TOXNET

Toxicology and Environmental Health Information

from the National Library of Medicine (NLM)

and Other Sites

Presented by

NLM's Toxicology and Environmental Health Information Program

part of the Division of Specialized Information Services

Contact:

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301-480-3537 (FAX)
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Contact: tehip@teh.nlm.nih.gov

Class Schedule

Part I	**Introduction**	9:00 - 9:15
Part II	**TOXNET Overview, HSDB & Related Files**	9:15 - 10:15
	Break	10:15 - 10:30
	Exercises (II)	10:30 - 11:00
Part III	**TOXLINE and Other Bibliographic Files**	11:00 - 11:30
	Exercises (III)	11:30 - 12:00
	Lunch	12:00 - 1:00
Part IV	**TRI**, **Specialty Files, New Initiatives**	1:00 - 1:45
	Exercises (IV)	1:45 - 2:15
Part V	**Non-NLM Resources**	2:15 - 2:45
	Break	2:45 - 3:00
Part VI	**ChemID*plus***	3:00 - 3:30
	Exercises (V, VI)	3:30 - 4:00

Class List

Part I

Introduction

Toxicology and Environmental Health Information Program (TEHIP)

Background

- Poisons recognized throughout time.
- Socrates - hemlock. Cleopatra - asp.
- Lucretia Borgia
- Harvey W. Wiley's Poison Squad – 1903
- The Jungle (1906) Upton Sinclair – lack of hygiene in the meat-packing industry
- Food and Drugs Act (1906) – prohibited adulterated or misbranded items
- Federal Food, Drug and Cosmetic Act (1938) – enhanced safety requirements for drugs
- Drug Amendments (1962) – effectiveness required for drugs
- Silent Spring (1962) Rachel Carson – sparked public awareness about hazards of synthetic chemicals
- President's Science Advisory Committee (1966) – "Report on the Handling of Toxicological Information"
- TEHIP Created (1967)
- Situated within NLM's Division of Specialized Information Services

TEHIP Mission

- Provide selected core toxicology and environmental health information resources and services
- Facilitate access to national and international toxicology and environmental health information resources
- Strengthen the information infrastructure of toxicology and environmental health

So…TEHIP

- Builds and/or makes available free online Web-based databases
- Creates other Web-based resources
- Collaborates with government agencies and others
- Is active in public training and outreach

TEHIP Databases

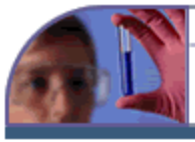
- TOXNET System of Databases (including ChemID*plus* and Specialty Databases)
- DIRLINE (directory of organizations)

Additional TEHIP Resources

- Special Topic Guides – arsenic, biological & chemical warfare agents, etc.
- Publications (including Glossary of Terms Used in Toxicology)
- ALTBIB - Alternatives Bibliography
- Toxicology Tutor

Other Relevant NLM Information

- PubMed/MEDLINE
- MedlinePlus (consumer health, includes drug information)
- Clinical Trials
- NLM Gateway – Multi-File Searching – Planned to go across all NLM Files



National Library of Medicine
Specialized Information Services

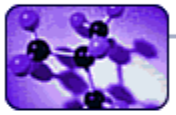
SIS

NLM

About The Specialized Information Services (SIS) Division of the National Library of Medicine (NLM) is responsible for information resources and services in toxicology, environmental health, chemistry, HIV/AIDS, and specialized topics in minority health.

Toxicology & Environmental Health

Databases and other resources related to toxicology and environmental health. Features TOXNET.



Chemical Information

Databases and other resources designed to help you search for information by chemical name or structure. Features ChemIDplus.

HIV / AIDS

Links to journal literature, clinical trials and treatment information, meeting abstracts, and other scientific and consumer-related resources.

Directory of Health Organizations

Features DIRLINE and Health Hotlines.

More to Explore

News
Outreach Activities
Staff Directory
Site Map and Search
Fact Sheets

Review of PDA Applications in Toxicology and Environmental Health NEW

International Toxicity Estimates for Risk (ITER®) NEW

NLM Environmental Health and Toxicology Listserv

Household Products Database

Asian American Health Web Site

AIDSinfo

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Toxicology and Environmental Health

TOXNET
Databases in toxicology and environmental health.

TOXLINE	HSDB	ChemID*plus*
DART	TRI	IRIS
GENE-TOX	CCRIS	ITER NEW

Internet Resources
Evaluated links to Internet resources on current issues such as chemical warfare agents and Environmental Justice.

Haz-Map
Database on hazardous chemicals and occupational diseases.

ALTBIB
References about alternatives to the use of live animals in biomedical research and testing.

Toxicology Tutor
Three self-guided tutorials on toxicology.

News and Events
Links to news items on the web site, outreach activities and a calendar of events.

Review of PDA Applications in Toxicology and Environmental Health NEW
A descriptive review of selected applications for PDAs covering toxicology and environmental health.

NLM Listserv on Environmental Health and Toxicology Information
An email list announcing updates in SIS's resources, services, and outreach in toxicology and environmental health.

Consumer Health
Tox Town
: An interactive guide to commonly encountered toxic substances.

Household Products Database
: Health & safety information on consumer household products.

MedlinePlus
: Poisoning,Toxicology and Environmental Health

DIRLINE
: Over 10,000 health organizations.

Health Hotlines
: Toll-free numbers to 300 organizations.

MEDLINE/PubMed
References from more than 4,600 biomedical journals, including the
: Toxicology Subset.

Other Resources
Chemical Information

Selected Toxicology Links
- 10th Report on Carcinogens (National Toxicology Program)
- Second National Report on Human Exposure to Environmental Chemicals (Centers for Disease Control and Prevention)

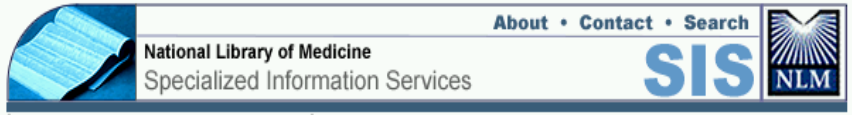
Reference Material
: Bibliographies, glossary, reports.

Database descriptions

TOXNET Manual

Locator*plus*
: The NLM catalog of books, journals, and audiovisuals.

NLM Gateway
: Search multiple databases at NLM.



Directory of Health Organizations Online

Search DIRLINE

drinking water

Search Clear

Search:
(•) all of the words ( ) any of the words ( ) exact phrase

Fields: (if none checked, all fields will be searched.)
☐ Organization name or acronym
☐ MeSH Headings/Keywords

Select records containing:
☐ Only organizations with toll-free numbers
☐ Only organizations with services for the hearing impaired

Search Browse the Index

Other NLM Resources

Health Hotlines
MEDLINE*plus*
PubMed
NLM Gateway
Locator*plus*

Support Page

Fact Sheet
Disclaimer
Suggestion Form

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Customer Service: tehip@teh.nlm.nih.gov.
Last modified on May 8, 2002.

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DIRLINE Search Results

Directory of Health Organizations | DIRLINE

Save Checked Items
Sort
Details
History
Download
Modify Search
New Search
Download
Modify Search
New Search
Download
Modify Search
New Search
Browse Index
SIS Home
MEDLINEplus Home

drinking water | Search | Clear

Items **1** through **20** of **46**

Pages: 1 2 3

Organization Names are sorted in relevancy ranked order.

Select Record	Organization Name
1	Drinking Water Program - Massachusetts Department of Environmental Protection
2	National Drinking Water Clearinghouse - National Environmental Service Center - West Virginia University (NDWC)
3	Office of Ground Water and Drinking Water - U.S. Environmental Protection Agency (OGWDW)
4	Division of Drinking Water - Virginia Department of Health (DDW)
5	Drinking Water Program - Division of Drinking Water and Environmental Management - California Department of Health Services - California State Government (DWP)
6	Water Supply and Water Resources Division - National Risk Management Research Laboratory - U.S. Environmental Protection Agency
7	Office of Water Quality - Indiana Department of Environmental Management - Indiana State Government (OWQ)
8	American Water Works Association (AWWA)
9	Office of Drinking Water Quality - Rhode Island Department of Health
10	Office of Water - U.S. Environmental Protection Agency (OW)
11	Water Environment Federation (WEF)
12	Clean Water Action (CWA)
13	WATERNET - American Water Works Association

Poisoning, Toxicology, Environmental Health Topics

- Air Pollution
- Anthrax
- Arsenic
- Asbestos
- Asbestosis see Asbestos

- Biodefense and Bioterrorism
- Biological Weapons see Biodefense and Bioterrorism
- Bioterrorism see Biodefense and Bioterrorism
- Campylobacter see Food Contamination and Poisoning
- Carbon Monoxide Poisoning

- Cell Phones see Electromagnetic Fields
- Chemical Weapons
- Cleaning Products see Household Poisons
- Drinking Water
- EMF see Electromagnetic Fields

- Electromagnetic Fields
- Environmental Health
- Environmental Tobacco Smoke see Secondhand Smoke
- Food Contamination and Poisoning
- Food Poisoning see Food Contamination and Poisoning

- Food Safety
- Fungicides see Pesticides
- Germ Warfare see Biodefense and Bioterrorism
- Hazardous Waste see Environmental Health
- Herbicides see Pesticides

☐ **Include trials that are no longer recruiting patients.** Search-Within-Results | Query Details | Map of locations

123 studies were found. Here are studies 1 to 50. Next 50

1. ☐ **Recruiting** Reducing Pesticide Exposure in Minority Families
   Condition: Disorders of Environmental Origin
2. ☐ **Recruiting** Serotonin in Alcoholism
   Conditions: Alcoholism; Healthy
3. ☐ **Recruiting** Pesticide Exposure Pathways for Farmworker Children
   Condition: Poisoning
4. ☐ **Recruiting** Brain Function in Children Previously Treated on Clinical Trials POG-9605 and POG-9201
   Conditions: neurotoxicity; long-term effects secondary to cancer therapy in children
5. ☐ **Recruiting** Prevention of Violent Behavior Among Children
   Conditions: Aggression; Violence; Wounds and Injuries
6. ☐ **Recruiting** Adjuvant Nutrition for Critally Ill Trauma Patients
   Condition: Trauma
7. ☐ **Recruiting** Phase II Randomized Study of Cultured Skin Substitutes versus Split Thickness Skin Grafts in Patients with Severe Burn Injuries
   Condition: Burns
8. ☐ **Recruiting** Randomized Study of Testosterone and Progressive Resistance Exercise in Men With Burn Injury
   Condition: Burns
9. ☐ **Recruiting** Environmental Contaminants and Infant Development
   Conditions: Mercury Poisoning; Lead Poisoning
10. ☐ **Recruiting** Follow-up of Psychological and Neurocognitive Gulf War Outcome: Relation to Stress
    Condition: Gulf War Syndrome

Gateway

your entrance to the knowledge resources of the National Library of Medicine

asthma pollution

Search | Clear Search

Find Terms | Limits | Results | History | Locker | Preferences

New Search

Overview
What's New
Help
F A Q

Other NLM Resources
Ordering Info.
Clinical Alerts
ClinicalTrials.gov
HSTAT
LOCATORplus
MEDLINEplus
PubMed
TOXNET

Results Summary

Category	Items Found	Actions
Journal Citations	5062	Display Results | Details of Search
Books / Serials / AVs	27	Display Results | Details of Search
Consumer Health	223	Display Results | Details of Search
Meeting Abstracts	3	Display Results | Details of Search
Other Collections	379	Display Results | Details of Search
Total	5694	

Part II

TOXNET Overview, HSDB, & Related Files

What is TOXNET?

- A free web-based system of databases on toxicology, environmental health, hazardous chemicals, toxic releases, chemical nomenclature, and specialty areas such as occupational health and consumer products
- A product of NLM's Toxicology and Environmental Health Information Program
- Toxicology Data (one record per chemical)– HSDB, IRIS, CCRIS, GENE-TOX, ITER (can also search any combination of these files with "Multi-Databases" interface)
- Toxicology Literature (bibliographic references) – TOXLINE, DART/ETIC
- Toxic Releases (of chemicals to the environment) – TRI
- Chemical Identification/Nomenclature – ChemIDplus
- Specialty Databases – HazMap, Household Products
- User Support – tehip@teh.nlm.nih.gov or click on "Contact TOXNET"

Where is TOXNET?

toxnet.nlm.nih.gov

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TOXNET

Welcome to TOXNET, a cluster of databases on toxicology, hazardous chemicals, and related areas.

Databases

- HSDB
- IRIS
- ITER
- GENE-TOX
- CCRIS
- Multi-Databases
- TOXLINE
- DART/ETIC
- TRI
- ChemIDplus

Tox/Env. Health Information Home Page

Search All Databases

Search Clear

Other NLM Resources

- Tox/Env. Health Home Page
- Haz-Map
- Tox Town
- Household Products Database
- ALTBIB
- MEDLINEplus Tox/Env. Health
- MEDLINE/PubMed
- DIRLINE
- NLM Gateway

Support Pages

- Help
- Database Descriptions
- News
- 2002 TOXNET Survey Results

About • Contact • Search

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TOXNET

Tox. & Env. Health | TOXNET

Welcome to TOXNET, a cluster of databases on toxicology, hazardous chemicals, and related areas.

Databases

- HSDB
- IRIS
- ITER
- GENE-TOX
- CCRIS
- Multi-Databases
- TOXLINE
- DART/ETIC
- TRI
- ChemIDplus

Search All Databases

methyl parathion

Search | Clear

Search Results:

Database	Records found
TOXLINE Special	3554
DART Special	71
HSDB	75
IRIS	1
ITER	1
GENETOX	1
CCRIS	1
TRI	7
CHEMIDplus	1

Other NLM Resources

- Tox/Env. Health Home Page
- Haz-Map
- Tox Town
- Household Products Database
- ALTBIB
- MEDLINEplus Tox/Env. Health
- MEDLINE/PubMed
- DIRLINE
- NLM Gateway

Support Pages

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- News
- 2002 TOXNET Survey Results

Toxicology Data Files - Content

Hazardous Substances Data Bank (HSDB) – from NLM

4784 Chemical Records

Human Health Effects
Emergency Medical Treatment
Animal Toxicity Studies
Metabolism/Pharmacokinetics
Pharmacology
Environmental Fate/Exposure
Environmental Standards & Regulations

Chemical/Physical Properties
Chemical Safety & Handling
Occupational Exposure Standards
Manufacturing and Use
Laboratory Methods
Special References
Synonyms and Identifiers

More about HSDB

- Factual Data Bank/Online Handbook
- Peer-Reviewed – Scientific Review Panel
- Review Status Tags – Peer Reviewed, QC Reviewed, Unreviewed
- Fully Referenced
- Data – Excerpted from books, government documents, technical reports, selected primary literature, databases. Some data compiled expressly for HSDB.

