder Scholar is a desktop research tool that provides campus-wide access to the worlds largest and most comprehensive databases of chemistry, biotechnology, engineering, life sciences and related sciences from CAS, with an ease of use never before seen in universities.

With SciFinder Scholar as a one single source, you can explore scientific information in several unique way-

- Search Scientific references from journals as well as patents
- Ask queries by drawing molecular structures, sequenceID, CAS numbers, molecular formulae and locate all references – many of which you can not get by keyword based searches.
- Draw reactions, view schematic synthesis schemes with conditions
- Access to over 2 billion chemical/physical property data for substances
- Important scientific discoveries from mid-1800s to present
- databases intellectually created by 600 scientists with various fields of specialization

SciFinder Scholar Content at a Glance

- 27 million document references from Chemical Abstracts
- 16 million document references from Medline
- 33 million organic/inorganic substances
- 60 million biosequences
- 13 million single/multi step reactions
- 1 billion predicted property values
- 1 million experimental property values
- More than 14 million substances with commercial availability details
- More than 245,000 regulated chemical inventories
- Links to electronic full-text journals and patents

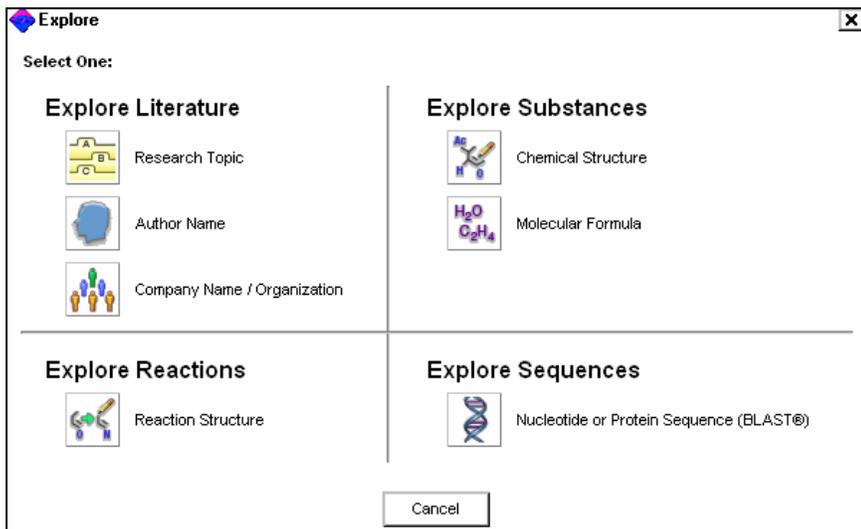
SciFinder Scholar Subject coverage

SciFinder Scholar provides quick and easy access to scientific literature from many scientific disciplines including :

- Chemistry
- Chemical Engineering
- Biochemistry
- Life Sciences
- Biotechnology
- Physics
- Medical sciences
- Pharmaceutical sciences
- Environmental Sciences
- Agricultural sciences
- Food Sciences
- Material Sciences
- Geology
- Petroleum
- & Many more

SciFinder Scholar Search Options and Techniques

Various Options of Searching – You can search SciFinder Scholar by not only Key Words, Company Name, Author Name etc but also, by drawing Chemical Structures, Reactions/processes and many more.



I) Key Word/Concept searching

Use conversational language to retrieve papers and patents on any research topic from more than – 27 million references in CAS database + 16 million abstracts in the MEDLINE database

For example - Locate information on Bioplastics.

View Results in Chronological order -

Once, you have located answers, you can refine or limit the retrieved answers in different ways such as -

Analyze or Refine

Select One:

- Analyze: Get histograms of the year, corporate source, or journal.
- Refine: Go to refine options without analyzing the results.
- Categorize: Organize references by subject category.

Cancel

Refine References

Refine By:

- Research Topic: Limit to literature relevant to a topic of interest.
- Company Name: Limit to literature from a specific organization.
- Author Name: Limit to literature written by a specific author.
- Publication Year: Limit to literature from a year or range.
- Document Type: Limit to only Patents, Journals, or other types.
- Language: Limit to literature written in specific languages.
- Database: Limit to literature from specific databases.

