

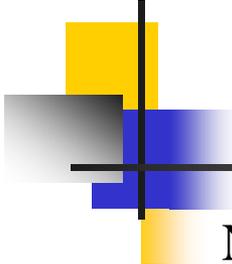
TOXNET

Toxicology and Environmental Health Information

from the National Library of Medicine (NLM)

and Other Sites

April 2008



Presented by

NLM's Toxicology and Environmental Health Information Program

part of the Division of Specialized Information Services

Contact:

Toxicology and Environmental Health Information Program

Division of Specialized Information Services

National Library of Medicine

Suite 510, MSC 5467

6707 Democracy Blvd.

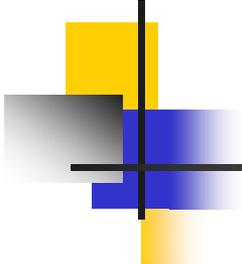
Bethesda, MD 20892-5467

301-496-1131

301-480-3537 (FAX)

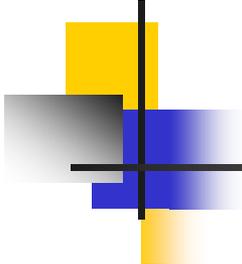
Web site: <http://sis.nlm.nih.gov/>

Contact: tehip@teh.nlm.nih.gov

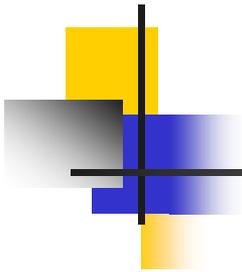


Class Schedule

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

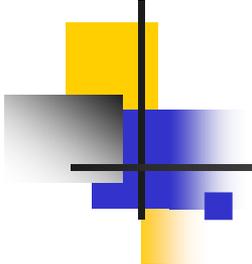


OFFICIAL CLASS LIST TOXNET



Part I

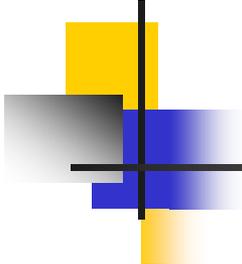
Introduction



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

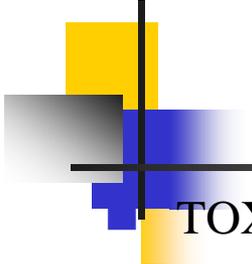


TEHIP Mission

- 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
- Addresses a spectrum of user needs, from the personal to the professional
- Is active in public training and outreach



TEHIP Databases

- TOXNET System of Databases (including ChemIDplus 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
- LactMed – Drugs and Lactation

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

Specialized Information Services Home Page

<http://sis.nlm.nih.gov>

United States
National Library of Medicine
National Institutes of Health

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 Go

NLM Home | Contact NLM | Site Map | FAQs

SIS Specialized Information Services

SIS Home | About Us | Site Map & Search | Contact Us

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.

- **Environmental Health & Toxicology**
Databases and other resources related to toxicology and environmental health
Features TOXNET
- **Chemical Information**
Databases and other resources designed to help search for information by chemical name or structure
Features ChemIDplus: Lite and Advanced
- **HIV/AIDS**
Links to journal literature, clinical trials and treatment information, meeting abstracts, and other scientific and consumer-related resources
- **Outreach Activities & Resources**
Programs, resources and web sites for minority and other specific populations
- **Directory of Health Organizations**
Features DIRLINE and Health Hotlines

More to Explore
SIS News
Drug Information Portal **NEW!**
Women's Health Resources **NEW!**
Special Populations:
Emergency and Disaster Preparedness
Radiation Event Medical Management
ToxMystery
Tox Town
WISER

Getting the Most from SIS's Environmental Health and Toxicology Resources

Additional NLM Sites
MEDLINE/PubMed®
Search journal literature

MedlinePlus®
Consumer health information

NLM Gateway
Search multiple NLM databases

Health Services Research & Public Health Information Programs

Bookshelf
Search selected biomedical books

Last updated: 20 February 2008

Environmental Health and Toxicology Home Page

<http://tox.nlm.nih.gov>



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Environmental Health and Toxicology

SIS Specialized Information Services

SIS Home >

[SIS Home](#) |
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 [Contact Us](#)