Toxicology Data Files - Content

Chemical Carcinogenesis Research Information System (CCRIS) –

from the National Cancer Institute (NCI)

8903 Chemical Records

Carcinogenicity Studies

Tumor Inhibition Studies

Tumor Promotion Studies

Mutagenicity Studies

e.g. Carcinogenicity Studies Data Structure – species, route, tumor site/type of lesion, results, reference

Toxicology Data Files - Content

GENE-TOX

from the U.S. Environmental Protection Agency (EPA)

3214 Chemical Records

Note: GENE-TOX not updated since January 2000

Mutagenicity Studies

Data Structure – assay type, assay code, results, panel report, reference

Toxicology Data Files - Content

Integrated Risk Information System (IRIS)

from the U.S. Environmental Protection Agency (EPA)

542 Chemical Records

Noncarcinogenic Assessment – Oral (RfD)	Carcinogenic Assessment - Oral
Noncarcinogenic Assessment – Inhalation (RfC)	Carcinogenic Assessment - Inhalation

- Contains EPA consensus scientific positions and quantitative values on cancer and non-cancer health effects that may result from lifetime oral or inhalation exposure to specific chemical substances in the environment
- Risk Assessment – Identification and quantification of risk. Function of toxicity and exposure
- Risk Assessment Process (National Academy of Sciences, 1983) – 1. Hazard identification, 2. Dose-Response assessment [IRIS], 3. Exposure assessment, 4. Risk Characterization

Toxicology Data Files - Content

International Toxicity Estimates for Risk Assessment (ITER)

from the Toxicology Excellence for Risk Assessment (TERA)

616 Chemical Records

Tabular and Comparative Risk Data for Cancer Oral, Non-Cancer Oral, Cancer Inhalation, Non-Cancer Inhalation Effects from:

Agency for Toxic Substances and Disease Registry, U.S. (ATSDR)
Environmental Protection Agency, U.S. (EPA)
Health Canada
International Agency for Research on Cancer (IARC)
NSF International (National Sanitation Foundation)
National Institute of Public Health and the Environment, Dutch (RIVM)
Independently-derived Values

Includes synopses, links to organization source documents

TOXNET Search Screen Options

- TOXNET Home Page Search
  - Single query box search
  - No limits
  - Gives quick counts of records retrieved and allows links to each database
  - Number of records retrieved in each database may vary from numbers attained by searching databases directly
- Database specific searches – interface varies according to type of database
- Multi-Databases search – interface for any combination of data files (i.e. HSDB, CCRIS, GENE-TOX, IRIS, ITER)

Search Page - Toxicology Data Files

- One Box Search for:
  - Chemicals – enter chemical names or CAS Registry numbers. System add synonyms (default) or use exact terms entered.
  - Other Terms
- Browse Index for:
  - All Words
  - Chemical name
  - CAS Registry Number
- Limits
  - For more precise searching – searching for terms within particular data fields

Search Results Page -Toxicology Data Files

- Displays chemical names and registry numbers of retrieved records
- Relevancy Ranked Display
- Select Record(s) of Interest
- View Details of Search Strategy
- Modify Search – Returns you to Search Page with query intact
- Begin a New Search – Returns you to Search Page with blank query box
- Or Search can be modified or begun anew directly on Results Page
- Sort Results – By substance name, ascending or descending sequence
- Save Checked Items, Display Checked Items
- View Search History and combine search statements
- Download – Entire Record(s) or Custom Format
- Browse Index
- Get Help
- Return to TOXNET Home

Selected Record Page - Toxicology Data Files

- Default display varies
  - Chemical Search – HSDB displays human health effects, other files display full record
  - Other Term(s) Search – Best Sections
- Search Term(s) Highlighted in Red
- Choose fields for display from Contents (expand, contract categories)
- Navigate – Next Item, Previous Item
- View Details of Search Strategy
- Modify Search – Returns you to Search Screen with query intact
- Begin a New Search – Returns you to Search Screen with blank query box
- Download – Entire Record(s) or Custom Format
- Browse Index
- Get Help
- Return to TOXNET Home
- Link to records for the same chemical in Other Files - (including TOXLINE and ChemID*plus*)

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Hazardous Substances Data Bank

Databases

- Hazardous Substances Data Bank
- IRIS
- ITER
- GENE-TOX
- CCRIS
- Multi-Databases
- TOXLINE
- DART/ETIC
- TRI
- ChemIDplus
- TOXNET Home

Search HSDB

acetone

Search | Clear

For chemicals, add synonyms and CAS numbers to search:

(•) Yes ( ) No

Limits | Browse the Index

Other NLM Resources

- Tox/Env. Health Home Page
- Haz-Map
- Tox Town
- Household Products Database
- ALTBIB
- MEDLINEplus Tox/Env. Health
- MEDLINE/PubMed
- DIRLINE
- NLM Gateway

Support Pages

- Help
- Fact Sheet
- Sample Record
- HSDB Scientific Review Panel

HSDB Search Results

Save Checked Items
Sort
Details
History
Download
Modify Search
Basic Search
Download
Modify Search
Basic Search
Download
Modify Search
Basic Search
Browse Index
Help
TOXNET Home

acetone [Search] [Clear] [Limits]

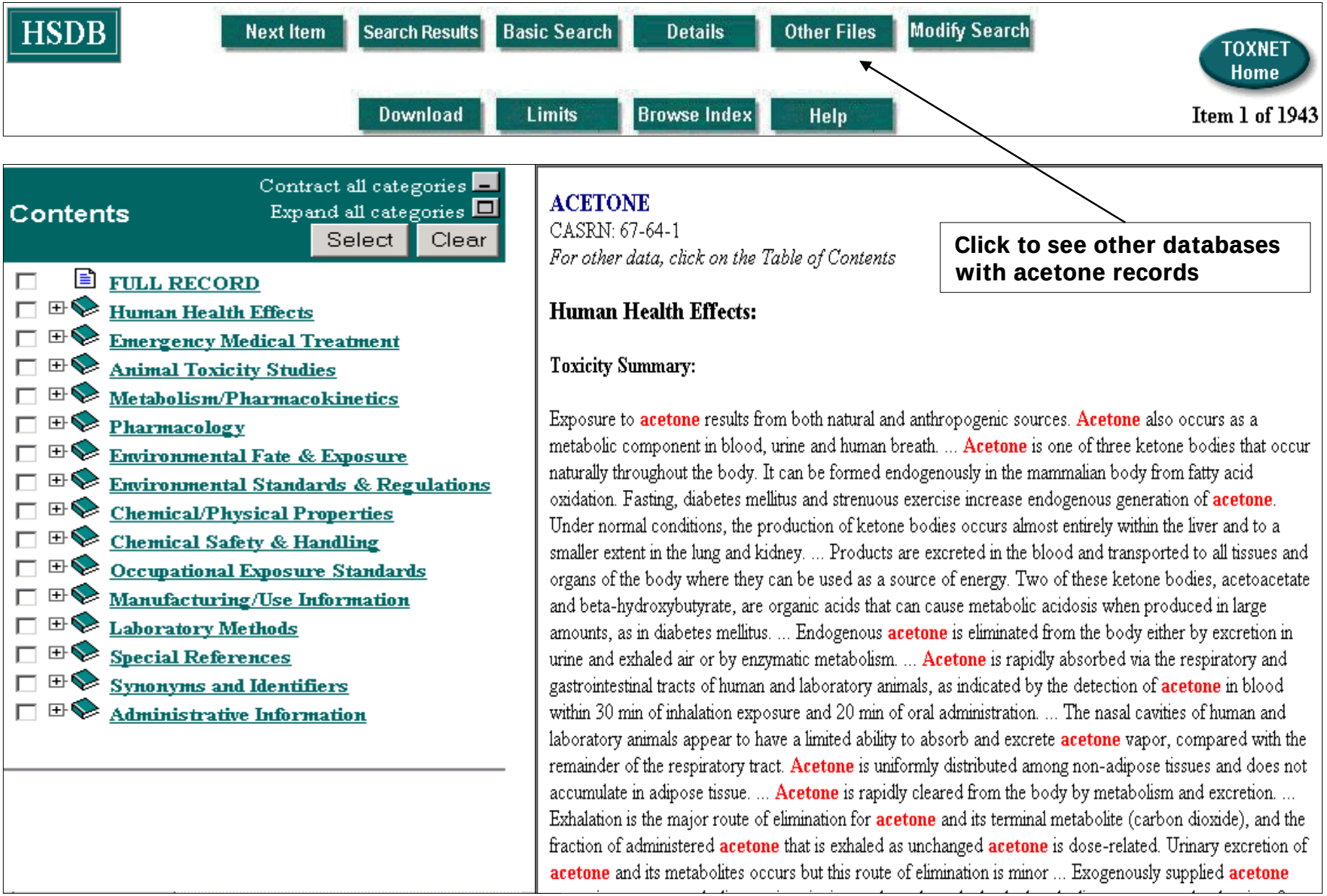
For chemicals, add synonyms and CAS numbers to search: (•) Yes ( ) No

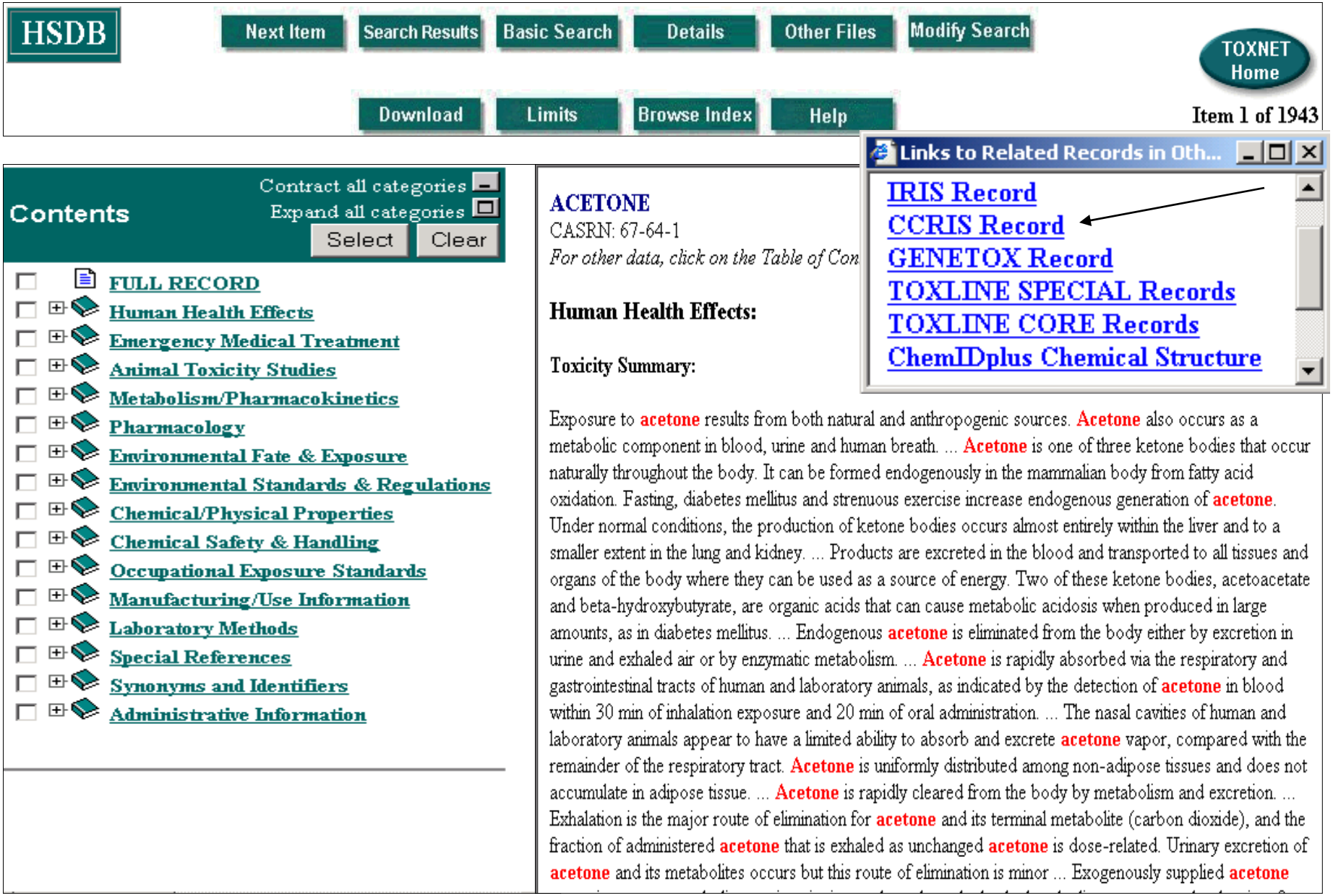
Items **1** through **20** of **1943**

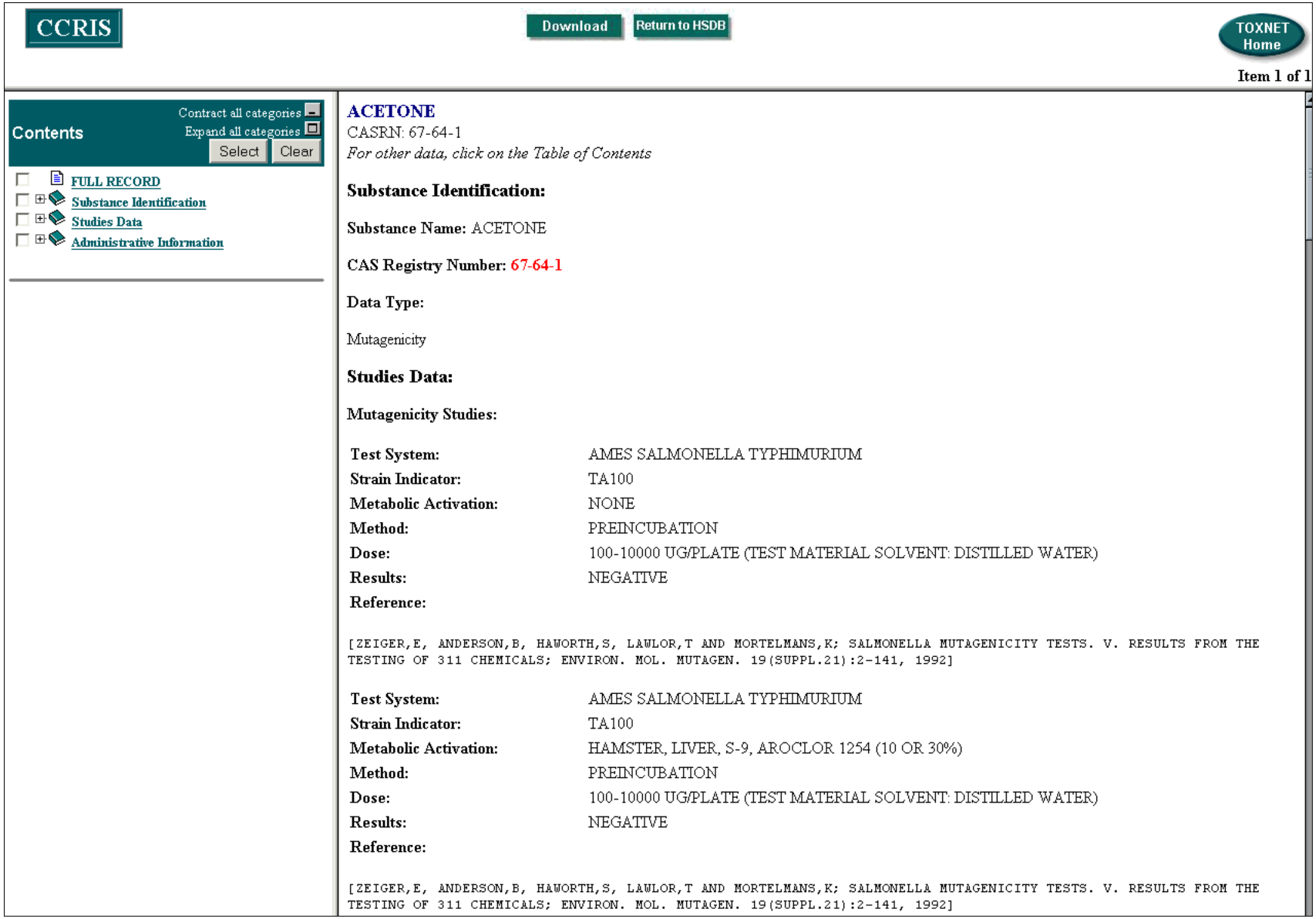
Page **1** of **98**. [Go] to page [ ]

Substance Names are sorted in relevancy ranked order.