Locating publications from 2000 onwards -

Refine by Publication Year

Specify the year(s) in which you are interested:

2000-

Examples:

2001	a single year
1907-1963	a range of years,
1992-	beginning with a year
-1992	up to and including

OK

SciFinder Scholar

File Edit View Task Tools Help

New Task Back Forward Print Save As Full Text Prefs Database Combine History Internet Help Exit

- Rasal, Rahul M.; Hirt, Douglas E. **Micropatterning poly(acrylamide) on PLA films using photolithography.** Annual Technical Conference - Society of Plastics Engineers (2007), 65th 1670-1674. CODEN: ACPED4 ISSN:0272-5223. AN 2007:1048460 CAPLUS
- Bhardwaj, Rahul; Mohanty, Amar K. **New materials from polylactide bioplastics.** Annual Technical Conference - Society of Plastics Engineers (2007), 65th 1551-1556. CODEN: ACPED4 ISSN:0272-5223. AN 2007:1048418 CAPLUS
- Koster, Rolf; van Dijken, Bregtje; van Erve, Lobke. **Designing injection molded bioplastics products.** Annual Technical Conference - Society of Plastics Engineers (2007), 65th 859-863. CODEN: ACPED4 ISSN:0272-5223. AN 2007:1048211 CAPLUS
- Temudo, Margarida F.; Kleerebezem, Robbert; van Loosdrecht, Mark. **Influence of the pH on (open) mixed culture fermentation of glucose: a chemostat study.** Biotechnology and Bioengineering (2007), 98(1), 69-79. CODEN: BIBIAU ISSN:0006-3592. AN 2007:930031 CAPLUS
- Gastaldi, E.; Angeliier, H.; Menut, P.; Kunanopparat, T.; Gontard, N.; Guilbert, S. **Wheat gluten-based biomaterials: composites and nanocomposites.** Gluten Proteins 2006, [based on Presentations Made at the International Gluten Workshop], 9th, San Francisco, CA, United States, Sept. 14-16, 2006 (2007), Meeting Date 2006, 227-231. CODEN: 69JRG3 CAN 147:284931 AN 2007:923873 CAPLUS
- Sobkowicz, Margaret J.; Dorgan, John R.; Gneshin, Keith W. **Renewable plastic composites with carbon nanospheres derived from cellulose.** Abstracts of Papers, 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007 (2007), POLY-478. CODEN: 69JNR2 AN 2007:886868 CAPLUS
- Larock, Richard C. **Novel bioplastics and composites from natural oils.** Abstracts of Papers, 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007 (2007), POLY-399. CODEN: 69JNR2 AN 2007:886789 CAPLUS

Remove Duplicates Analyze/Refine Get Related... Back

References 1-7 of 286

You can also view details of retrieved references -

Detail of Reference 14

File Edit Help

Bibliographic Information

Development of bioplastic for automobile parts. Yoshida, Kunihiko; Matsuda, Yushi; Tochioka, Takahiro. Tech. Res. Cent., Mazda Motor Corporation, Japan. Matsuda Giho (2007), 25 157-160. Publisher: Matsuda K.K., CODEN: MAGIEM ISSN: 0288-0601. Journal; General Review written in Japanese. CAN 147:212821 AN 2007:741105 CAPLUS

Abstract

A review. Bioplastics have a great potential as future plastic materials for automobile because of the reduced amts. of fossil fuel consumption through prodn. process and carbon neutral about CO2 emission. Current bioplastics have a poor impact strength, a poor heat resistance for automobile and long producing time of injection molding due to the low crystn. speed. We tried to improve mech. and thermal properties and a moldability of current bioplastics by compounding a newly-developed nucleating agent for crystn. and a compatibilizer. As a result, we have developed an improved exterior surface quality, high-strength, heat-resistant, and injection moldable bioplastic, which is able to use for automotive interior parts for the first time in the industry. This research was the result of an industry-government-academia joint research project in Hiroshima Prefecture. This new bioplastic is made of mainly corn-based polyactic acid. In addn., because part of the nucleating agent for crystn. and compatibilizer are also made of plant-derived materials, developed bioplastic has high plant-derived content (88%).

Indexing -- Section 38-0 (Plastics Fabrication and Uses)

Biodegradable materials
(development of bioplastic from corn-based polyactic acid for automobile parts)

Molded plastics, uses
Polyesters, uses
Role: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

Use "Categorize" feature to navigate large answer set easily. It analyzes the index terms & groups them into subject categories.

Analyze or Refine

Select One:

- Analyze
Get histograms of the year, corporate sources, authors, etc.
- Refine
Go to refine options without analyzing the answer set.
- Categorize**
Organize references by subject category and substance.