<p>Topics</p> <ul style="list-style-type: none"> ▶ Chemicals and Drugs ▶ Diseases and the Environment ▶ Environmental Health ▶ Occupational Safety and Health ▶ Poisoning ▶ Risk Assessment and Regulations ▶ Toxicology ▶ Pesticide Exposure 	<p>Especially for</p> <ul style="list-style-type: none"> ▶ The Public ▶ Researchers/Scientists ▶ Health Professionals ▶ Students/Educators ▶ Emergency Responders 	<p>TOXNET®</p> <p>Collection of databases on hazardous chemicals, toxic releases, and environmental health</p> <p>Search TOXNET for:</p> <input style="width: 100%;" type="text"/> <input style="background-color: #0056b3; color: white; padding: 2px 5px;" type="button" value="Search"/> <p>Search a single database:</p> <table style="width: 100%; font-size: x-small;"> <tr><td>ChemIDplus</td><td>HSDB</td></tr> <tr><td>CCRIS</td><td>IRIS</td></tr> <tr><td>CPDB</td><td>ITER</td></tr> <tr><td>DART</td><td>LactMed</td></tr> <tr><td>GENE-TOX</td><td>TOXLINE</td></tr> <tr><td>Haz-Map</td><td>TOXMAP</td></tr> <tr><td>Household Products</td><td>TRI</td></tr> </table> <p>TOXNET FAQs</p> <p> Quick Tours</p> <ul style="list-style-type: none"> NLM's Environmental Health and Toxicology Resources (4 minutes, 7 MB, Flash player) Basic Searching of the Hazardous Substances Data Bank (8 minutes, 11 MB, Flash player) 	ChemIDplus	HSDB	CCRIS	IRIS	CPDB	ITER	DART	LactMed	GENE-TOX	TOXLINE	Haz-Map	TOXMAP	Household Products	TRI
ChemIDplus	HSDB															
CCRIS	IRIS															
CPDB	ITER															
DART	LactMed															
GENE-TOX	TOXLINE															
Haz-Map	TOXMAP															
Household Products	TRI															
<p>Reference Tools</p> <ul style="list-style-type: none"> A to Z List of Resources Calendar of Events Database Descriptions Database Manual Fact Sheets FAQ List Getting the Most from SIS's Environmental Health and Toxicology Resources IUPAC Glossary of Terms Used in Toxicology List of NLM Databases and Resources News Publications and Reference Materials Toxicology Tutorials <p>Listservs:</p> <ul style="list-style-type: none"> MedlinePlus® Environmental Health NLM-TOX-ENVIRO-HEALTH-L WISER - Wireless Information System for Emergency Responders 	<p>More to Explore</p> <ul style="list-style-type: none"> ALTBIB Dietary Supplements Labels Database DIRLINE® Drug Information Portal NEW! Education and Career Links Enviro-Health Links Health Services Research & Public Health Information Programs MedlinePlus: Consumer Environmental Health Information Public Health Information Radiation Event Medical Management (REMM) Tox Town Toxicology Web Links ToxMystery ToxSeek WISER 	<p>Featured Site</p> <div style="text-align: center; margin-bottom: 10px;">  </div> <p>National Report on Human Exposure to Environmental Chemicals Centers for Disease Control and Prevention</p> <hr/> <div style="text-align: center;">  </div> <p>National Institute of Environmental Health Sciences: The primary NIH organization for environmental health research</p>														

Last updated: 07 February 2008

DIRLINE Home Page

<http://dirline.nlm.nih.gov>



United States
National Library of Medicine
National Institutes of Health

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Directory of Health Organizations

SIS Specialized Information Services

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[SIS Home](#) >

Search DIRLINE

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



Health Hotlines

Toll-free numbers for over 300 organizations

Other NLM Resources

[MedlinePlus®](#)

[PubMed](#)

[NLM Gateway](#)

[LocatorPlus](#)

Support Pages

[Help](#)

[Fact Sheet](#)

[Disclaimer](#)

[Suggestion Form](#)



DIRLINE Search Results

[SIS Home](#) [DIRLINE](#)

drinking water

Search

Clear

Items 1 through 20 of 47

Pages: [1](#) [2](#) [3](#) ▶

Organization Names are sorted in *relevancy ranked* order.