Select Record	Substance Name
The following is the primary record for the chemical. All of the query terms were found.	
1 ☐	ACETONE 67-64-1
The following 1942 records contain one or more of the requested chemical name(s) and all of the query terms anywhere in the record.	
2 ☐	ACETONE CYANOHYDRIN 75-86-5
3 ☐	1-CHLORO-2-PROPANONE 78-95-5
4 ☐	ISOPROPANOL 67-63-0
5 ☐	1,1,1,3,3,3-HEXAFLUORO-2-PROPANONE 684-16-2


HSDB
Next Item
Search Results
Basic Search
Details
Other Files
Modify Search
TOXNET Home
Download
Limits
Browse Index
Help
Item 1 of 1943
Contents
Contract all categories
Expand all categories
Select
Clear
FULL RECORD
Human Health Effects
Emergency Medical Treatment
Animal Toxicity Studies
Metabolism/Pharmacokinetics
Pharmacology
Environmental Fate & Exposure
Environmental Standards & Regulations
Chemical/Physical Properties
Chemical Safety & Handling
Occupational Exposure Standards
Manufacturing/Use Information
Laboratory Methods
Special References
Synonyms and Identifiers
Administrative Information
ACETONE
CASRN: 67-64-1
For other data, click on the Table of Contents
Click to see other databases with acetone records
Human Health Effects:
Toxicity Summary:
Exposure to acetone results from both natural and anthropogenic sources. Acetone also occurs as a metabolic component in blood, urine and human breath. ... Acetone is one of three ketone bodies that occur naturally throughout the body. It can be formed endogenously in the mammalian body from fatty acid oxidation. Fasting, diabetes mellitus and strenuous exercise increase endogenous generation of acetone. Under normal conditions, the production of ketone bodies occurs almost entirely within the liver and to a smaller extent in the lung and kidney. ... Products are excreted in the blood and transported to all tissues and organs of the body where they can be used as a source of energy. Two of these ketone bodies, acetoacetate and beta-hydroxybutyrate, are organic acids that can cause metabolic acidosis when produced in large amounts, as in diabetes mellitus. ... Endogenous acetone is eliminated from the body either by excretion in urine and exhaled air or by enzymatic metabolism. ... Acetone is rapidly absorbed via the respiratory and gastrointestinal tracts of human and laboratory animals, as indicated by the detection of acetone in blood within 30 min of inhalation exposure and 20 min of oral administration. ... The nasal cavities of human and laboratory animals appear to have a limited ability to absorb and excrete acetone vapor, compared with the remainder of the respiratory tract. Acetone is uniformly distributed among non-adipose tissues and does not accumulate in adipose tissue. ... Acetone is rapidly cleared from the body by metabolism and excretion. ... Exhalation is the major route of elimination for acetone and its terminal metabolite (carbon dioxide), and the fraction of administered acetone that is exhaled as unchanged acetone is dose-related. Urinary excretion of acetone and its metabolites occurs but this route of elimination is minor ... Exogenously supplied acetone


HSDB
Next Item
Search Results
Basic Search
Details
Other Files
Modify Search
TOXNET Home
Download
Limits
Browse Index
Help
Item 1 of 1943
Links to Related Records in Oth...
IRIS Record
CCRIS Record
GENETOX Record
TOXLINE SPECIAL Records
TOXLINE CORE Records
ChemIDplus Chemical Structure
Contents
Contract all categories
Expand all categories
Select
Clear
FULL RECORD
Human Health Effects
Emergency Medical Treatment
Animal Toxicity Studies
Metabolism/Pharmacokinetics
Pharmacology
Environmental Fate & Exposure
Environmental Standards & Regulations
Chemical/Physical Properties
Chemical Safety & Handling
Occupational Exposure Standards
Manufacturing/Use Information
Laboratory Methods
Special References
Synonyms and Identifiers
Administrative Information
ACETONE
CASRN: 67-64-1
For other data, click on the Table of Con
Human Health Effects:
Toxicity Summary:
Exposure to acetone results from both natural and anthropogenic sources. Acetone also occurs as a metabolic component in blood, urine and human breath. ... Acetone is one of three ketone bodies that occur naturally throughout the body. It can be formed endogenously in the mammalian body from fatty acid oxidation. Fasting, diabetes mellitus and strenuous exercise increase endogenous generation of acetone. Under normal conditions, the production of ketone bodies occurs almost entirely within the liver and to a smaller extent in the lung and kidney. ... Products are excreted in the blood and transported to all tissues and organs of the body where they can be used as a source of energy. Two of these ketone bodies, acetoacetate and beta-hydroxybutyrate, are organic acids that can cause metabolic acidosis when produced in large amounts, as in diabetes mellitus. ... Endogenous acetone is eliminated from the body either by excretion in urine and exhaled air or by enzymatic metabolism. ... Acetone is rapidly absorbed via the respiratory and gastrointestinal tracts of human and laboratory animals, as indicated by the detection of acetone in blood within 30 min of inhalation exposure and 20 min of oral administration. ... The nasal cavities of human and laboratory animals appear to have a limited ability to absorb and excrete acetone vapor, compared with the remainder of the respiratory tract. Acetone is uniformly distributed among non-adipose tissues and does not accumulate in adipose tissue. ... Acetone is rapidly cleared from the body by metabolism and excretion. ... Exhalation is the major route of elimination for acetone and its terminal metabolite (carbon dioxide), and the fraction of administered acetone that is exhaled as unchanged acetone is dose-related. Urinary excretion of acetone and its metabolites occurs but this route of elimination is minor ... Exogenously supplied acetone


CCRIS
Download
Return to HSDB
TOXNET Home
Item 1 of 1
Contents
Contract all categories
Expand all categories
Select
Clear
FULL RECORD
Substance Identification
Studies Data
Administrative Information
ACETONE
CASRN: 67-64-1
For other data, click on the Table of Contents
Substance Identification:
Substance Name: ACETONE
CAS Registry Number: 67-64-1
Data Type:
Mutagenicity
Studies Data:
Mutagenicity Studies:
Test System: AMES SALMONELLA TYPHIMURIUM
Strain Indicator: TA100
Metabolic Activation: NONE
Method: PREINCUBATION
Dose: 100-10000 UG/PLATE (TEST MATERIAL SOLVENT: DISTILLED WATER)
Results: NEGATIVE
Reference:
[ZEIGER,E, ANDERSON,B, HAWORTH,S, LAWLOR,T AND MORTELMANS,K; SALMONELLA MUTAGENICITY TESTS. V. RESULTS FROM THE TESTING OF 311 CHEMICALS; ENVIRON. MOL. MUTAGEN. 19(SUPPL.21):2-141, 1992]
Test System: AMES SALMONELLA TYPHIMURIUM
Strain Indicator: TA100
Metabolic Activation: HAMSTER, LIVER, S-9, AROCLOR 1254 (10 OR 30%)
Method: PREINCUBATION
Dose: 100-10000 UG/PLATE (TEST MATERIAL SOLVENT: DISTILLED WATER)
Results: NEGATIVE
Reference:
[ZEIGER,E, ANDERSON,B, HAWORTH,S, LAWLOR,T AND MORTELMANS,K; SALMONELLA MUTAGENICITY TESTS. V. RESULTS FROM THE TESTING OF 311 CHEMICALS; ENVIRON. MOL. MUTAGEN. 19(SUPPL.21):2-141, 1992]

“Details” of the Acetone Search

Query:

(acetone OR “dimethyl ketone” OR propanone OR “methyl ketone” OR “ketone propane”)

The chemical name **acetone** was identified.

The following terms were added from ChemIDplus:

dimethyl ketone

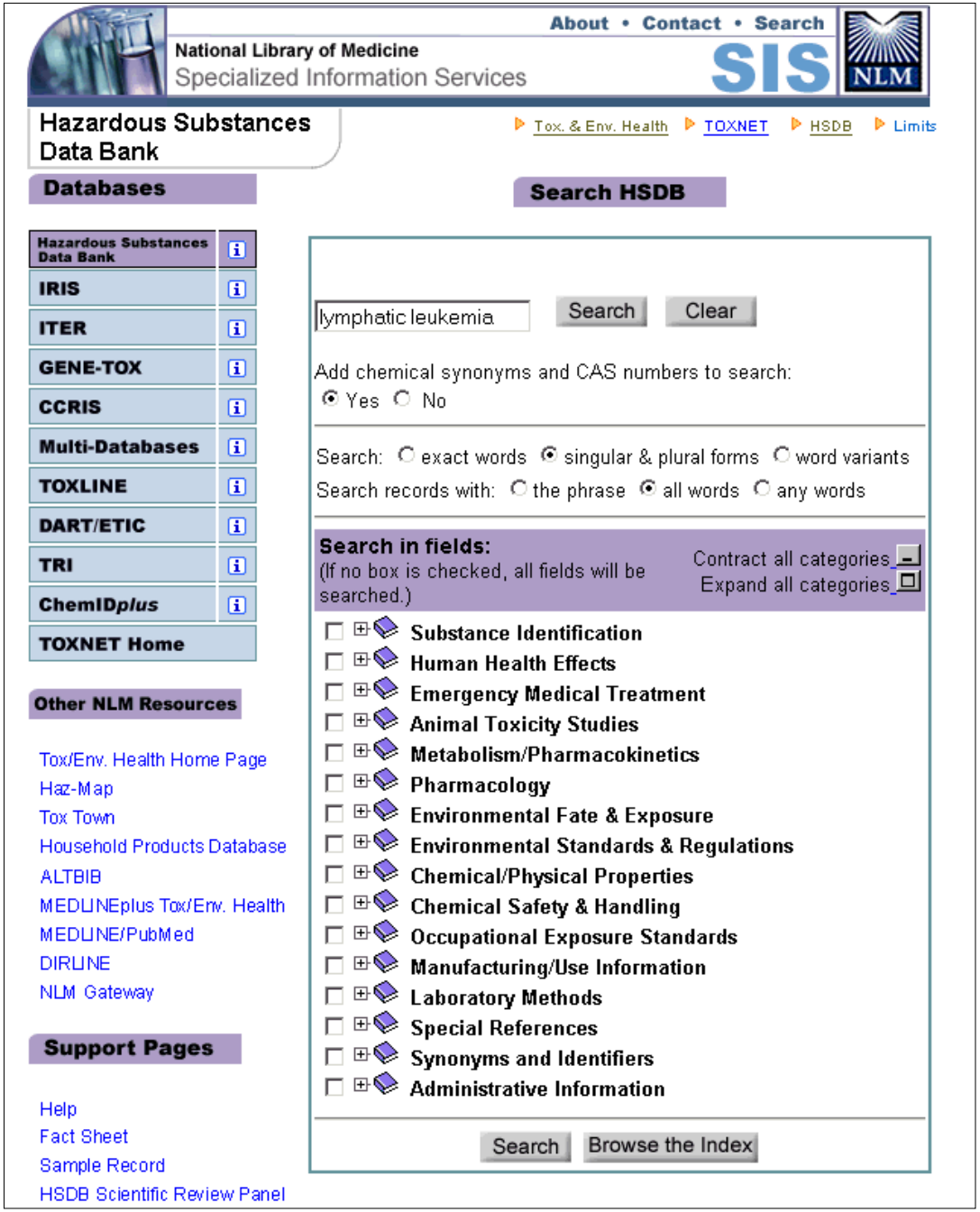
propanone

methyl ketone

ketone propane

CAS Registry Number: **67-64-1**

LIMITS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Specialized Information Services
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Tox. & Env. Health
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ITER
GENE-TOX
CCRIS
Multi-Databases
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ChemIDplus
TOXNET Home
lymphatic leukemia
Search
Clear
Add chemical synonyms and CAS numbers to search:
Yes
No
Search: exact words singular & plural forms word variants
Search records with: the phrase all words any words
Search in fields:
(If no box is checked, all fields will be searched.)
Contract all categories
Expand all categories
Substance Identification
Human Health Effects
Emergency Medical Treatment
Animal Toxicity Studies
Metabolism/Pharmacokinetics
Pharmacology
Environmental Fate & Exposure
Environmental Standards & Regulations
Chemical/Physical Properties
Chemical Safety & Handling
Occupational Exposure Standards
Manufacturing/Use Information
Laboratory Methods
Special References
Synonyms and Identifiers
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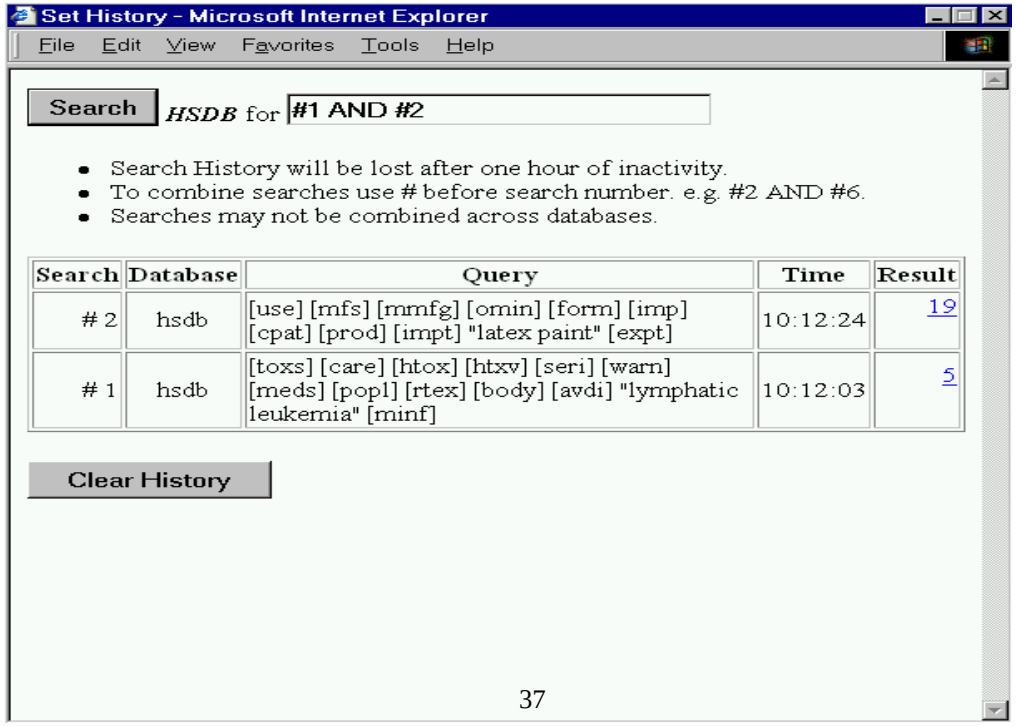
MEDLINE/PubMed
DIRLINE
NLM Gateway
Support Pages
Help
Fact Sheet
Sample Record
HSDB Scientific Review Panel