Cancel

Categorize

File Edit Task Tools Help

Select categories of interest:	Reference Count	Select terms of interest:	Reference Count
<input checked="" type="radio"/> Polymer chemistry		<input type="checkbox"/> Polyesters	89
<input checked="" type="radio"/> Polymers	237	<input type="checkbox"/> Polymers	78
<input type="radio"/> Applications & phenomena	82	<input type="checkbox"/> Poly(3-hydroxybutyrate)	32
<input type="radio"/> Miscellaneous substances	68	<input type="checkbox"/> Biopolymers	23
<input type="radio"/> Processes & apparatus	40	<input type="checkbox"/> Starch	21
<input type="radio"/> Modifiers & additives	31	<input type="checkbox"/> Poly[oxy(1-methyl-2-oxo-1,2-ethanediy)]	20
Technology		<input type="checkbox"/> Poly(lactic acid)	19
<input type="radio"/> Materials & products	177	<input type="checkbox"/> Polyamides	15
<input type="radio"/> Metallurgy	116	<input type="checkbox"/> Biomer P226	13
<input type="radio"/> Processes & apparatus	95	<input type="checkbox"/> Polysiloxanes	13
<input type="radio"/> Substances in technology	92	<input type="checkbox"/> 3-Hydroxybutyrate-3-hydroxyvalerate copolymer	11
<input type="radio"/> Ceramics	15	<input type="checkbox"/> Polytetrafluoroethylene	11
<input type="radio"/> Construction	13	<input type="checkbox"/> Polymer blends	10
<input type="radio"/> Formed, removed, & other substances	9	<input type="checkbox"/> Bioplastic	8

No terms selected

Get References Review Selected Terms Back

Histogram Entries 1-14 of 189

II) Search by particular Author/Inventor's name

Explore by Author Name

Enter the author's name.

Last name (required):

First name or initial:

Middle name or initial:

Look for alternative spellings of the last name.

OK Cancel

III) Locate published papers and patents of a Company / Organization

Explore by Company Name

Please enter the name of the company or organization.

Examples:
 Minnesota Mining and Manufacturing
 3M
 Du Pont

OK Cancel

III) You can locate specific publications by providing bibliographic details –

Locate

Select One:

Locate Literature

 Bibliographic Information
Examples: journal name, title

 Document Identifier
Examples: patent number, CAS number

Locate by Bibliographic Information

Specify journal or patent reference and then enter as much information as you know. [More >](#)

Journal Reference

Author last name:

First initial: Middle initial:

Journal name:

Publication year(s):

Article title word(s):

Patent Reference

Patent number:

IV) Locating specific Substances - you can locate substance by CAS Registry number, common chemical/trade names. Further you can view details like - structure diagram, experimental and calculated properties,

Locate Substances

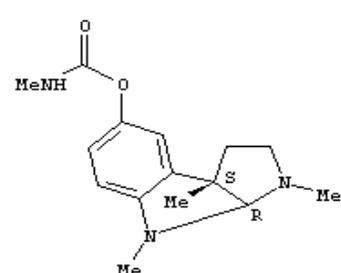
 Substance Identifier
Examples: chemical name, CAS Registry Number

SciFinder Scholar

File Edit View Task Tools Help

NewTask Back Forward Print Save As Full Text Prefs Database

57-47-6



~4609 References
REGISTRY

Detail of Substance 1

File Edit Help

Formula: C15 H21 N3 O2

CA Index Name: Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-5-(N-methylcarbamate), (3aS,8aR)-

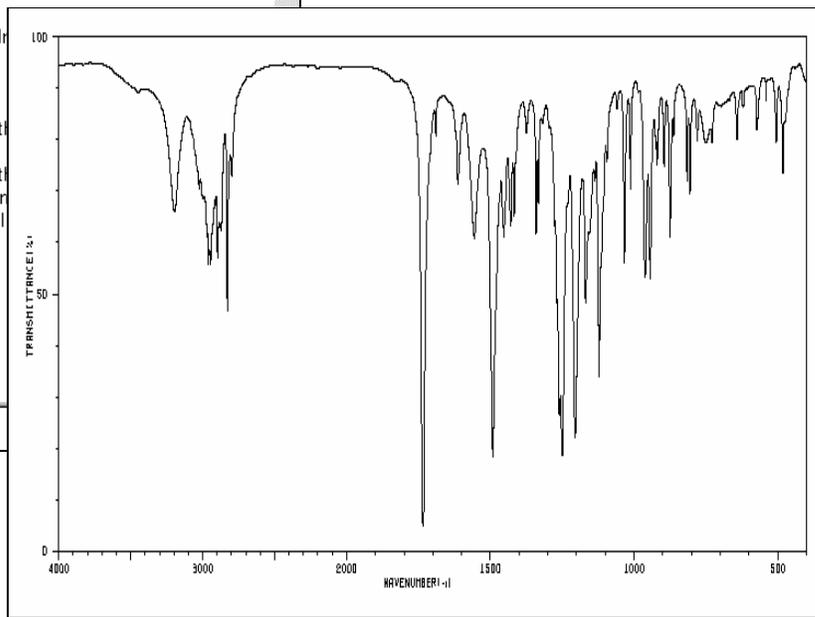
Other Names: Physostigmine (8CI); Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methyl (3aS,8aR)- (9CI); Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methyl (3aS-cis)-; (-)-Eserine; (-)-Physostigmine; Cogn MCV 4484; NIH 10421; NSC 30782; Physostol