Save
Checked Items

Sort

Details

History

Download

Modify Search

New Search

Browse Index

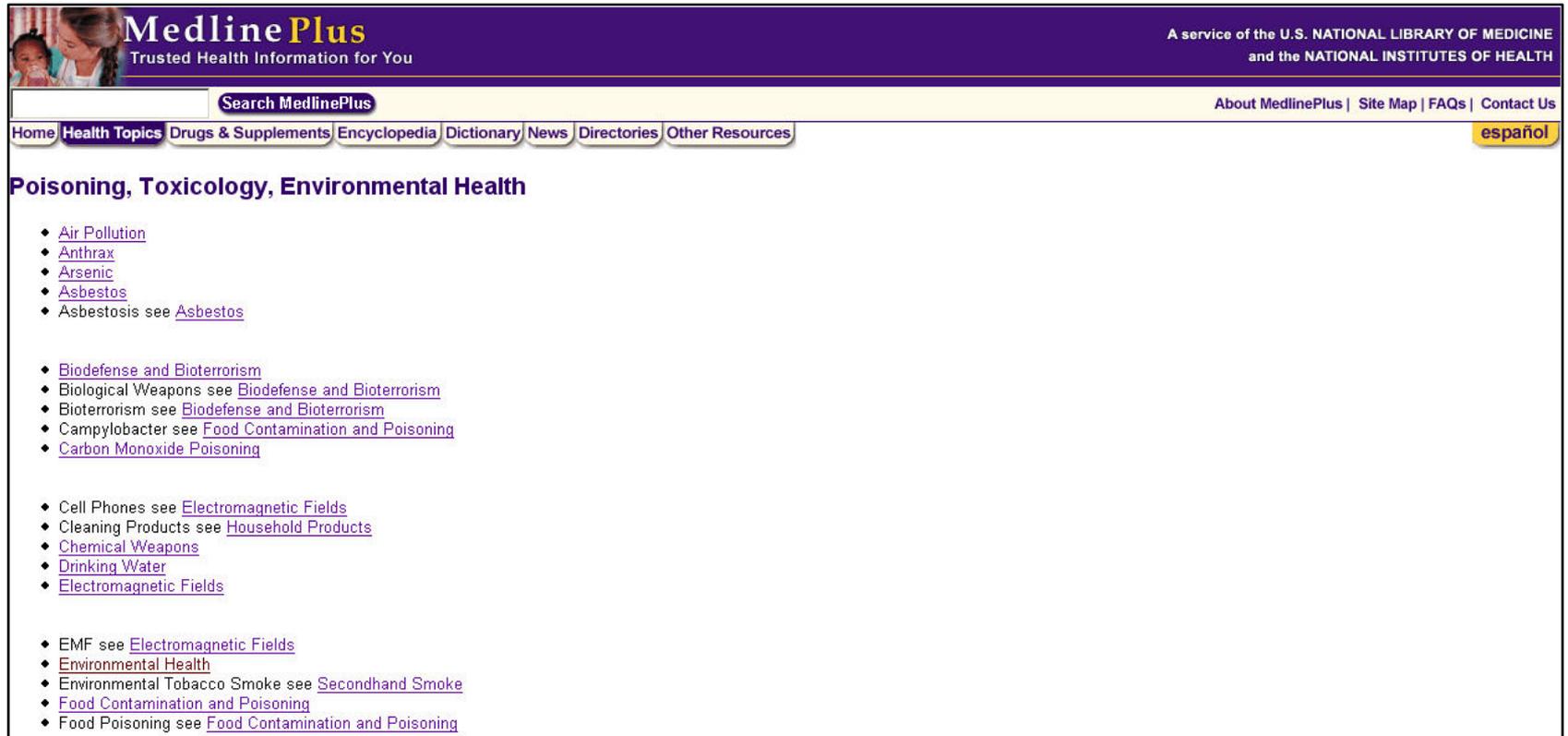
SIS
Home

MEDLINEplus
Home

Select Record	Organization Name
1 <input type="checkbox"/>	Office of Drinking Water - Virginia Department of Health (ODW)
2 <input type="checkbox"/>	Drinking Water Program - Department of Environmental Protection - Massachusetts State Government (DWP)
3 <input type="checkbox"/>	National Drinking Water Clearinghouse - National Environmental Service Center - West Virginia University (NDWC)
4 <input type="checkbox"/>	Office of Ground Water and Drinking Water - U.S. Environmental Protection Agency (OGWDW)
5 <input type="checkbox"/>	Drinking Water Program - Division of Drinking Water and Environmental Management - California Department of Health Services - California State Government (DWP)
6 <input type="checkbox"/>	Division of Water Supply Protection - Massachusetts Department of Conservation and Recreation
7 <input type="checkbox"/>	Water Supply and Water Resources Division - National Risk Management Research Laboratory - U.S. Environmental Protection Agency (WSWR)
8 <input type="checkbox"/>	Office of Drinking Water Quality - Rhode Island Department of Health - State of Rhode Island
9 <input type="checkbox"/>	Office of Water Quality - Indiana Department of Environmental Management - Indiana State Government (OWQ)

MedlinePlus Health Topic: Poisoning, Toxicology, Environmental Health

<http://www.nlm.nih.gov/medlineplus/poisoningtoxicologyenvironmentalhealth.html>



The screenshot shows the MedlinePlus website interface. At the top left is the MedlinePlus logo with the tagline 'Trusted Health Information for You'. To the right, it states 'A service of the U.S. NATIONAL LIBRARY OF MEDICINE and the NATIONAL INSTITUTES OF HEALTH'. Below the logo is a search bar labeled 'Search MedlinePlus'. A navigation menu includes 'Home', 'Health Topics', 'Drugs & Supplements', 'Encyclopedia', 'Dictionary', 'News', 'Directories', and 'Other Resources'. A 'español' button is located on the right side of the navigation menu. The main content area is titled 'Poisoning, Toxicology, Environmental Health' and contains a list of links to related 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](#)
- ♦ Cleaning Products see [Household Products](#)
- ♦ [Chemical Weapons](#)
- ♦ [Drinking Water](#)
- ♦ [Electromagnetic Fields](#)