Search History

- To review search strategies
- To combine search statements (within databases)
- Query Box provided to enter subsequent searches directly on Search History Page
- Use # to combine search statements (e.g. #1 AND #2)



Boolean Searching, Field Qualification, Search Techniques

- Upper Case Boolean Operators (AND, OR, NOT)
- Fields in brackets and post-qualified (e.g. benzene [na])
- Nested parenthesis permitted
- Phrase searching with quotation marks (e.g. “coronary artery bypass”)
- Asterisk (*) for truncation (e.g. carcinogen*)

LinkOut from PubMed to HSDB

1: Chest. 2003 Nov;124(5):1716-23. Related Articles, Links

Full text article at www.chestjournal.org

Long-term intermittent exposure to high ambient CO2 causes respiratory disturbances during sleep in submariners.

Margel D, White DP, Pillar G.

Israeli Naval Medical Department, Haifa, Israel.

BACKGROUND: During most of the cruise, submarines are detached from their environment. Therefore, O(2) levels are relatively low (19 kPa, 144 mm Hg) and CO(2) levels are high (1 kPa, 7.6 mm Hg). There are, however, periods during ventilation of the submarine in which CO(2) levels drop and O(2) levels increase. The objective of this study was to determine whether these unique gas changes might result in sleep-disordered breathing in submariners. METHODS AND MATERIALS: The sleep of eight healthy soldiers was assessed three times: (1) control night, in submarine docking; (2) at the beginning of the cruise (reflecting acute exposure to gas changes); and (3) at the end of the cruise (chronic exposure to gas changes). Each night was divided to three parts because of different CO(2) levels (secondary to ventilation of the submarine). Sleep and breathing were measured using the portable Watch PAT100 device (Itamar Medical, Ltd; Caesarea, Israel) to detect breathing abnormalities during sleep. RESULTS: Sleep and breathing data were categorized according to four CO(2) conditions: acute moderate (inhaled CO(2) levels of 2.3 to 5 mm Hg during first 1 to 2 nights of the cruise); acute high (inhaled CO(2) levels of 5 to 9.2 mm Hg during the first 1 to 2 nights of the cruise); chronic moderate (inhaled CO(2) levels of 2.3 to 5 mm Hg during nights 9 to 10 of the cruise); and chronic high (inhaled CO(2) levels of 5 to 9.2 mm Hg during nights 9 to 10 of the cruise). Respiratory disturbance index (RDI) was significantly higher in the chronic moderate CO(2) condition than the chronic high condition (18.9/h
significant), but significantly negatively correlated with it during the
submariners adapt to high CO(2) levels, as evidenced by the signi
a significant increase in RDI when CO(2) levels declined during th

PMID: 14605040 [PubMed - indexed for MEDLINE]

Display LinkOut Show: 20 Sort Send to Text

- Links to full-text and resource information are supplied by LinkOut providers.
- Links with an asterisk indicate the LinkOut provider requires a subscription, membership, or fee for access.

1: Margel D et al. Long-term intermittent exposu...[PMID: 14605040] Related Articles, Links

- LITERATURE:
  - Aggregators:
    - EBSCO
      *full-text online
    - MD Consult LLC
      *full-text online
    - Ovid Technologies, Inc.
      *full-text online
    - ProQuest Information and Learning
      *full-text online *full-text PDF
  - Libraries
  - Publishers/providers:
    - HighWire Press
      *full-text online
- MEDICAL:
  - Consumer health:
    - MEDLINEplus Health Information
      Sleep Apnea
- MOLECULAR BIOLOGY DATABASES:
  - Structure:
    - Hazardous Substances Data Bank
      CARBON DIOXIDE

Part III

TOXLINE and Other Bibliographic Files

TOXLINE
TOXicology Literature onLine

- Covers pharmacological, biochemical, physiological, environmental, and toxicological effects of chemicals/other agents on living systems
- Citations, Abstracts, Keywords and/or MeSH (Medical Subject Headings)
- CAS Registry Numbers
- From 1965 to date (and earlier)
- Drawn from Secondary Sources, varying unit record formats
- Components – TOXLINE Core (on PubMed, accessible via TOXNET) and TOXLINE Special (on TOXNET)
- Over 3 million toxicology related records combined

TOXLINE Core (on PubMed)

- Toxicology Subset limit of MEDLINE on PubMed
- Similar to TOXLINE's former TOXBIB subfile
- Drawn from standard biomedical journal literature
- Accessible directly on PubMed or from the TOXLINE search screen on TOXNET
- Some features of PubMed:
  - MeSH Searching
  - Limit by field, publication type, age, gender, language, human or animal, etc.
  - Cubby – to store and update searches
  - Related articles
  - LinkOut + Links to Books
  - Interlibrary Loan (Loansome Doc)

TOXLINE Special (on TOXNET)

- Technical Reports and Research projects
  - Federal Research in Progress (FEDRIP)
  - Toxicology Document and Data Depository (NTIS)
  - Toxicology Research Projects (CRISP)
  - Toxic Substances Control Act Test Submissions (TSCATS)

- Special Journal and Other Research Literature
  - Developmental and Reproductive Toxicology (DART)
  - International Labour Office (CIS)
  - Swedish National Chemicals Inspectorate (RISKLINE)

TOXLINE Special (continued)

- Archival Collections (No Longer Being Updated)
  - Aneuploidy (ANEUPL)
  - Environmental Mutagen Information Center file (EMIC)
  - Environmental Teratology Information Center file (ETIC)
  - Epidemiology Information System (EPIDEM)
  - Hazardous Materials Technical Center (HMTC)
  - International Pharmaceutical Abstracts (IPA)
  - NIOSHTIC (NIOSH)
  - Pesticides Abstracts (PESTAB)
  - Poisonous Plants Bibliography (PPIB)
  - Toxicological Aspects of Environmental Health (BIOSIS)

TOXLINE Special (continued)

- Some Features of TOXLINE Special
  - Relevancy Ranking
  - Toggle between TOXLINE Special and TOXLINE Core
  - Automatic Mapping to MeSH terms
  - Link to TOXLINE Special from *ChemIDplus*
  - Related Articles

Note: Search algorithms and display formats of TOXLINE Special and TOXLINE Core vary.

Another Toxicology Literature File

Developmental and Reproductive Toxicology (DART/ETIC)

101,812 Records

- Covers Developmental and Reproductive Toxicology (including Teratology)
- Components – DART Core (on PubMed) and DART Special (on TOXNET)

Search Page - Toxicology Literature Files

- One Box Search for:
  - Chemicals – enter chemical names or CAS Registry numbers. Let system add synonyms (default) or use exact terms entered.
  - Other Terms
- Select TOXLINE Special, TOXLINE Core or both (default)
- Browse Index for:
  - All Words
  - Authors
  - MeSH Headings/Keywords
  - CAS Registry Numbers
- Automatic Term Mapping to MeSH & UMLS
  - e.g. passive smoking --- tobacco smoke pollution
- Limits
  - For more precise searching – to search within all fields, title only, author only, by specific range of years of publication, subfile, language, etc.

Search Results Page - Toxicology Literature Files

- Displays title, author, source, subfile of retrieved records
- Relevancy Ranked Display
- Select Record(s) of Interest
- View Details of Search Strategy
- Modify Search – Returns you to Search Page with query intact
- Begin a new Basic Search – Returns you to Search Page with blank query box
- Or Search can be modified or begun anew directly on Results Page
- Sort Results – By year of publication, title, author, entry month, relevance, in ascending or descending order
- Save Checked Items, Display Checked Items
- View Search History and combine search statements
- Download – Brief, Full, Abstract, Tagged
- Browse Index
- Return to TOXNET Home

Selected Record Page - Toxicology Literature Files

- Displays full bibliographic record – Title, Author, Source, Abstract, keywords, etc.
- Search Terms highlighted in Red
- Hot Linked Items (e.g. authors, keywords, CAS registry numbers) highlighted and underlined in Blue
- Related Records
- Return to Search Results page
- Download – Brief, Full, Abstract, Tagged
- Modify Search – Returns you to Search Screen with query intact
- Begin a new Basic Search – Returns you to search Screen with blank query box
- Or Search can be modified or begun anew directly on Results Page
- View Details of Search Strategy
- View Search History and combine search statements
- Browse Index
- Return to TOXNET Home

National Library of Medicine
Specialized Information Services

SIS

NLM

Toxicology Bibliographic Information

Databases

- HSDB
- IRIS
- ITER
- GENE-TOX
- CCRIS
- Multi-Databases
- Toxicology Bibliographic Info
- DART/ETIC
- TRI
- ChemIDplus
- TOXNET Home

Search TOXLINE

brain cancer pesticides

Search | Clear

For chemicals, add synonyms and CAS numbers to search:
(•) Yes ( ) No

Search in
(•) TOXLINE Special
( ) TOXLINE Core on PubMed
( ) Both — New Default

Limits | Browse the Index

Other NLM Resources

- Tox/Env. Health Home Page
- Haz-Map
- Tox Town
- Household Products Database
- ALTBIB
- MEDLINEplus Tox/Env. Health
- MEDLINE/PubMed
- DIRLINE
- NLM Gateway

Support Pages

- Help
- Fact Sheet
- Sample Record

TOXLINE Special Search Results

Save Checked Items
Sort
Details
History
Download
Modify Search
Basic Search
Browse Index
Help
TOXNET Home

brain cancer pesticides Search Clear Limits

For chemicals, add synonyms and CAS numbers to search: Yes No

Items **1** through **20** of **57**

Pages: 1 2 3

References are sorted in relevancy ranked order.
*Click on **Sort** to change the order of the retrieved References.*

Select Record	Reference
1	**Pesticide Prioritization for a Brain Cancer Case-Control Study** Sanderson WT ; Talaska G ; Zaebst D ; Davis-King K ; Calvert G Environmental Research, Vol. 74, No. 2, pages 133-144, 28 references, 1997 [NIOSH]
2	**Pesticide prioritization for a brain cancer case-control study.** SANDERSON WT ; TALASKA G ; ZAEBST D ; DAVIS-KING K ; CALVERT G ENVIRONMENTAL RESEARCH; 74 (2). 1997. 133-144. [BIOSIS]
3	**Occupational Risk Factors for Brain Tumors among Women in Shanghai, China** Heineman EF ; Gao Y-T ; Dosemeci M ; McLaughlin JK Journal of Occupational and Environmental Medicine, Vol. 37, No. 3, pages 288-293, 22 references, 1995 [NIOSH]
4	**Brain cancer mortality among French farmers: The vineyard pesticide hypothesis.** VIEL J-F ; CHALLIER B ; PITARD A ; POBEL D ARCHIVES OF ENVIRONMENTAL HEALTH; 53 (1). 1998. 65-70. [BIOSIS]
5	**Family pesticide use and childhood brain cancer.** DAVIS JR ; BROWNSON RC ; GARCIA R ; BENTZ BJ ; TURNER A ARCH ENVIRON CONTAM TOXICOL; 24 (1). 1993. 87-92. [BIOSIS]

Related Records
Search Results
Download
Basic Search
Browse Index
Modify Search
Details
History
Help
TOXNET Home

brain cancer pesticides Search Clear Limits

For chemicals, add synonyms and CAS numbers to search: Yes No

Item 1 of 57

Pesticide Prioritization for a Brain Cancer Case-Control Study

Authors:

Sanderson WT
Talaska G
Zaebst D
Davis-King K
Calvert G

Source: Environmental Research, Vol. 74, No. 2, pages 133-144, 28 references, 1997

Abstract:

Procedures used to select **pesticides** to be included in a NIOSH case control study examining the risk of **brain cancer** in farm workers in Iowa, Michigan, Minnesota, and Wisconsin associated with **pesticide** use and other environmental exposures was discussed. A procedure to identify and prioritize the **pesticides** most appropriate for the study was needed because of the large number and variety of **pesticides** available, approximately 24,000 commercially registered **pesticides**, therefore making it impossible to investigate them all. Lists of **pesticides** were created to document those used in the four states and in the US as a whole utilizing data from the US Department of Agriculture and the departments of agriculture and land grant colleges in each state. **Pesticides** were then prioritized according to the criteria: volume of use before 1985, ranking of use in the four states and the US as a whole according to **pesticide** type, and toxicologic evidence of carcinogenic, teratogenic, and mutagenic effects. The criterion '**pesticide** use before 1985' was chosen to allow a latency period of at least 10 years for **brain cancer.** The study was to be based on **brain cancer** cases diagnosed in the four states from 1985 on. A total of 240 **pesticides** were used in the four states: 102 herbicides, 81 insecticides, 32 fumigants, and 35 fungicides. Using the criteria above, the list was reduced to 56 herbicides, 49 insecticides, 17 fumigants, and 12 fungicides. The final list represented more than 99% of the total pounds of herbicides and insecticides and more than 98% of the total pounds of fungicides and fumigants used in the states before 1985. Lists of the priority **pesticides** are to be sent to the study participants before the study questionnaire is administered to allow them time to recall details of their including specific years of use and crops they were used on. The authors conclude that the procedures used to select the **pesticides** to be examined in this study are useful for documenting past **pesticide** use.