[Experimental Properties](#)
[Predicted Properties](#)

-- Resources --

References: ~4609

Close



Further, you can locate associated answers –

Get References

Retrieve references for:

All substances Selected substances

For each substance, retrieve:

All references References associated with:

Adverse Effect, including Toxicity Occurrence
 Analytical Study Preparation
 Biological Study Process
 Combinatorial Study Properties
 Crystal Structure Reactant or Reagent
 Formation, nonpreparative Spectral Properties
 Miscellaneous Uses

For each **sequence**, retrieve:

Additional related references, e.g., activity studies, disease studies.

OK Back

SciFinder Scholar

File Edit View Task Tools Help

New Task Back Forward Print Save As Full Text Prefs Database Combine History Internet Help Exit

Gargiulo, Paul M.; Lane, Roger Michael; Wall, Bettina; Platt, Beatrix; Theobald, Frank. **Transdermal therapeutic systems providing specific plasma concentrations of active ingredients, such as cholinesterase inhibitors.** Can. Pat. Appl. (2007), 37pp. CODEN: CPXXEB CA 2563110 A1 20070601 CAN 147:39157 AN 2007:609363 CAPLUS

Beri, Veena; Gupta, Rajendra. **Acetylcholinesterase inhibitors neostigmine and physostigmine inhibit induction of alpha-amylase activity during seed germination in barley, Hordeum vulgare var. Jyoti.** Life Sciences (2007), 80(24-25), 2386-2388. CODEN: LIFSAK ISSN:0024-3205. AN 2007:603275 CAPLUS

Zvosec, Deborah L.; Smith, Stephen W.; Litonjua, Regina; Westfal, Richard E. J. **Physostigmine for gamma-hydroxybutyrate coma: Inefficacy, adverse events, and review.** Clinical Toxicology (2007), 45(3), 261-265. CODEN: CTPPA5 ISSN:1556-3650. CAN 147:205618 AN 2007:569934 CAPLUS

Lahiri, Debomoy K.; Alley, George M.; Tweedie, David; Chen, Derna; Greig, Nigel H. **Differential effects of two hexahydropyrroloindole carbamate-based anticholinesterase drugs on the amyloid beta protein pathway involved in Alzheimer disease.** NeuroMolecular Medicine (2007), 9(2), 157-168. CODEN: NMEEAN ISSN:1535-1084. CAN 146:493365 AN 2007:566120 CAPLUS

Gervais, Francine; Bellini, Francesco. **Therapeutic formulations for the treatment of beta-amyloid-related diseases.** PCT Int. Appl. (2007), 254pp., which which which which which which. CODEN: PIXXD2 WO 2007049098 A2 20070503 CAN 146:455274 AN 2007:486266 CAPLUS

Pires, W.; Wanner, S. P.; La Guardia, R. B.; Rodrigues, L. O. C.; Silveira, S. A.; Coimbra, C. C.; Marubayashi, U.; Lima, N. R. V. **Intracerebroventricular physostigmine enhances blood pressure and heat loss in running rats.** Journal of Physiology and Pharmacology (2007), 58(1), 3-17. CODEN: JPHPEI ISSN:0867-5910. CAN 147:64277 AN 2007:465433 CAPLUS

Rault, Magali; Mazzia, Christophe; Canowicz, Yvan. **Tissue distribution and characterization of cholinesterase**

Remove Duplicates Analyze/Refine Get Related... Back

References 6-12 of 8248

V) Structure Searching in SciFinder Scholar – You can draw molecular Structure in the structure drawing screen and search the structure. There are three types of structure searching –

- Exact Structure Search** – Searches for Salts, stereoisomers, mixtures of the query structure.
- Substructure Search** – Searches for all reported derivatives of the query structure.
- Similarity Search** - Locates similar compounds.