- ♦ EMF see [Electromagnetic Fields](#)
- ♦ [Environmental Health](#)
- ♦ Environmental Tobacco Smoke see [Secondhand Smoke](#)
- ♦ [Food Contamination and Poisoning](#)
- ♦ Food Poisoning see [Food Contamination and Poisoning](#)

ClinicalTrials.gov Conditions Category Injuries, Poisonings, and Occupational Conditions

<http://clinicaltrials.gov>

ClinicalTrials.gov

A service of the U.S. National Institutes of Health

[Home](#) [Search](#) [Study Topics](#) [Glossary](#)

[Basic Search](#)

[Advanced Search](#)

[Studies by Topic](#)

[Studies on Map](#)

Categorize All Studies in ClinicalTrials.gov

Main Category: [Conditions By Category](#)

Condition Category: [Injuries, Poisonings, and Occupational Conditions](#)

Search for Condition

[Abdominal Injuries](#) 2 studies
[Abnormalities, Radiation-Induced](#) 1 study
[Alcohol-Induced Disorders](#) 20 studies
[Alcohol-Related Disorders](#) 244 studies
[Alcoholic Intoxication](#) 7 studies
[Alcoholic Neuropathy](#) 1 study
[Alcoholism](#) 220 studies
[Amphetamine-Related Disorders](#) 19 studies
[Amputation, Traumatic](#) 6 studies
[Ankle Injuries](#) 5 studies
[Aortic Rupture](#) 1 study
[Arachnidism](#) 1 study
[Arm Injuries](#) 36 studies
[Asbestosis](#) 1 study
[Asphyxia](#) 13 studies
[Athletic Injuries](#) 3 studies
[Back Injuries](#) 16 studies
[Barotrauma](#) 2 studies
[Berylliosis](#) 2 studies
[Birth Injuries](#) 3 studies
[Bites and Stings](#) 5 studies
[Blast Injuries](#) 1 study
[Botulism](#) 3 studies

Click on a link to search for the Condition. Use the back button to return to this page to try another Condition.

NLM Gateway

Search Results for ASTHMA POLLUTION

<http://gateway.nlm.nih.gov/gw/Cmd>



Your Entrance to the
Knowledge Resources of the
National Library of Medicine

[Help](#)[FAQ](#)[What's New](#)[About](#)[Term Finder](#)[Limits/Settings](#)[Search Details](#)[History](#)[Locker](#)[Contact Us](#)

Results Summary: **6501** records found [\[Bookmark this Search \]](#)

Bibliographic Resources [i](#)

- 3121 **MEDLINE/PubMed** - journal citations, abstracts
- 22 **NLM Catalog** - books, AVs, serials
- 28 **Bookshelf** - full text biomedical books

- 2870 **TOXLINE Subset** - toxicology citations
- 16 **DART** - Developmental and Reproductive Toxicology
- 8 **Meeting Abstracts**

Consumer Health Resources [i](#)

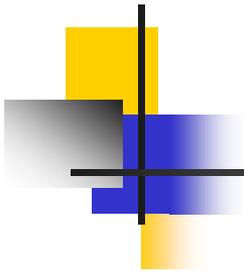
- 6 **MedlinePlus** - Health Topics
- 0 **MedlinePlus** - Drug Information
- 7 **MedlinePlus** - Medical Encyclopedia
- 2 **MedlinePlus** - Current Health News
- 3 **MedlinePlus** - Other Resources

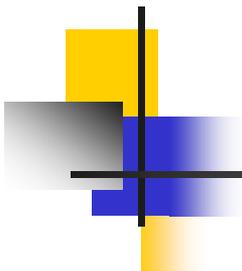
- 11 **ClinicalTrials.gov**
- 0 **DIRLINE** - Directory of Health Organizations
- 0 **Genetics Home Reference**
- 0 **Household Products Database**

Other Information Resources [i](#)

- 10 **HSRProj** - Health Services Research Projects
- 1 **OMIM** - Online Mendelian Inheritance in Man
- 394 **HSDB** - Hazardous Substances Data Bank
- 1 **IRIS** - Integrated Risk Information System

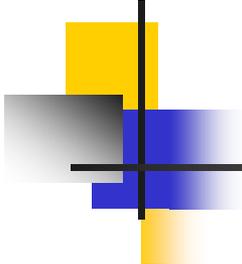
- 0 **ITER** - International Toxicity Estimates for Risk
- 0 **GENE-TOX** - Genetic Toxicology (Mutagenicity)
- 0 **CCRIS** - Chemical Carcinogenesis Research Information System
- 1 **Profiles in Science**