Keywords:

DCN-241835
NIOSH Author
Agricultural chemicals
Occupational exposure
Epidemiology
Brain tumors
Risk analysis
Information systems
Agricultural workers

Coden:

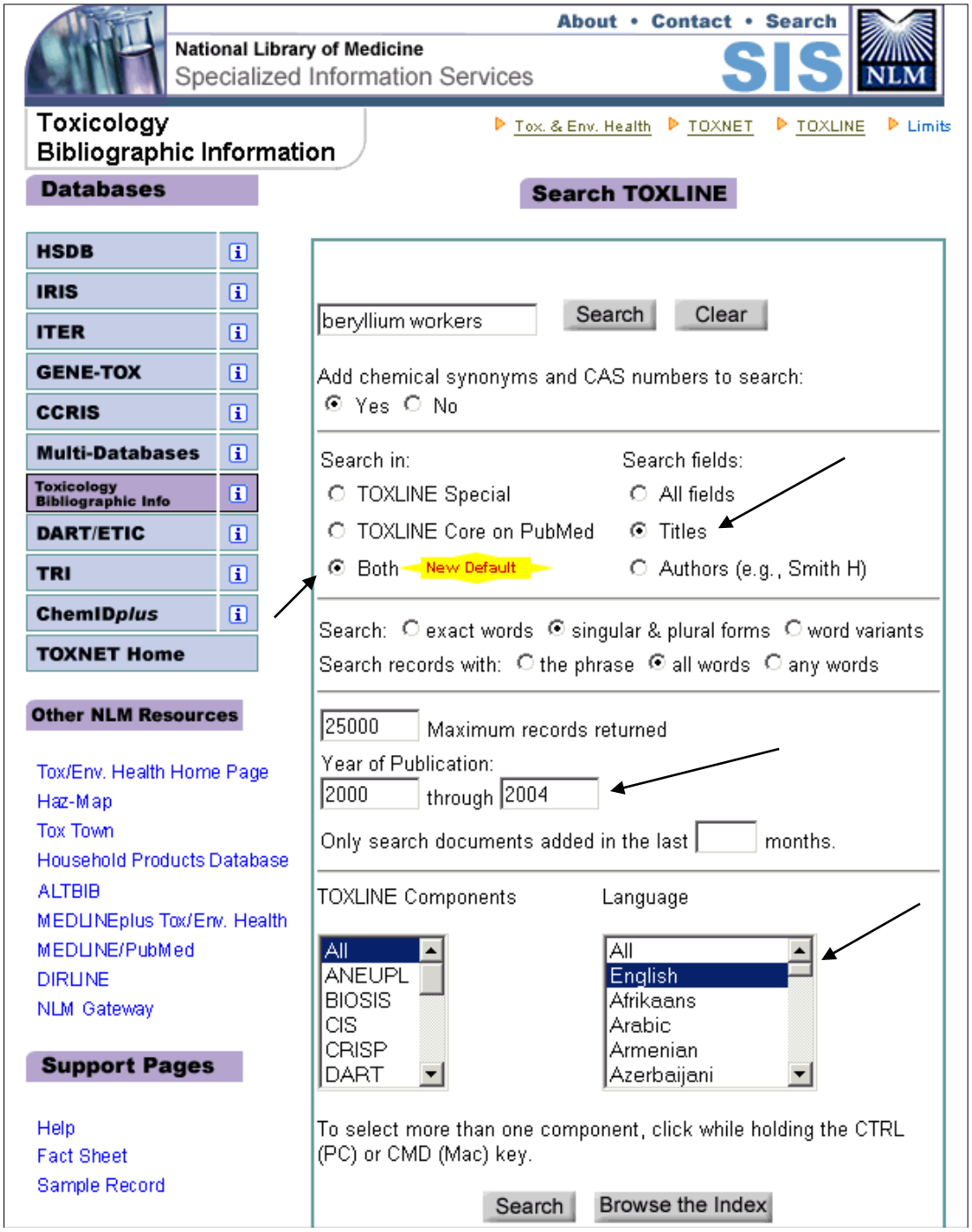
ENVRAL

Entry Month: October, 1998

Year of Publication: 1997

Secondary Source ID: NIOSH/00241410

LIMITS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MEDLINE/PubMed
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Sample Record
Search TOXLINE
beryllium workers
Search
Clear
Add chemical synonyms and CAS numbers to search:
Yes
No
Search in:
TOXLINE Special
TOXLINE Core on PubMed
Both
New Default
Search fields:
All fields
Titles
Authors (e.g., Smith H)
Search: exact words singular & plural forms word variants
Search records with: the phrase all words any words
25000
Maximum records returned
Year of Publication:
2000
through
2004
Only search documents added in the last
months.
TOXLINE Components
All
ANEUPL
BIOSIS
CIS
CRISP
DART
Language
All
English
Afrikaans
Arabic
Armenian
Azerbaijani
To select more than one component, click while holding the CTRL (PC) or CMD (Mac) key.
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Basic Search
Browse Index
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TOXNET Home
beryllium workers
Search
Clear
Limits
For chemicals, add synonyms and CAS numbers to search: Yes No
Items 1 through 3 of 3
References are sorted in relevancy ranked order.
Click on Sort to change the order of the retrieved References.
Select Record
Reference
1
CHRONIC BERYLLIUM DISEASE AMONG BERYLLIUM EXPOSED WORKERS
ROSSMAN M
Crisp Data Base National Institutes of Health [CRISP]
2
CHRONIC BERYLLIUM DISEASE AMONG BERYLLIUM EXPOSED WORKERS
ROSSMAN M
Crisp Data Base National
3
Lung cancer case-contro
Sanderson WT; Ward EM;
American Journal of Indus
NCBI
PubMed
National Library of Medicine
NLM
Entrez PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books
Search PubMed for beryllium[TI] workers[TI] AND 2000:2004[dp] AN Go Clear
Limits Preview/Index History Clipboard Details
About Entrez
Text Version
Entrez PubMed
Overview
Help | FAQ
Tutorial
New/Noteworthy
E-Utilities
PubMed Services
Journals Database
MeSH Database
Single Citation Matcher
Batch Citation Matcher
Clinical Queries
LinkOut
Cubby
Related Resources
Order Documents
Display Summary Show: 20 Sort Send to Text
Items 1-5 of 5
One page.
1: Horng CJ, Horng PH, Lin SC, Tsai JL, Lin SR, Tzeng CC.
Related Articles, Links
Determination of urinary beryllium, arsenic, and selenium in steel production workers.
Biol Trace Elem Res. 2002 Sep;88(3):235-46.
PMID: 12350133 [PubMed - indexed for MEDLINE]
2: Deubner DC, Lockey JL, Kotin P, Powers MB, Miller F, Rogers AE, Trichopoulos D.
Related Articles, Links
Re: Lung cancer case-control study of beryllium workers. Sanderson WT, Ward EM, Steenland K, Petersen MR. Am. J. Ind. Med. 2001. 39:133-144.
Am J Ind Med. 2001 Sep;40(3):284-8. No abstract available.
PMID: 11598976 [PubMed - indexed for MEDLINE]
3: Henneberger PK, Cumro D, Deubner DD, Kent MS, McCawley M, Kreiss K.
Related Articles, Links
Beryllium sensitization and disease among long-term and short-term workers in a beryllium ceramics plant.
Int Arch Occup Environ Health. 2001 Apr;74(3):167-76.
PMID: 11355290 [PubMed - indexed for MEDLINE]

Part IV

TRI, Specialty Files, New Initiatives

Toxics Release Inventory (TRI)
U.S. Environmental Protection Agency (EPA)

TRI 95-01 – 577,790 Records
(Coming soon TRI87-02)

- Facility Identification (Facility Name, Address, Phone, etc.)
- Substance Identification (Chemical Name, CAS RN, Uses, etc.)
- Environmental Release of Chemical (in Air, Water, Land, Underground Injection)
- Waste Treatment
- Off-Site Waste Treatment
- Source Reduction and Recycling (Quantity Released, Energy Recovery, Quantity Recycled, Quantity Treated)

TRI Background

- Right-to-Know Movement – Workplace, Community
- OSHA Hazard Communication Standard – 1983
- SUPERFUND = CERCLA (1980)
- Bhopal (1984) and smaller scale chemical disasters
- SARA (Superfund Amendments and Reauthorization Act) (1986)
  - Title 3 = Emergency Planning and Community Right-to-Know Act
    - Section 313 = Toxic Release Reporting
- Pollution Prevention Act of of 1990

Search Page - TRI

- Several search query boxes – fill in any combination.
- Chemical names or CAS Registry numbers. Let system add synonyms (default) or use exact terms entered.
- Select Year(s) – 1995-2001
- Facility Name(s)
- Facility Location (state, city/state, county/state, zip)
- Ranging
  - Greater than _____ pounds
  - Total Release, Air, Water, Land, Underground Injection
  - Or “No Release Selected”
- Browse Index for:
  - All Words
  - Chemical Name
  - CAS Registry Number
  - Facility Name
  - Facility City

Search Results Page - TRI

- Displays facility name, chemical, city/state of retrieved records.
- Unsorted order
- Select Record(s) of Interest
- Calculate Releases – Tabular Display of Total Environmental Releases and Off-Site Waste Transfers for all retrieved records.
- View Details of Search Strategy
- Modify Search – Returns you to Search Page with query intact
- Begin a new Basic Search – Returns you to Search Page with blank query box (note: search screen can't be modified directly from this page)
- Sort Results – By substance name, facility name, city, or state. Ascending or Descending.
- Save Checked Items, Display Checked Items
- View Search History and combine search statements
- Download – Brief or Full Format
- Browse Index
- Get Help
- Return to TOXNET Home

Selected Record Page - TRI

- Full record displayed
- Choose fields for display from Contents (expand, contract categories)
- Navigate – Next Item, Previous Item
- View Details of Search Strategy
- Modify Search – Returns you to Search Screen with query intact
- Begin a New Search – Returns you to Search Screen with blank query box
- Browse Index
- Get Help
- Download – In Full Format
- Return to TOXNET Home
- Link to records for the same chemical in Other Files - (including TOXLINE and ChemID*plus*

Toxics Release Inventory

Databases

HSDB
IRIS
ITER
GENE-TOX
CCRIS
Multi-Databases
TOXLINE
DART/ETIC
Toxics Release Inventory
ChemIDplus
TOXNET Home

Search TRI

Chemical Name or CAS Registry Number

methyl ethyl ketone

Search | Clear

Add synonyms and CAS numbers to search:

(•) Yes ( ) No

TRI Files:

[x] 2001 [ ] 2000 [x] 1999 [ ] 1998
[ ] 1997 [ ] 1996 [ ] 1995

Facility Names

(Separate multiple entries with commas)

Facility Location

(Separate multiple entries for state, city/state, or zip with commas. For example: NJ, DE, or Trenton NJ, Houston TX, or 21113, 21224.)

marshfield/mo

( ) State (•) City/State
( ) County/State ( ) Zip

Greater Than 0 lbs **for**

No Release Selected

Search | Browse the Index

Other NLM Resources

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Haz-Map
Tox Town
Household Products Database
ALTBIB
MEDLINEplus Tox/Env. Health
MEDLINE/PubMed
DIRLINE
NLM Gateway

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TRI2001, TRI99 Search Results

Calculate Release!
Save Checked Items
Sort
Details
History
Download
Modify Search
New Search
Browse Index
Help
TOXNET Home

Please click on **Modify Search** button to modify TRI search strategy.

TRI2001: 2 TRI99: 2
Click on the database name to repeat the search in that database

Items **1** through **4** of **4**
*Facility/Substance Names are **unsorted**.*

Select Record	Database	Facility/Substance Name
1 ☐	TRI2001	YORK CASKET-MISSOURI METHYL ETHYL KETONE MARSHFIELD, MO
2 ☐	TRI2001	WILCORP INDS. INC. - MAR METHYL ETHYL KETONE MARSHFIELD, MO
3 ☐	TRI99	WILCORP INDS. INC. METHYL ETHYL KETONE MARSHFIELD, MO
4 ☐	TRI99	YORK CASKET-MISSOURI METHYL ETHYL KETONE MARSHFIELD, MO

TRI99

METHYL ETHYL KETONE

YORK CASKET-MISSOURI

MARSHFIELD, MO

For other data, click on the Table of Contents

Environmental Release of Chemical:

Non-Point Air Emissions Estimates:
Non-Point Air Release: 1,900 lbs./rep yr. 1999
Basis of Estimate: (C) Mass Balance Calculations

Point Air Emissions Estimates:
Point Air Release: 17,000 lbs./rep yr. 1999
Basis of Estimate: (C) Mass Balance Calculations

Total Air Release: 18,900 lbs./rep yr. 1999

Water Discharge Estimates:
Receiving Stream: NA
Water Release: NA
Basis of Estimate: 0%

Total Water Release: 0 lbs./rep yr. 1999

Underground Injection Total: 0 lbs./rep yr. 1999

Land Release Estimates:
Disposal Method: (D03) Land Treatment/Application/Farming
Land Release: NA

Search carpenters as Agent Disease Job Text Search

Haz-Map Search | More Searches | Haz-Map Help | Glossary | References

Browse Haz-Map

- **Hazardous Agents**
  1. By Types of Agents
  2. By Adverse Effects
  3. Alphabetically
- **Occupational Diseases**
  1. By Types of Diseases
  2. By **Jobs** and **Symptoms**
  3. Alphabetically
- **High Risk Jobs**
  1. By Types of Jobs
  2. Alphabetically

Haz-Map: Information on Hazardous Chemicals and Occupational Diseases
by
Jay A. Brown, M.D., M.P.H.

Haz-Map Fact Sheet | Download Haz-Map Brochure

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Last updated: February 14, 2003

Search [ ] as Agent Disease Job Text Search

Highlight Term(s) First

Haz-Map Search | More Searches | Haz-Map Help | Glossary | References

Browse Haz-Map by Jobs

Search TOXNET

Information about this job:

Carpenters

- **High risk job tasks associated with this job:**
  - Apply arsenic preservatives to wood
  - Contaminate skin or inhale spray while using pentachlorophenol
  - Handle agents that cause allergic contact dermatitis or contact urticaria
  - Installed insulation before 1975
  - Machine allergenic wood and inhale dust
  - Remove insulation installed before 1975
  - Saw or sand arsenic-treated wood
  - Saw or sand creosote-treated wood
  - Use epoxy, isocyanate, or formaldehyde-resin adhesives, finishes, or sealants
  - Use n-hexane as a solvent in glues, coatings, or degreasers
  - Work with glue solvents

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Search as Agent Disease Job Text Search

Haz-Map Search | More Searches | Haz-Map Help | Glossary | References

Browse Haz-Map

Search TOXNET

Agent Name	n-Hexane
Alternative Name	Hexane
CAS Number	110-54-3
Formula	C6-H14
Major Category	Solvents
Synonyms	Hexyl hydride, normal-Hexane
Category	Alkanes (Paraffins)
Description	Colorless liquid with a gasoline-like odor;
Sources/Uses	Used as a solvent, especially in the adhesive and shoe industries; abused by glue sniffers for its euphoric effects; [LaDou, p. 371] Used in shoe and furniture manufacture to dissolve glue; also used in adhesive tape manufacturing; [Sullivan, p. 1124]
Comments	n-Hexane is in the list of "Some volatile substances which may be abused by inhalation" published on the web site of the U.N. International Drug Control Programme, indicating its potential to cause narcosis in workers. In addition to CNS solvent syndrome, n-Hexane can cause motor neuropathy.