The screenshot shows the SciFinder Scholar interface for structure drawing and searching. The main window displays a chemical structure of a complex bicyclic amide with methyl groups. A 'Get Substances' dialog box is open, showing search options: 'Exact search', 'Substructure search' (selected), and 'Similarity search'. Below the dialog, there are buttons for 'Preview' and 'Get Substances', and a molecular formula 'C15 H21 N3 O2' is displayed at the bottom.

Exact Search Results –

Three panels showing exact search results for a query structure. Each panel displays a chemical structure, a molecular formula, and a reference to a registry. The first panel shows a bicyclic amide with a methyl group and a molecular formula of C15H21N3O2. The second panel shows the same structure with a molecular formula of C15H21N3O2. The third panel shows the same structure with a molecular formula of C15H21N3O2.

Substructure Search Results -

The screenshot displays three chemical substructures in a grid format. Each substructure is accompanied by its ID and a reference count:

- 137328-48-4**: ~1 Reference REGISTRY
- 137253-65-7**: ~1 Reference REGISTRY
- 137253-64-6**: ~1 Reference REGISTRY

The interface includes a menu bar (File, Edit, View, Task, Tools, Help) and a toolbar with icons for New Task, Back, Forward, Print, Save As, Full Text, Prefs, Database, Combine, History, Internet, Help, and Exit.

Locate Associated References -

The screenshot shows a list of references in the SciFinder Scholar interface. The list includes the following entries:

- Teicher, Martin; Andersen, Susan L.; Samson, Jacqueline A. **Methods for the treatment of ADHD and related disorders.** PCT Int. Appl. (2007), 22pp. CODEN: PIXXD2 WO 2007100777 A2 20070907 AN 2007:999484 CAPLUS
- Mark, William Antonio; Hall, Lloyd Thomas. **Water soluble protein hydrolyzate excipients for effective drug delivery formulations.** U.S. Pat. Appl. Publ. (2007), 18pp. CODEN: USXXCO US 2007190130 A1 20070816 CAN 147:263388 AN 2007:907658 CAPLUS
- Rosenkranz, Vera; Wink, Michael. **Induction of apoptosis by alkaloids, non-protein amino acids, and cardiac glycosides in human promyelotic HL-60 cells.** Zeitschrift fuer Naturforschung, C: Journal of Biosciences (2007), 62(5/6), 458-466. CODEN: ZNCBDA ISSN:0939-5075. AN 2007:767492 CAPLUS
- Yu, Ruey J.; Van Scott, Eugene J. **Pharmaceutical compositions containing N-(phosphonoalkyl)-amino acids.** U.S. Pat. Appl. Publ. (2007), 23pp. CODEN: USXXCO US 2007161543 A1 20070712 CAN 147:173626 AN 2007:763639 CAPLUS
- Li, Xinwang; Yu, Ping; Zhang, Bin; Meng, Yingfang. **Effect of physostigmine on morphine-induced spatial recall impairment in cats.** Zhongguo Linchuang Kangfu (2006), 10(2), 82-84. CODEN: ZLKHAH ISSN:1671-5926. CAN 147:134161 AN 2007:680809 CAPLUS
- Gargiulo, Paul M.; Lane, Roger Michael; Wall, Bettina; Platt, Beatrix; Theobald, Frank. **Transdermal therapeutic systems providing specific plasma concentrations of active ingredients, such as cholinesterase inhibitors.** Can. Pat. Appl. (2007), 37pp. CODEN: CPXXEB CA 2563110 A1 20070601 CAN 147:39157 AN 2007:609363 CAPLUS
- Beri, Veena; Gupta, Rajendra. **Acetylcholinesterase inhibitors neostigmine and physostigmine inhibit induction of alpha-amylase activity during seed germination in barley, Hordeum vulgare var. Jyoti.** Life Sciences (2007), 80(24-25), 2386-2388. CODEN: LIFSAY ISSN:0024-3205. AN 2007:603275 CAPLUS

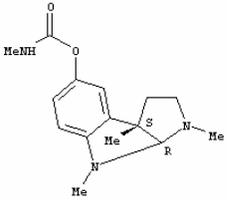
At the bottom of the list, there are buttons for "Remove Duplicates", "Analyze/Refine", "Get Related...", and "Back". The status bar at the bottom indicates "References 1-7 of 9103".

Detail of Reference 6

File Edit Help

Role: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(controlled-release transdermal therapeutic system comprising polymeric matrix and silicone adhesive)

[57-47-6](#), Physostigmine
Absolute stereochemistry. Rotation (-).