Part II

ChemIDplus



ChemIDplus

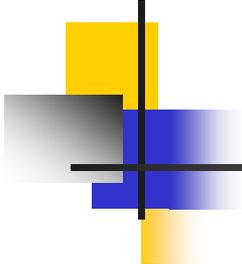
The ChemIDplus file is a database with two different applications:

- ChemIDplus Lite at:

<http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

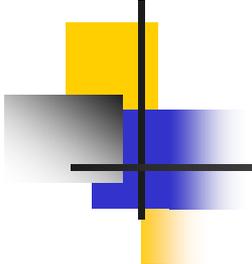
- ChemIDplus Advanced at:

<http://chem.sis.nlm.nih.gov/chemidplus/>



ChemIDplus

- Chemical Identification File
- Chemical Dictionary/Directory File for chemicals cited in MEDLARS Files & outside resources
- Contains over 380,000 chemical records
- Structural Data for over 290,000 records
- Search options include ChemIDplus Lite (Basic search) and ChemIDplus Advanced



ChemIDplus Lite (Basic Search)

Lite search yields:

- Basic information buttons in the left column which can be used to access specific info such as names/synonyms, formula, classification codes, or the Full Record containing all basic information
- Links to various source “locators” with additional information on the chemical.  button gives a description of the source.
- Navigation buttons on the right can be used to return to the Main Query Page in TOXNET or proceed to an Advanced ChemIDplus Search

Note: The ChemIDplus Lite search input box accepts only chemical names (including all synonyms) or registry numbers. A partial name can be used with an asterisk(*) as a “starts with” feature. Example: EDTA*

ChemIDplus Lite (Basic Search) Result

ARSENIC Search Clear

Arsenic RN: 7440-38-2

For more information about this substance,
you may select from the the links below.

File Locator

CCRIS	i NCI Chem Carcino Res Info Sys
DART	i Developmental and Reprod.Tox.
DSL	i Domestic Sub. List of Canada
EINECS	i EU Inv of Exist. Comm. Chem Sub
EMIC	i Env. Mutagen Info. Center
GENETOX	i EPA GENetic TOXicology
HSDB	i Hazardous Substances Data Bank
Haz-Map	i Occ. Exposure to Haz. Agents
IRIS	i EPA Integrated Risk Info. System
ITER	i International Tox. Est. for Risk
MeSH	i Medical Subject Headings File
MeSH Heading	i Medical Subject Headings
PubChem	i PubChem
PubMed	i Biomedical Citations From PubMed
PubMed Cancer	i Cancer Citations from PubMed
PubMed Toxicology	i Toxicology Citations From PubMed
RTECS	i Reg. of Toxic Eff. of Chem. Sub.
TOXLINE	i NLM TOXLINE on TOXNET
TOXMAP	i NLM Enviro. Health e-Maps
TRI2000	i EPA Toxics Release Inv. 2000

Basic Information

Full Record

Names & Synonyms

Formulas

Classification Codes

Registry Numbers

Notes

Toxicity

Search Navigation

Main Query Page

Advanced ChemIDplus Search

Begin a new search in Lite or TOXNET

Lists other names used

Link to PubMed articles

Types of Locators in ChemIDplus

Methylmercury II RN: 22967-92-6

Basic Information

Full Record

Names & Synonyms

Formulas

Classification Codes

Registry Numbers

For more information about this substance, you may select from the the links below.

File Locator

[DART](#)

[EMIC](#)

[HSDB](#)

[IRIS](#)

[ITER](#)

[MeSH](#)

[PubChem](#)

[PubMed](#)

[PubMed Cancer](#)

[PubMed Toxicology](#)

[RTECS](#)

[TOXLINE](#)

[Developmental and Reprod.Tox.](#)

[Env. Mutagen Info. Center](#)

[Hazardous Substances Data Bank](#)

[EPA Integrated Risk Info. System](#)

[International Tox. Est. for Risk](#)

[Medical Subject Headings File](#)

[PubChem](#)

[Biomedical Citations From PubMed](#)

[Cancer Citations from PubMed](#)

[Toxicology Citations From PubMed](#)

[Reg. of Toxic Eff. of Chem. Sub.](#)

[NLM TOXLINE on TOXNET](#)

Internet Locator

[ChEBI](#)

[EPA Envirofacts](#)

[EPA SRS](#)

[Chem Entities of Biological Interest](#)

[EPA Master Chemical Integrator](#)

[EPA Substance Registry System](#)

Superlist Locator

[CA65](#)

[MA](#)

[S110](#)

[California Proposition 65 List](#)

[Massachusetts Right-to-know Sub.](#)