Exposure Assessment	
BEI	2,5-Hexanedione in urine = 5 mg/g creatinine; end of shift; screen forn-hexane in end-expired air; ACGIH Notice of Intended Change (2001):2,5-Hexanedione (free) in urine = 4 mg/L end of shift near end ofworkweek;
Skin Designation (ACGIH)	Yes
TLV (ACGIH)	50 ppm
PEL (OSHA)	500 ppm
IDLH (NIOSH)	1100 ppm
Excerpts from Documentation for IDLHs	It has been reported that a 10minute exposure to 5,000 ppm caused dizziness and a sensation of giddiness.
Vapor Pressure	124 mm Hg
Odor Threshold Low	65 ppm
Odor Threshold High	248 ppm
Explanatory Notes	IDLH = 10% of LEL (lower explosive limit); Odor threshold from AIHA;
MAK	50 ppm
Half Life	Urine (2,5-hexanedione): 15 hours; blood: 2-3 hours; fat: 64 hours; [TDR, p. 1480]
Reference Link	ATSDR ToxFAQs - n-Hexane
Flammability (NFPA)	3: may ignite at ambient temperature
Adverse Effects	
Neurotoxin	Motor Neuropathy

Household Products Database

National Institutes of Health
National Library of Medicine
Specialized Information Services

NLM

Home | Products | Ingredients | MSDS

Quick Search

Health & Safety Information on Household Products

Browse & Search

- Products
- Ingredients
- MSDS

Support Pages

- About
- Help
- Glossary
- Contact Us

- Other Resources

What's under your kitchen sink, in your garage, in your bathroom, and on the shelves in your laundry room? Do these household products pose a potential health risk to you and your family?

Find out what's in these products and what are the potential health effects, and other safety and handling information. Find a product...

For advice if someone's poisoned, call your local Poison Center at (1-800-222-1222).

Household Products Database

National Institutes of Health
National Library of Medicine
Specialized Information Services

Home | Products | Ingredients | MSDS

Browse by Categories | Browse Alphabetically | Search

Choose a Product Category

Auto Products

Brake Fluid, De-icer, Defogger, Lubricant, Sealant, and more...

Home Inside

Air Freshener, Bleach, Detergent, Toilet Bowl Cleaner, and more...

Pesticides

Animal Repellent, Fungicide, Herbicide, Insecticide, and more...

Landscape / Yard

Fertilizer, Lawn Care, Swimming Pool Products, and more...

Personal Care / Use

Antiperspirant, Hair Spray, Makeup, Shampoo, Soap, and more...

Home Maintenance

Caulk, Grout, Insulation, Paint, Putty, Stain, and more...

Hobbies & Crafts

Adhesive, Glaze, Primer, Varnish, and more ...

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Household Products Database

National Institutes of Health
National Library of Medicine
Specialized Information Services

Brand Information

Brand Name: Kilz Kwik-Start Water-Based Primer Sealer
Form: liquid
Product Category: Home maintenance
Purpose: Primer
Type: latex
Customer Service No.: 800-325-3552
Date Entered: 2001-06-14
Related Items: Products with similar usage in this database

Manufacturer

Manufacturer: Masterchem Industries, Inc.
Address: PO Box 368
City: Barnhart
State: MO
Zip Code: 63012
Telephone Number: 636-942-2510
Fax Number: 636-942-3663
Toll Free Number: 800-325-3552
Date Info Verified: 2003-01-01
Related Items: Products by this manufacturer

Health Effects

Search TOXNET

Warning from Label: CAUTION: USE ONLY WITH ADEQUATE VENTILATION.

Harmful if swallowed. Avoid contact with eyes. May cause eye, nose and throat irritation. Avoid breathing of dust, vapors and spray mist. Open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or leave area. Close container after each use. Wash thoroughly after handling, and before smoking and eating. WARNING: This product contains chemicals known to the state of California to cause cancer and birth defects, or other reproductive harm. Keep out of reach of children.

Acute Health Effects: From MSDS:
EFFECTS OF OVEREXPOSURE:
Inhalation: May cause irritation to upper respiratory tract. Shortness of breath and dizziness.
Splash (Eyes): Can cause irritation, burning and redness.
Splash (Skin): Prolonged or repeated contact may cause irritation.
Ingestion: Gastrointestinal distress, vomiting and diarrhea.

PRIMARY ROUTE(S) OF ENTRY: DERMAL, INHALATION, INGESTION

Chronic Health Effects:	MSDS: Splash (Skin): Prolonged or repeated contact may cause irritation.
Carcinogenicity:	MSDS: None of the ingredients in this product is listed as a carcinogen.
First Aid:	MSDS: EMERGENCY AND FIRST AID PROCEDURES: Inhalation: Remove to fresh air. Restore breathing. Treat symptomatically. Consult a physician. Splash (eyes): Flush immediately with large amounts of water for at least 15 minutes. Take to physician for medical treatment. Splash (skin); Wash affected areas with soap and water. Remove contaminated clothing. Consult a physician if irritation persists. Ingestion: Drink 1 or 2 glasses of water to dilute. DO NOT Induce vomiting. Consult physician or poison control center immediately. Treat symptomatically.
Health Rating:	2
Flammability Rating:	0
Reactivity Rating:	0
HMIS Rating Scale:	0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe; N = No information provided by manufacturer; * = Chronic Health Hazard
MSDS Date:	2000-09-26

Handling/Disposal

Handling:	MSDS: PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in accordance with OSHA 1910.106. Store in well ventilated areas. Protect from freezing. Frozen product may coagulate and become unusable. OTHER PRECAUTIONS: DO NOT TAKE INTERNALLY. Avoid prolonged contact with skin. Keep closure tight and container upright to prevent leakage. Do not store near heat, sparks, or open flame. Do not breathe spray. Containers must not be washed out or used for other purposes. Avoid contact with or breathing of vapors released during curing process. Do not remove or deface container label. Keep out of the reach of children.
Disposal:	MSDS: WASTE DISPOSAL METHOD: Dispose of in accordance with all local, state and federal regulations. Dry product and empty containers may be landfilled. Full or partially full containers should be dried or coagulated with the liquid portion poured off. Coagulated material should be dried before landfilling. Product may also be incinerated.

Ingredients from MSDS/Label

Chemical	CAS No / Unique ID	Percent
Talc (non-fibrous)	014807-96-6	5-10
Calcium carbonate	001317-65-3	5-10
Titanium dioxide	013463-67-7	5-10
Ethylene glycol	000107-21-1	2.62
Water	007732-18-5	30-40
Acrylic polymer/copolymer	999999-63-1	25-40

World Library of Toxicology, Chemical Safety, and Environmental Health

Enter country name or other term(s):

Search Clear

Or click on map below:

Select a country

Select an organization

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More to Come

- Drugs and Lactation
- Endocrine Disruptors
- WISER - for PDA
- Toxicology Education Portal & ToxLearn
- ChemID Advanced Version

Part V

Non-NLM Resources

Professional Associations

- Society of Toxicology – http://www.toxicology.org/
- Society of Environmental Toxicology and Chemistry – http://www.setac.org
- American Academy of Clinical Toxicology – http://www.clintox.org
- American Association of Poison Control Centers – http://www.aapcc.org
- Society of Risk Analysis – http://www.sra.org
- Other groups in environmental health, occupational health, industrial hygiene, health physics etc.

U.S. Government Resources

- Agency for Toxic Substances and Disease Registry (ATSDR) – http://www.atsdr.cdc.gov
- Environmental Protection Agency (EPA) – http://www.epa.gov
- Food and Drug Administration – http://www.fda.gov
  - National Center for Toxicological Research – http://www.fda.gov/nctr
- National Institute for Occupational Safety and Health – http://www.cdc.gov/niosh

U.S. Government Resources (continued)

- National Institute of Environmental Health Sciences – http://www.niehs.nih.gov
- National Toxicology Program – http://ntp-server.niehs.nih.gov
- U.S. Chemical Safety and Hazard Investigation Board – http://www.chemsafety.gov

Some State Government Sites

- New Jersey Department of Health and Senior Services – Division of Epidemiology, Environmental and Occupational Health – http://www.state.nj.us/health/eoh
- California – Office of Environmental Health Hazard Assessment – http://www.oehha.ca.gov

Some Chemical Databases

- Chemfinder – http://www.chemfinder.cambridgesoft.com
- Scorecard (from Environmental Defense) – http://www.scorecard.org
- Environmental Fate Databases & more (from Syracuse Research Corporation) –http://www.syrres.com/esc/free_demos.htm
- EXTOXNET (pesticide information) – http://ace.orst.edu/info/extoxnet

Some Chemical Databases (continued)

- PAN (Pesticide Action Network) Pesticides Database – http://www.pesticideinfo.org
- Where to Find Material Safety Data Sheets on the Internet – http://www.ilpi.com/msds
- RxList, the Internet Drug Index – http://www.rxlist.com
- International Programme for Chemical Safety (IPCS) INCHEM – http://www.inchem.org/

Also Consider:

- Scirus - Elsevier Science - http://www.scirus.com/

Other Web Sites

- UNEP (United Nations Environment Programme) Chemicals – http://www.chem.unep.ch
- Intergovernmental Forum on Chemical Safety - http://www.who.int/ifcs/
- Inter-Organization Programme for the Sound Management of Chemicals - http://www.who.int/iomc/
- National Council for Science and the Environment – http://www.cnie.org
- Society of Environmental Journalists – http://www.sej.org
- TEHIP/NLM Web Links – http://sis.nlm.nih.gov/Tox/ToxWebLinks.html

Some Commercial ($) Databases

- ARIEL Insight – Ariel Research – http://www.arielresearch.com
- BIOSIS Previews – BIOSIS – http://www.biosis.org
- Chemical Abstracts & CAS Registry – Chemical Abstracts Service – http://www.cas.org (also http://stnweb.cas.org)
- CCINFOweb (CHEMINDEX &IPCS/INCHEM are free) – CCOHS – http://www.ccohs.ca
- CIS Database (on occupational health) (from the International Labour Office) (free as a TOXLINE subfile) – http://www.ilo.org/public/english/protection/safework/cis/products/cisdoc.htm

Some Commercial ($) Databases (continued)

- EMBASE – Elsevier Science – http://www.embase.com
- Environment Abstracts – Congressional Information Service – available from Dialog - http://www.dialog.com/
- MICROMEDEX Databases – MICROMEDEX – http://www.micromedex.com
- Science Direct - Elsevier - http://www.sciencedirect.com/
- Toxicology Abstracts – Cambridge Scientific Abstracts – http://www.csa.com
- Web of Science – ISI – http://www.isinet.com/

Some Web Search Engines and Tools

- AltaVista – http://www.altavista.com
- Google – http://www.google.com
- Hotbot – http://www.hotbot.com
- Yahoo – http://www.yahoo.com
- Meta Search Engines
  - Go2Net – http://www.go2net.com
  - Dogpile – http://www.dogpile.com
  - Ask Jeeves – http://www.ask.com
- Searchenginewatch – http://www.searchenginewatch.com
- Mailing List Directories – CATALIST - http://www.lsoft.com/lists/listref.html

TOXNET Exercises

[Note: There is typically more than one "right" approach to answering each of the following questions. Answers, where they are provided, are merely representative, not definitive. Explore.]

TOXICOLOGY DATA FILES

1. What is the CAS registry number and octanol/water partition coefficient of 2,6-dinitrotoluene and what is this chemical used for? [HSDB]

   In HSDB, search for **2,6-dinitrotoluene** and click on the 2,6-dinitrotoluene record on the Search Results Page. In the Table of Contents, expand **Chemical/Physical Properties** and click on **Octanol/Water Partition Coefficient**. Expand **Manufacturing/Use Information** and click on **Major Uses**.

2. Has 2,6-dinitrotoluene been shown to be mutagenic in the Ames salmonella test? [HSDB]

   MODIFY above search to **2,6-dinitrotoluene ames,** and click on **2,6-dinitrotoluene** record.
   Note: You may also wish to check other files, such as GENE-TOX and CCRIS.

3. What is the oral LD50 of caffeine in male rabbits? Also, click on **DETAILS** to view the search strategy. [HSDB]

   Search for **oral ld50 caffeine male rabbits** and click on **caffeine** record.
   Note: On target hit displays first.

4. Has caffeine been studied as a tumor promoter? Does it cause mutations? [CCRIS, GENE-TOX]

   From HSDB caffeine record (above), click on **Other Files**. Select CCRIS. Expand Studies data in Table of Contents and check the boxes for **Tumor Promotion Studies** and **Mutagenicity Studies.** Return to HSDB. Click on **Other Files** again and select GENE-TOX. **Select Mutagenicity Studies**.

5. Which of the toxicology data files contain information on ammonia? What is the Inhalation Reference Concentration (RfC) of ammonia? (Note: the RfC is a non-carcinogenic risk assessment parameter) Also, view the DOWNLOAD options available. [Multi-Data Base and IRIS]

   Select the **Multi-Database** option on the TOXNET main page. Search for **ammonia**. Click on the IRIS ammonia record. Expand **Chronic Health Hazard Assessment for Noncarcinogenic Effects** in Table of Contents. Click on **Reference Concentration for Chronic Inhalation Exposure (RfC)**.

TOXNET Exercises (continued)

6. What are some chemicals used in leather tanning and what are their human health effects? [HSDB]

   Use the **limits** option of HSDB. Search for **leather tanning** in HSDB. Expand **Manufacturing/Use Information** and check the box for **Major Uses**. Click on several retrieved chemical records to view their "best sections" and click on **Human Health Effects** for these records in the Table of Contents.

7. Does nitrobenzene have any effect on sperm? Find some recent general articles on nitrobenzene. [HSDB, TOXLINE Core]

   Search for **nitrobenzene sperm** in HSDB. Click on nitrobenzene record and view **Best Sections.** Click on **Other Files and** click on **TOXLINE Core.**

8. How does the U.S. Environmental Protection Agency characterize the carcinogenicity of methylmercury? [IRIS]

   Search for **methylmercury** in IRIS and select the methylmercury record on the Search Results page. Expand category **II. Carcinogenicity Assessment for Lifetime Exposure**. Click on **II.A. Evidence for Human Carcinogenicity**.