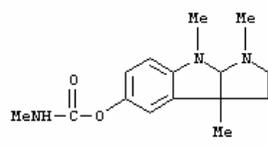
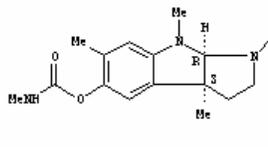
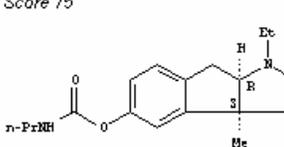


[321-64-2](#), Tacrine
[357-70-0](#), Galantamine
[1406-05-9](#), Penicillin
[102518-79-6](#), Huperzine A
[120014-06-4](#), Donepezil
[129101-54-8](#), Rivastigmine hydrogen tartrate

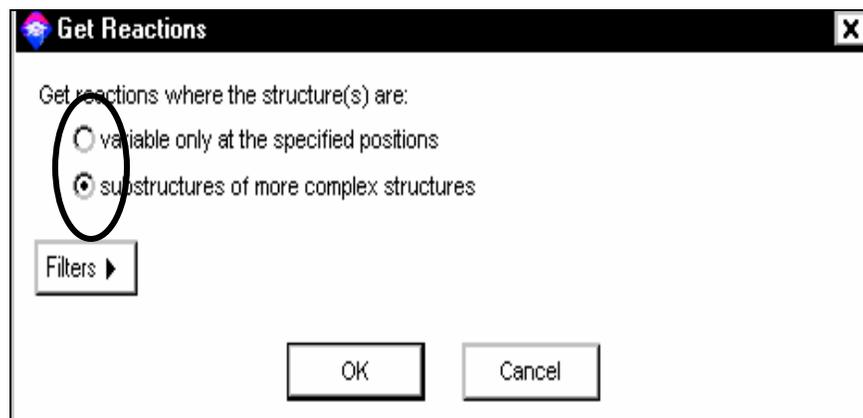
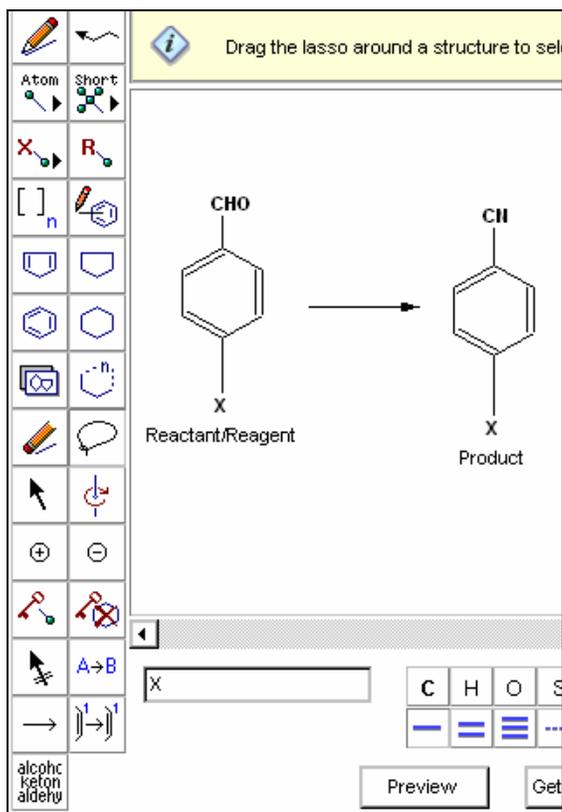
Role: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(controlled-release transdermal therapeutic system comprising polymeric matrix and silicone adhesive)

Similarity Search Results -

As the score decreases, you can see more changes in original molecule.

<p>152159-14-3 Score ≥ 99</p>  <p>~1 Reference REGISTRY</p>	<p>382637-42-5 Score 94</p>  <p>~1 Reference REGISTRY</p>	<p>162601-99-2 Score 75</p>  <p>~2 References REGISTRY</p>
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VI) Reaction Searching – You can search for Reactions/Processes by drawing the structure -



View Reaction details -

SciFinder Scholar

File Edit View Task Tools Help

NewTask Back Forward Print Save As Full Text Prefs Database Combine History Internet Help Exit

Clc1ccc(C=O)cc1
 $\xrightarrow{\text{R: Ac}_2\text{O, R: H}_2\text{NOH-HCl, 210 } \ominus}$
Clc1ccc(C#N)cc1