[ATSDR Priority List of Haz. Sub.](#)

Search Navigation

Main Query Page

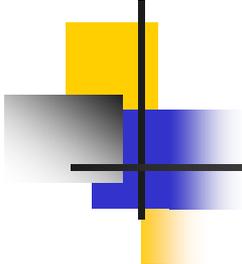
Search Results Page

Advanced ChemIDplus Search

File locators link to NLM associated databases

Internet locators link to web resources with additional biomedical information

Superlist locators link to regulatory and governmental lists and websites



ChemIDplus Advanced

Advanced search input:

- Multiple search boxes such as: substance ID, toxicity, physical properties, structure, and more.
- Search boxes can be utilized simultaneously or one at a time. Some boxes have qualifiers (i.e. starts with, contains, between, greater than, etc.)
- Structure drawing and searching features
- History button saves last 10 search inputs
- Allows user to select number of results displayed per page



Search Clear History Help

Display 5 results

Substance Identification

Name/Synonym Equals

Data is available for 381,220 records.

Toxicity

Test: (any) between (mg/kg or ppm)
Species: (any)
Route: (any)
Effect: (any)

Toxicity data is available for 139,354 records.

Physical Properties

Melting Point between
Either Measurement Type

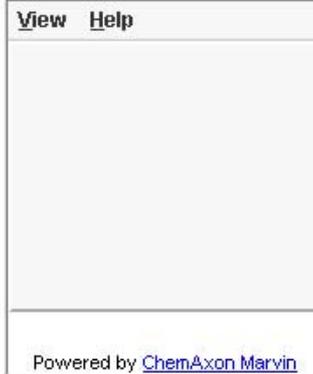
Physical property data was provided by [Syracuse Research Corporation](#) and is available for 25,461 records.

Locator Codes

(any)

Structure

View Help



Powered by [ChemAxon Marvin](#)

Structure Search Options

- Substructure Search
- Similarity Search 80 %
- Exact (parent only)
- Flex (parent, salts, mixture) *NEW*
- Flexplus (parent, all variations) *NEW*

Display structures using

- Marvin Chime [Change](#)

Structure data is available for 278,554 records.

Molecular Weight

Insert name, registry #,
Classification code, & more

Qualify a toxicity search

Select a physical
property

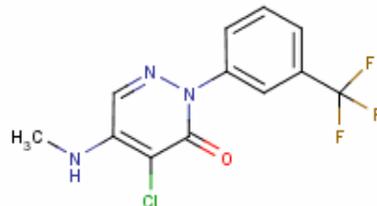
Qualify a property
search

Click inside box to
draw structure

Select the type
of structure search

ChemIDplus Advanced Search Result

NAME: Norflurazon [ANSI:BSI:ISO]
RN: 27314-13-2



Click to enlarge and manipulate structure

Same basic information as Lite result

MW: 303.67

[Enlarge Structure](#)

Basic Information	
Full Record	
Structure	
Names & Synonyms	
Formulas	
Classification Codes	
Registry Numbers	
Toxicity	
Physical Properties	

For more information about this substance, you may select from the the links below.

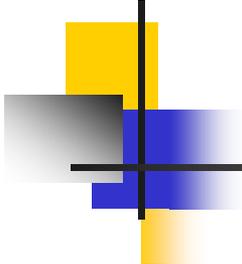
File Locator

DART	Developmental and Reprod.Tox.
EINECS	EU Inv of Exist. Comm. Chem Sub
EMIC	Env. Mutagen Info. Center
HSDB	Hazardous Substances Data Bank
IRIS	EPA Integrated Risk Info. System
ITER	International Tox. Est. for Risk
MeSH	Medical Subject Headings File
PubChem	PubChem
PubMed	Biomedical Citations From PubMed
PubMed Cancer	Cancer Citations from PubMed
PubMed Toxicology	Toxicology Citations From PubMed
RTECS	Reg. of Toxic Eff. of Chem. Sub.
TOXLINE	NLM TOXLINE on TOXNET
TOXMAP	NLM Enviro. Health e-Maps
TRI2000	EPA Toxics Release Inv. 2000
TRI2001	EPA Toxics Release Inv. 2001
TRI2002	EPA Toxics Release Inv. 2002
TRI2003	EPA Toxics Release Inv. 2003
TRI2004	EPA Toxics Release Inv. 2004
TRI2005	EPA Toxics Release Inv. 2005

Search Navigation	
Start New Query	
Modify Query	
Show Query	
Search History	
Structure Similarity Search	
Structure Salt/Parent Search	
Transfer Structure	
Basic ChemIDplus Search	