9. Find any information on the occurrence or effects of methyl parathion in soil. Search using the chemical's CAS Registry Number – 298-00-0. [HSDB]

   Search HSDB for **298-00-0 soil** in the query box and scan the **Best Sections** of the methyl parathion record.

10. How do the Dutch RIVM and the U.S. EPA compare in their non-cancer oral risk values for chloroform? [ITER]

    Search for **chloroform**. View **Risk Data: Non-Cancer Oral Table**.

11. Use Boolean operators and phrase searching to look for information on lung cancer or bladder cancer in workers, in HSDB.

    Enter – **("lung cancer" [htox] OR "bladder cancer" [htox]) AND worker**

TOXNET Exercises (continued)

TOXICOLOGY LITERATURE FILES

1. Search TOXLINE Special for articles by C.N. Pope. Sort retrieval by primary author names. [TOXLINE Special]

   Search for "pope cn" in query box. On "Search Results" page, click on "SORT" button and sort by author.

2. Search TOXLINE Special and TOXLINE Core for phosphoric acid. Explore navigating through your retrieval, examining individual records, and going to linked records. [TOXLINE Special & Core]

   Search for **phosphoric acid** in query box. Click on **Details** buttons in both databases to view the respective search strategies. Navigate the pages. Click on records of interest and on hot-linked data – e.g. keywords, author names, CAS registry numbers. Check for related records.

3. Find articles focused on the effects of diet on breast cancer. [TOXLINE Special & Core]

   Try a **Limits** search. Enter **diet breast cancer** in the query box. Limit to **Titles.** Select **Both** TOXLINE Special and TOXLINE Core.

4. Find journal references on the treatment of arthritis by the anti-inflammatory agent Celebrex. [TOXLINE Core]

   Search for **arthritis celebrex** in the query box. Select the TOXLINE Core radio button.

5. Use the EMIC subfile to determine whether peppermint been tested for mutagenicity. Check for English language articles. [TOXLINE Special]

   Conduct a Limits search. Select EMIC as a TOXLINE Component and English as a language from the drop down menus. Enter **peppermint** in the query box.

6. Find information on the effects of alcohol on the fetus. [DART Special and DART Core]

   Select **Both** DART Special and DART CORE. Search for **alcohol fetus** in the query box.

TOXNET Exercises (continued)

7. Search TOXLINE Core directly on PubMed to find articles on toxicological aspects of jellyfish. Search for articles published from 2000-2003 in English. [TOXLINE Core via PubMed directly].

   Go to PubMed at http://pubmed.gov. Click on **Limits**. Enter **jellyfish** in the search query box. Limit the search to the toxicology subfile, the publication dates to 2000-2004 and the language to English.

8. Find information on renal failure associated with amanita mushroom poisoning. Look for English language articles published from 1995 to 2004. [TOXLINE Special]

   Conduct a Limits search. Enter **amanita renal failure** in the query box. Restrict publication years to 1995-2003. Select English from the dropdown menu.

9. Use the HISTORY feature to look for hospital or medical waste incineration in TOXLINE Special. [TOXLINE Special]

   First search for **"hospital waste" incinerat***. (Using quotes looks for the terms together as a phrase. The asterisk is for truncation and searches for words such as incinerate, incineration, etc.) Then search for **"medical waste" incinerat***. Press the HISTORY button and combine your two searches according to the instructions, and using an "OR" operator.

TOXIC CHEMICAL RELEASES

1. How much ammonia was released to the air and water in Milwaukee in 1999?

   In TRI99, search for **ammonia** in the "chemical name" query box and for **Milwaukee/WI** in the "facility location (city/state)" query box. Click on "Calculate Releases."

2. How much of the above releases came from Red Star Yeast and in what body of water did this facility discharge ammonia?

   After above search, go back to the "TRI Search Results" screen. Click on the Red Star Yeast record. Click on "Environmental Release of Chemical" in the Table of Contents. Scroll down to "Water Discharge Estimates."

TOXNET Exercises (continued)

3. What chemicals have been released to the air, in amounts greater than 100,000 pounds, over Old Hickory, Tennessee in 1995 and 1996? By what companies?

   Search for **Old Hickory Tennessee** in the "facility location (city/state)" query box. Select **greater than 100,000 pounds** for "total air release." Results page will display chemicals and companies.

4. Did Hewlett-Packard's Newark, California facility transfer any 1,2,4-trichlorobenzene off-site for treatment in 1996? How much? Where to?

   In TRI96, search for **1,2,4-trichlorobenzene** in the "chemical" query box, **hewlett-packard** in the "facility name" query box, and **newark california** in the "facility location (city/state)" query box. Click on "Off-Site Waste Transfer" in the Table of Contents.

5. What company has reported the highest underground injection release of a single chemical in 1999? What was the chemical?

   In TRI99, select **10,000,000** and "Total Underground Injection" in the "Greater than ___ for ___" drop down menus. For the records retrieved, expand the "Environmental Release of Chemical" category. Click on "Underground Injection Total" for these records and compare the numbers. Identify the chemical with the highest number.

6. How many individual TRI98 reports have been filed on barium compounds?

   In TRI98, search **barium compounds** in the chemical query box. Note the number of records retrieved listed at the top of the Search Results page.

TOXNET Exercises (continued)

HAZ-MAP

1. What are some high risk tasks associated with the job of carpet installation?

   Click on **High Risk Jobs** and then on "Alphabetically." Choose the letter "C" and click on **Carpet Installers**.

2. What are some hazards associated with the use of cobalt in the workplace?

   Enter **Cobalt** in query box and click on "agent." Click on **Cobalt**. Click on **Cobalt** again to view potential hazards. For Extra Credit – highlight a term or phrase (e.g. "cobalt chloride skin allergy" and search **TOXLINE**.

3. What are some hazards of leather tanning?

   Perform a "text search" for **leather tanning** in the search query box. Click on first **leather tanning and finishing** as an Industry and then go back and click on **tanning leather** as a Process.

HOUSEHOLD PRODUCTS DATABASE

1. What is in Windex and are there any health dangers associated with it?

   Enter **Windex** in query box. Click on your choice of Windex cleaner. View ingredient and health effects information.

2. Compare the toxicities of various pesticides used to treat ants.

   Choose "Browse by Categories." Click on **Pesticides**, then on **Insecticides** as a Category and **Ant** as a type. View the data on the various products.

3. What stick deodorants include the antibacterial ingredient triclosan?

   Click on Ingredients. Enter **triclosan** in query box. Click on triclosan. Scan list of products.

TOXNET Exercises (continued)

WORLD WIDE WEB

1. Explore EPA's voluminous Web site, particularly the **Databases and Software** section located by clicking on their home page's **Information Sources**. Locate IRIS, ECOTOX, the Toxics Release Inventory, and the Safe Drinking Water Information System. Use the Advanced Search box to find documents with **mercury** in the title. [**www.epa.gov**]

2. Locate a full-text article about the ban on ephedra in the March-April 2004 issue of the **FDA Consumer** magazine. [**www.fda.gov**]

3. What chemicals are on the list of "Known to be Human Carcinogens" in the National Toxicology Program's Year 2002 10th Report of Carcinogens? [**ntp-server.niehs.nih.gov**]

4. Find the Agency for Toxic Substances and Disease Registry's TOXFAQ profile on nickel. [**www.atsdr.cdc.gov**]

5. Check out the National Council for Science and the Environment's Web site and find recent Congressional Research Service (CRS) reports, under their National Library for the Environment section, on **pesticides**. [**www.cnie.org**]

6. Which Florida universities offer graduate programs in toxicology? Check the Society of Toxicology's Resource Guide to Careers in Toxicology (under Public Outreach/Career Resources) [**www.toxicology.org**]

7. Explore the variety of data sources containing information on acrylonitrile, by searching ChemFinder. [**www.chemfinder.com**]

8. Where and on what dates will the fourth Society of Environmental Toxicology and Chemistry's World Congress be held? [**www.setac.org**]

9. What is New Jersey's rank among states in total release hazardous air pollutants? Use Scorecard (from Environmental Defense). Start by clicking on Pollution Rankings. [**www.scorecard.org**]

10. Use the BIOLOG file (one of Syracuse Research Corporation's Environmental Fate Data Bases – EFDB) to find information about DDT in sewage. **[esc.syrres.com/esc/efdb.com]**

11. Use the Environmental Journalism site to determine what environmental meetings will be coming up in October 2004. **[www.nsej.org]**

12. What are some common side effects of the drug Vioxx? Consult MedlinePlus' Drug Information page (data from the USP). **[www.nlm.nih.gov/medlineplus/druginformation.html]**

13. Who makes Kill Zone Flea and Tick Killer 2000? What are its active ingredients? How have various governmental agencies rated the carcinogenic potential of these ingredients? [**www.pesticideinfo.org**]

14. How many poison control centers in Texas are certified by the American Association of Poison Control Centers (AAPCC)? What are their addresses? The AAPCC's Poison Center Lists includes a list of certified centers. Find the nation-wide toll-free poisoning emergency phone number. [**www.aapcc.org**]

Part VI

ChemID*plus*

ChemID*plus*

- Chemical Identification File
- Chemical Dictionary/Directory File for chemicals cited in MEDLARS Files & outside resources
- Contains over 368,000 chemical records
- Structural Data for over 206,000 records
- Direct Link/Searches of MEDLINE, TOXNET, and other resources

ChemID*plus* Content

Names and Synonyms

- **Name of Substance**: Usually the most commonly used name, includes MeSH heading and USAN name
- **MeSH Heading**: NLM Medical Subject Heading
- **Systematic Name**: Describes molecular structure
- **Synonyms**: All other names found for the substance
- **Mixture Name**: Name of multi-component substance, one of which is the retrieved substance
- SUPERLIST names: The name used by regulatory/guidance lists

ChemID*plus* Content

- **CAS Registry Number**: Unique number of up to 9 digits assigned by Chemical Abstracts Service used to index chemicals. ChemIDplus uses the hyphenated format

- **ID**: The ID number is the CAS Registry Number in a non-hyphenated fixed length format or a unique number for entries that have no CAS Registry or NLM assigned numbers

- **Molecular Structure**: Display of structure (if present) via Chime or ChemSymphony

- **Registry Numbers**: All CAS Registry Numbers known to be assigned over time to a specific compound

ChemID*plus* Content

- **Formulas**: The molecular formula in a hyphenated format.

- **Classification Codes**: Describe the general category assigned by a given source to a chemical based on toxicity, use and application, pharmacologic and/or therapeutic category, and status on certain chemical lists.

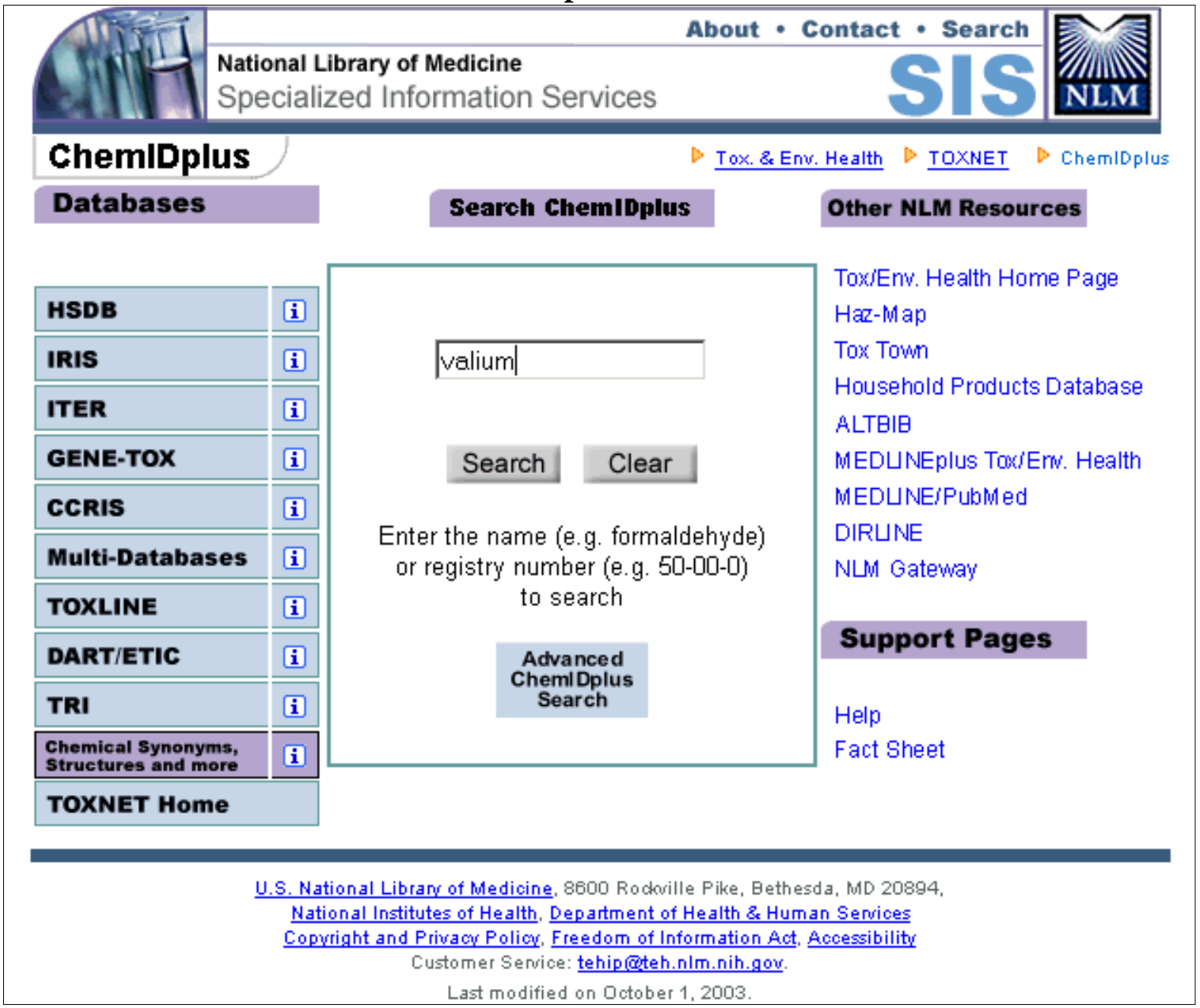
- **Notes**: A textual description of a compound's use and utility, often from MeSH controlled vocabulary.

- **Locators**: The names of NLM databases, and other major resources that have information about a given compound, usually hyperlinked.