 96%

NOTE: green chem., microwave irradsn., no solvent,
 Reactants: 1, Reagents: 2,
 Steps: 1, Stages: 1

[Bulletin of the Korean Chemical Society, 28\(1\), 29-30, 2007](#)
 CASREACT

Clc1ccc(C=O)cc1
 $\xrightarrow[1.2 \text{ R: Bromosuccinimide, 25 min, 0 } ^\circ\text{C}]{1.1 \text{ R: NH}_4\text{OH, S: H}_2\text{O, 2-3 min, rt}}$
Clc1ccc(C#N)cc1

 93%

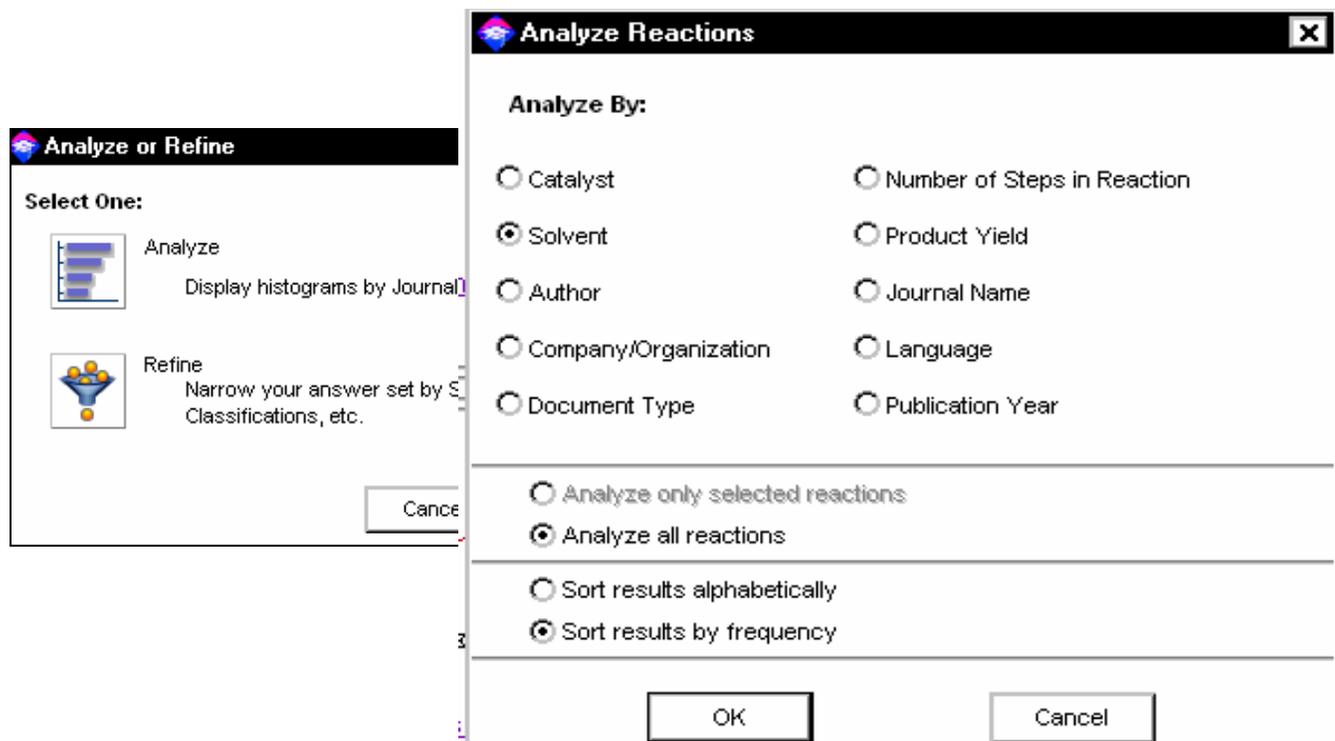
NOTE: Reactants: 1, Reagents: 2, Solvents: 1,
 Steps: 1, Stages: 2