Advanced search navigation features

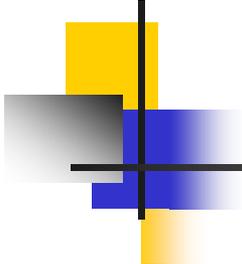
Same locators as Lite result



ChemIDplus Glossary

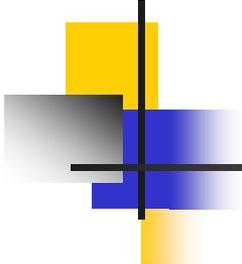
Names and Synonyms

- **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 Name**: The name used by regulatory/guidance lists



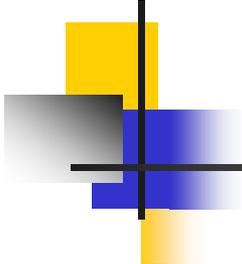
ChemIDplus Glossary

- **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.



ChemIDplus Glossary

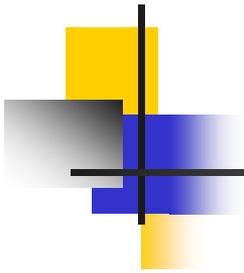
- **CAS Registry Number**: Unique number of up to 10 digits assigned by Chemical Abstracts Service used to index chemicals. ChemIDplus uses the hyphenated format
- **ID**: The ID number is the CAS Registry Number in a non-hyphenated fixed length format or a unique number for entries that have no CAS Registry or NLM assigned numbers
- **Molecular Structure**: Display of structure (if present) via Chime or Marvin
- **Registry Numbers**: All CAS Registry Numbers known to be assigned over time to a specific compound



ChemIDplus Glossary

- **Toxicity** Values that indicate whether the dose caused death (LD) or other toxic non-lethal effect (TD) or whether it was administered as a lethal concentration (LC) or toxic concentration in the inhaled air (TC)
- **Physical Properties** Values for melting point, boiling point, water solubility, octanol/water partition coefficient, vapor pressure, acid dissociation constant, Henry's law, and OH radical reaction rate constant
- **Molecular Weight** The mass of a molecule

Note: Click on the Advanced Help button for detailed definitions and explanations of search features.



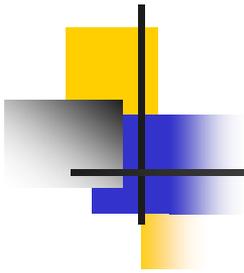
ChemIDplus Exercises

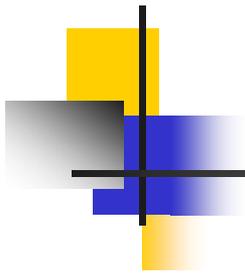
Using ChemIDplus Lite: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

1. Check the file locator to see what NLM databases contain information on phenytoin. Search DART without leaving ChemIDplus.
Type Phenytoin in search box, click Search. Click DART/ETIC in the middle blue box under File Locator, view record in slave window.
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 carcinogenicity, click on the "i" to see the source.
Type styrene in the search box, click Search. Scroll down the middle blue box and under Internet Locators click the link to ATSDR TOXFAQS. Close the slave window and click NIOSH Pocket Guide also under Internet Locators. Next, scroll down and under Superlist Locator click the link to the CAA1 listing for styrene. Under Basic Information on the left, click the button for Classification Code. Under Superlist Classification Code, click the "i" for Overall Carcinogenic Evaluation..... to view this data source in the slave window.

Using ChemIDplus Advanced: <http://chem.sis.nlm.nih.gov/chemidplus/>

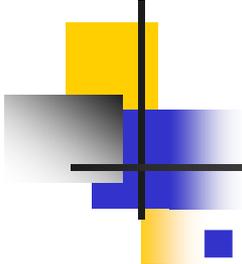
1. Find the "valium" record in ChemIDplus and use its structure to do substructure and similarity searches respectively. How many structures are in each category?
Type valium in the substance identification input box, click Search. Now click the Transfer Structure button in the right column. In the Structure input box, be sure the default substructure search is selected. Click search. View the result count. Now click the modify query button. In the Structure input box, select similarity search and choose 90 in the percentage pull-down box (the default is 80%). Click search. View the result count. This result give structures that are 90% similar or greater. If no results are retrieved, then a lower percentage must be used.
2. Identify all the HSDB records that are ozone depletors (CAA2).
In the Locator Code input box select HSDB from the first pull-down list. Type HSDB in the search box. Be sure the default "and" is selected in the second pull-down list. In the third pull-down list choose CAA2. Click Search.
3. Identify all compounds that have an orally administered LD50 less than 50mg/kg (less than 50mg/kg is considered extremely toxic by EPA guidelines-See Help Section under Toxicity).
In the Toxicity input box next to Test, select LD50 and less than from the pull-down boxes. Then, type 50 in the empty input box below Test. Next to Route, select oral from the pull-down box. Click search.
4. Find the logP value for the chemical DDT in the Physical Properties table. Use the Help Section to verify that this substance is stored in the fatty tissues of animals based on the logP value in the table.
Type DDT in the substance identification input box and click search. Click on the Physical Properties button under Basic Information. Note the logP value in the table in the slave window. Close the window. Click the Start New Query button to return to the main query page. Click the Help button. Click on the link to Chemical Properties. Scroll down and read the example given for logP values.