ChemID*plus* **Lite**

- The Lite search page is available at http://chem2.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- Lite version does not allow structure searching and thus needs no plug-ins or special display software
- Chemical structures are displayed as GIF images
- Right truncation ("starts with") is available by using the asterisk (*) at the end of a search term
- More advanced data and structure searching can be done at the main ChemID*plus* page http://chem.sis.nlm.nih.gov/chemidplus/
- Spell checker

ChemID*plus* Lite



ChemID*plus* Lite

ChemID*plus* Lite

Internet Locator

EPA CRS	EPA Substance Registry System
EPA Envirofacts	EPA Master Chemical Integrator
NIAID ChemDB	NIAID Chemical Database
NIST WebBook	NIST Chemistry WebBook
NJ-HSFS	New Jersey Hazardous Substance Fact Sheets

Superlist Locator

CA65	California Proposition 65 List
DEA	DEA Controlled Substances
IARC	International Agency for Research on Cancer
MA	Massachusetts Right-to-know Substances

ChemID*plus* Lite

ChemID*plus* Lite

ChemIDplus Full Record

Tox. & Env. Health | TOXNET | Return to Results Page

Diazepam [USAN:BAN:INN:JAN]
RN: 439-14-5

Names and Synonyms

MeSH Heading
Diazepam

Name of Substance
Diazepam
Diazepam [USAN:BAN:INN:JAN]

Synonyms
1-Methyl-5-phenyl-7-chloro-1,3-dihydro-2H-1,4-benzodiazepin-2-one
2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-1-methyl-5-phenyl-
5-24-04-00300 (Beilstein Handbook Reference)
7-Chloro-1,3-dihydro-1-methyl-5-phenyl-2H-1,4-benzodiazepin-2-one
7-Chloro-1,3-dihydro-1-methyl-5-phenyl-2H-1,4-benzodiazepin-2-one (IUPAC)
7-Chloro-1-methyl-2-oxo-5-phenyl-3H-1,4-benzodiazepine
7-Chloro-1-methyl-5-3H-1,4-benzodiazepin-2(1H)-one

WY-3467
Winii
Zepaxid
Zipan
e-Pam

Systematic Name
2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-1-methyl-5-phenyl-
Diazepam

Superlist Name
DEA No. 2765
Diazepam

Formulas

Molecular Formula
C16-H13-Cl-N2-O

Classification Codes

Classification Code
Adjuvants, anesthesia
Anesthetics, intravenous
Anti-anxiety agents, benzodiazepine
Anticonvulsants
Antiemetics
Drug / Therapeutic Agent
GABA modulators
Human Data
Muscle relaxants, central
Mutation data
Reproductive Effect
Sedative-hypnotic
Sedatives, nonbarbiturate
Tumor data

Superlist Classification Code
DEA Schedule IV
Overall Carcinogenic Evaluation: Group 3

Registry Numbers

CAS Registry Number
439-14-5

Other Registry Number
11100-37-1
53320-84-6

System Generated Number
000439145

Notes

Note
A Benzodiazepine with anticonvulsant, anxiolytic, sedative, muscle relaxant, and amnesic properties and a long duration of action. Its actions are mediated by enhancement of GABA activity. It is used in the treatment of severe anxiety disorders, as a hypnotic in the short-term management of insomnia, as a sedative and premedicant, as an anticonvulsant, and in the management of alcohol withdrawal syndrome. (From Martindale, The Extra Pharmacopoeia, 30th ed, p589)

ChemID*plus* Lite

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National Library of Medicine
Specialized Information Services

SIS

NLM

ChemID Search Near Matches

Tox. & Env. Health | TOXNET | ChemSearch

Results

Your search for chemical name **"VALEUM"** did not retrieve any exact matches.

You may return to the query page and modify your search or examine any of the near matches below by clicking on it. Your search target may not be on the list.

Valium
Valeo
Valeans
Valu-8
Valu-7
Valux
Vallene
Value 100
Valinum [Latin]
Vaulen
Vaderm
Velium
Velmol
Vulm-411
Vulm 111
Vulm 993
VULM 993

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ChemIDplus Search Results

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2H-1,4-BENZODIAZ*

Search Clear

Results: 1 - 10 of 200

Main Query Page

Next Page

Previous Page

Go To Record Number

TOXNET Home

1 Nitrazepam [USAN:BAN:INN:JAN]
146-22-5

2 Diazepam [USAN:BAN:INN:JAN]
439-14-5

3 Oxazepam [USAN:BAN:INN:JAN]
604-75-1

4 Lorazepam [USAN:BAN:INN:JAN]
846-49-1

5 Temazepam [USAN:BAN:INN]
846-50-4

6 Lormetazepam [USAN:BAN:INN:JAN]
848-75-9

7 7-Aminodesmethylflunitrazepam
894-76-8

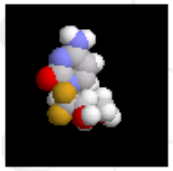
8 2H-1,4-Benzodiazepin-2-one, 1,3-dihydro-3-amino-7-chloro-5-phenyl-
894-77-9

9 Demoxepam [USAN:INN]
963-39-3

10 2H-1,4-Benzodiazepin-2-one, 1,3-dihydro-7-chloro-5-(o-fluorophenyl)-1-(3-(1-piperazinyl)propyl)-, hydrochloride
1057-13-2

Division of Specialized Information Services, NLM
ChemID*plus* Chemical Search Input Page
A TOXNET Resource

Try the new "Lite" version at
http://chem2.sis.nlm.nih.gov/chemidplus
- Fast searching by Name or RN
- Structures display as GIF images
- No plugin or applet required



ChemID*plus*

368066 Records
206088 Structures

Powered by Chemscape ™
http://www.mdl.com/products/framework/chemscape/

3D structures generated by CORINA *a product of* Molecular Networks

Data Search Type:
Name/Synonym | Equals

And optional **Locator Code** limit is
(Any)

Structure Input Box

Structure Search Type:
Substructure Search

Display 10 Results

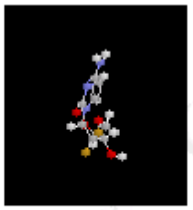
Display chemical structures using
Chime
Change Now
Java

Search | Clear | Help

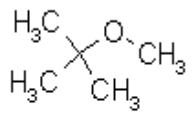
ChemID*plus* Search Screen

Five drop down menus on the search screen:

- Data Search Type: Names/Synonym, Registry Number, Formula (hyphenated), Classification Code, Locator Code
- Logical Operators: Equals (the default), Starts With, Contains
- Display results: 10 (default), 25
- Locator Code (optional limit): List of files and locators, MEDLINE, TOXLINE, EPA, FDA, WHO, OSHA, CDC
- Structure Search Type: Substructure Search, Similarity Search (default 80% similarity), Exact Structure



Methyl tert-butyl ether RN: 1634-04-4



Enlarge Structure

Molecular Structure | Names and Synonyms | Classification Codes | Formulas | Notes | Registry Numbers

Locator Codes | Entire Record | Main Query Page

ChemIDplus

File Locator

- CANCERLIT
- CCRIS
- DART/ETIC
- DSL
- EINECS
- EMIC
- HSDB
- Haz-Map
- IRIS
- ITER
- MEDLINE
- MEDLINEplus
- MESH
- RTECS
- TOXLINE Core
- TOXLINE Special
- TRI2000
- TRI2001
- TRI95
- TRI96
- TRI97
- TRI98
- TRI99
- TSCAINV

Internet Locators

- ATSDR PHSs
- ATSDR TOXFAQS

Welcome to the ChemID*plus* Locator Page

The window to the left displays one or more ChemID*plus* Locator Codes which link to other sites that carry information about the chemical you have retrieved. You may click on:

- **A hyperlinked Locator Code such as TOXLINE to retrieve data from that resource. Results will be displayed in this window.**
- **The information icon (i) to get a description of the source of the Locator Code and the scope of the search.**

The window on the top of the screen displays buttons that you may click on to change the data displayed for this chemical or to change your search mode. Hold your mouse pointer over a button to see a more detailed description.

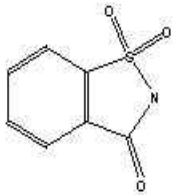
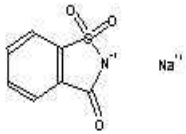
Locator Code Page

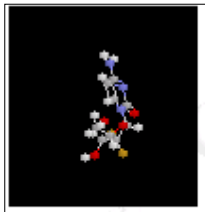
- Hyperlinked locators directly search resources on a substance
- Information icon (i) next to the locator gives the description of the database and scope

ChemIDplus

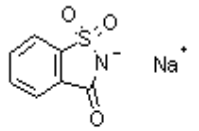
Query Results 1 - 2 of 2

Main Query Page

Options	ID	Structure	CAS	Molecule Name	Formula
Full Record Enlarge Structure Use Structure For Query Use Structure for Similarity	000081072		81-07-2	Saccharin [USAN]	C7-H5-N-O3-S
Full Record Enlarge Structure Use Structure For Query Use Structure for Similarity	000128449		128-44-9	Saccharin sodium anhydrous	C7-H5-N-O3-S.Na



Saccharin sodium anhydrous RN: 128-44-9



Enlarge Structure

Molecular Structure | Names and Synonyms | Classification Codes | Formulas | Registry Numbers | Locator Codes

Entire Record | Main Query Page

ChemIDplus

File Locator

- CCRIS
- DART/ETIC
- DSL
- EINECS
- EMIC
- GENETOX
- Household Products
- RTECS
- TOXLINE Special
- TSCAINV

Internet Locators

- EPA CRS
- EPA Envirofacts

Superlist Locator

- HPV
- IARC
- INER
- MA
- PA
- PAFA

Welcome to the ChemID*plus* Locator Page

The window to the left displays one or more ChemID*plus* Locator Codes which link to other sites that carry information about the chemical you have retrieved. You may click on:

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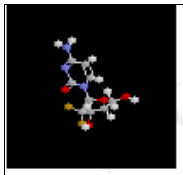
The window on the top of the screen displays buttons that you may click on to change the data displayed for this chemical or to change your search mode. Hold your mouse pointer over a button to see a more detailed description.

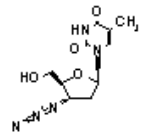


Zidovudine [USAN:BAN:INN:JAN] RN: 30516-87-1

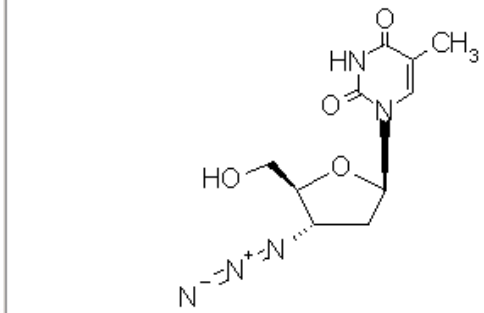
Molecular Structure | Names and Synonyms | Classification Codes | Formulas | Notes | Registry Numbers

Locator Codes | Entire Record | Main Query Page

ChemIDplus



Enlarge Structure



ID: 030516871	CAS Number: 30516-87-1
Enlarge Structure Use Structure For Query Use Structure for Similarity	Formula: C10-H13-N5-O4

Names and Synonyms

MeSH Heading

- Zidovudine

Mixture Name

- Combivir
- Trizivir

Name of Substance

- Zidovudine
- Zidovudine [USAN:BAN:INN:JAN]

Superlist Name

- 3'-Azido-3'-deoxythymidine
- Zidovudine

Synonyms

- (component of) Combivir
- (component of) Trizivir
- 1-(3-Azido-2,3-dideoxy-beta-D-ribofuranosyl)-5-methylpyrimidine-2,4-(1H,3H)-dione
- 3'-Azido-3'-deoxythymidine
- AZT
- Azidothymidine
- BW A509U
- BW-A 509U
- CCRIS 105
- Compound S
- DRG-0004
- HSDB 6515
- NSC 602670
- Retrovir
- ZDV
- Zidovudina [Spanish]
- Zidovudine
- Zidovudinum [Latin]

Systematic Name

- Azidothymidine
- Thymidine, 3'-azido-3'-deoxy-

Classification Codes

Classification Code

- Anti-HIV agents
- Antimetabolites
- Antimetabolites, antineoplastic
- Antiretroviral
- Antiviral
- Drug / Therapeutic Agent
- Human Data
- Mutation data
- Reproductive Effect
- Reverse transcriptase inhibitors
- Tumor data

Superlist Classification Code

- Overall Carcinogenic Evaluation: 2B

Formulas

Molecular Formula

- C10-H13-N5-O4

Locators

File Locator

- AIDSDRUGS
- AIDSLINE
- CANCERLIT
- CCRIS
- ClinicalTrials.gov
- DART/ETIC
- DSL
- EMIC
- HSDB
- MEDLINE
- MEDLINEplus
- MESH
- MESH HEADING
- RTECS
- TOXLINE Core
- TOXLINE Special

Internet Locators

- NIAID ChemDB
- NIAID HIV DRUGS
- healthfinder

Superlist Locator

- IARC
- NTPT

Notes

Note

- A dideoxynucleoside compound in which the 3'-hydroxy group on the sugar moiety has been replaced by an azido group. This modification prevents the formation of phosphodiester linkages which are needed for the completion of nucleic acid chains. The compound is a potent inhibitor of HIV replication, acting as a chain-terminator of viral DNA during reverse transcription. It improves immunologic function, partially reverses the HIV-induced neurological dysfunction, and improves certain other clinical abnormalities associated with AIDS. Its principal toxic effect is dose-dependent suppression of bone marrow, resulting in anemia and leukopenia.

Registry Numbers

CAS Registry Number

- 30516-87-1

ChemID*plus* Exercises

1. Check the file locator to see what NLM databases contain information on phenytoin. Search DART without leaving ChemID*plus*.

   Type Phenytoin in search box, click Search. Click DART/ETIC in left pane under File Locator, view record in right pane.

2. Locate the record for styrene and link to the Internet Locator ATSDR TOXFAQS. Next link to the NIOSH Pocket Guide. Is styrene on the EPA Clean Air Act (CAA1)? Activate the Classification Code button and find the IARC classification on carcinogenecity, click on the “i” to see the source.

   Type styrene in the search box, click Search. Scroll down the left pane and under Internet Locators click the link to ATSDR TOXFAQs. Next, scroll down and under Superlist Locator click the link to the CAA1 listing for styrene. At the top of the screen, click the button for Classification Code. Under Superlist Classification Code, click the "i" for Overall Carcinogenic Evaluation….. to view this source in the right pane.

3. Find the “valium” record in ChemID*plus* and use its structure to do substructure and similarity searches respectively. How many structures are in each category?

   Type valium in the search box, click Search. Now click the Molecular Structure button at the top. Click Use Structure for Query button. Choose Similarity Search from the Structure Search Type pull-down list and click Search. Type in a percent similarity between 50 and 100, the default is 80 percent, but you may have to use a lower number if you don't retrieve any hits. For a substructure search, go back to the Structure Search page (click back button on your browser), choose Substructure Search from the Structure Search Type pull-down list, click Search

4. Identify all the HSDB records that are ozone depletors (CAA2).

   Choose Locator Code from the Data Search Type pull-down list. Type HSDB in the search box. In the pull-down list that says "and optional Locator Code limit is" choose CAA2 from the pull-down list. Click Search.

Notes

Notes