[Synthetic Communications, 36\(10\), 1347-1352, 2006](#)
 CASREACT

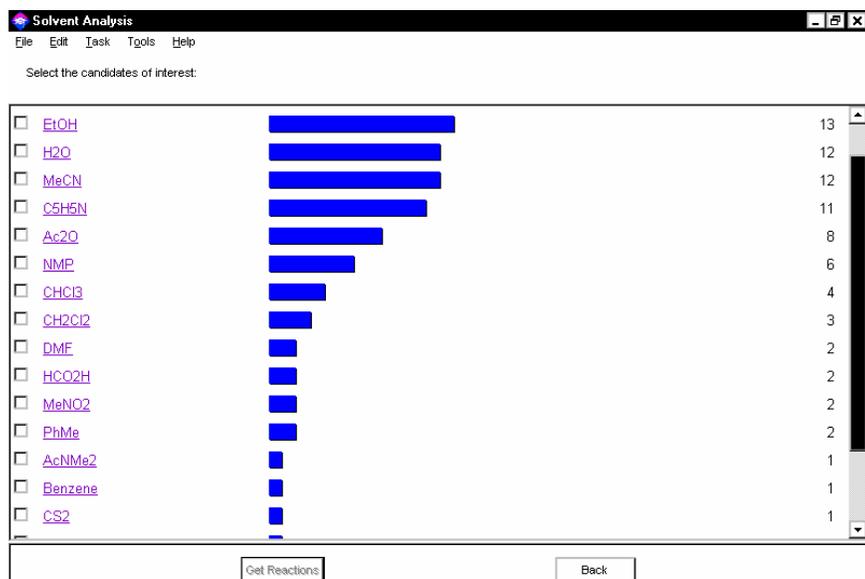
Get References Analyze/Refine Back

Reactions 15-16 of 76

You can further use features like Analyze/Refine to locate specific reactions and their references. -



Analysis result of Solvents used in the reactions -



Further, locate related references on the above reactions -

SciFinder Scholar

File Edit View Task Tools Help

NewTask Back Forward Print Save As Full Text Pref: Database Combine History Internet Help Exit

Yamaguchi, Kazuya; Fujiwara, Hiroshi; Ogasawara, Yoshiyuki; Kotani, Miyuki; Mizuno, Noritaka. **A tungsten-tin mixed hydroxide as an efficient heterogeneous catalyst for dehydration of aldoximes to nitriles.** *Angewandte Chemie, International Edition* (2007), 46(21), 3922-3925. CODEN: ACIEF5 ISSN:1433-7851. CAN 147:211310 AN 2007:614634 CAPLUS

Patrick, Donald A.; Bakunov, Stanislav A.; Bakunova, Svetlana M.; Kumar, E. V. K. Suresh; Lombardy, Richard J.; Jones, Susan Kilgore; Bridges, Arlene S.; Zhimov, Oksana; Hall, James Edwin; Wenzler, Tanja; Brun, Reto; Tidwell, Richard R. **Synthesis and in Vitro Antiprotozoal Activities of Dicationic 3,5-Diphenylisoxazoles.** *Journal of Medicinal Chemistry* (2007), 50(10), 2468-2485. CODEN: JMCMAR ISSN:0022-2623. CAN 147:72679 AN 2007:426499 CAPLUS

Movassagh, Barahman; Fazeli, Azadeh. **Direct synthesis of aromatic nitriles from aldehydes using hydroxylamine and oxalyl chloride.** *Synthetic Communications* (2007), 37(4), 623-628. CODEN: SYNCAV ISSN:0039-7911. CAN 146:316587 AN 2007:330945 CAPLUS

Lee, Jong Chan; Yoon, Jae Man; Baek, Jong Wook. **A novel and efficient synthesis of nitriles from aldehydes under solvent-free microwave irradiation conditions.** *Bulletin of the Korean Chemical Society* (2007), 28(1), 29-30. CODEN: BKCSDE ISSN:0253-2964. CAN 147:72256 AN 2007:268570 CAPLUS

Li, Li-Jun; Song, Ying-Xia; Gao, Yan-Su; Li, Yan-Feng; Zhang, Jian-Feng. **Solvent-free synthesis of nitriles from aldehydes catalyzed by KF/Al₂O₃, montmorillonite KSF and K10.** *E-Journal of Chemistry* (2006), 3(12), 164-168. CODEN: ECJHAO CAN 146:500694 AN 2006:1054612 CAPLUS

Sloboda-Rozner, Dorit; Neumann, Ronny. **Aqueous biphasic catalysis with polyoxometalates. Oximation of ketones and aldehydes with aqueous ammonia and hydrogen peroxide.** *Green Chemistry* (2006), 8(8), 679-681. CODEN: GRCHFJ ISSN:1463-9262. CAN 146:441128 AN 2006:758170 CAPLUS

Das, Biswajit; Ahmed, Shahadat; Yadav, Ajay Singh; Ghosh, Soma; Gujrati, Arti; Sharma, Pankaj; Rattan, Ashok.

Remove Duplicates Analyze/Refine Get Related... Back

References 1-7 of 52