Part III

TOXNET Overview, HSDB, & Related Files

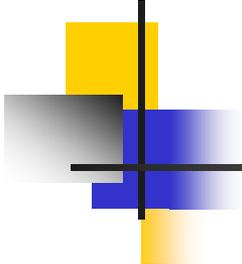


What is TOXNET?

- 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
- Chemical Nomenclature - ChemIDplus
- Toxicology Data (one record per chemical)– HSDB, IRIS, CCRIS, GENE-TOX, ITER, LactMED (can also search any combination of these files with “Multi-Databases” interface)
- Toxicology Literature (bibliographic references) – TOXLINE, DART
- Toxic Releases (of chemicals to the environment) – TRI
- Specialty Databases – HazMap, Household Products
- User Support – tehip@teh.nlm.nih.gov or click on “Contact TOXNET”

Where is TOXNET?

toxnet.nlm.nih.gov



Toxicology Data Files - Content

Hazardous Substances Data Bank (HSDB) – from NLM

About 5000 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

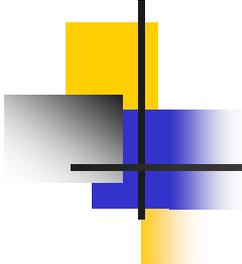
Occupational Exposure Standards

Manufacturing and Use

Laboratory Methods

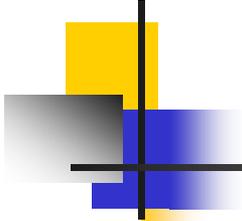
Special References

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.
- Recent Radiation Data Enhancements to HSDB – Radionuclides and a separate record for Ionizing Radiation Added



Toxicology Data Files - Content

Chemical Carcinogenesis Research Information System (CCRIS) –

from the National Cancer Institute (NCI)

About 9000 Chemical Records

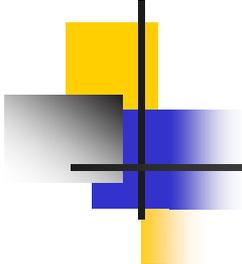
Carcinogenicity Studies

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

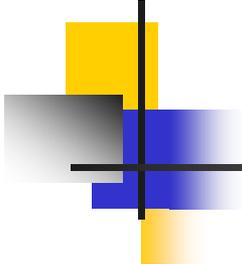
from the U.S. Environmental Protection Agency (EPA)

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)

About 550 Chemical Records

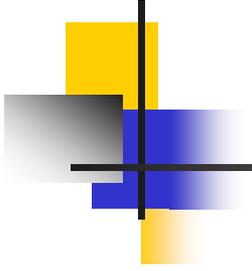
Noncarcinogenic Assess. – Oral (RfD)

Noncarcinogenic Assess. – Inhal. (RfC)

Carcinogenic Assess. – Oral

Carcinogenic Assess. – Inhal.

- 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 Toxicology Excellence for Risk Assessment (TERA)

A Non-profit Corporation

About 650 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

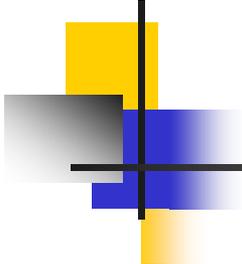
International Agency for Research on Cancer (IARC)

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



Toxicology Data Files – Content

Drugs and Lactation (LactMed)

Over 500 records

- Summary of Use During Lactation
- Drug Levels [*Maternal and Infant (Serum or Urine)*]
- Effects in Infants
- Possible Effects on Lactation
- AAP (American Academy of Pediatrics) Category
- Alternate Drugs
- References [*Hyperlinked to PubMed Record if available*]
- Substance Name
- CAS Registry Number
- Drug Class



United States
National Library
of Medicine

TOXNET

Toxicology Data Network



TOXNET PDA Access SIS Home | About Us | Site Map & Search | Contact Us

▶ Env. Health & Toxicology ▶ TOXNET

TOXNET - Databases on toxicology, hazardous chemicals, environmental health, and toxic releases.

Select Database

- ChemIDplus [?](#)
- HSDB [?](#)
- TOXLINE [?](#)
- CCRIS [?](#)
- DART [?](#)
- GENETOX [?](#)
- IRIS [?](#)
- ITER [?](#)
- LactMed [?](#)
- Multi-Database [?](#)
- TRI [?](#)
- Haz-Map [?](#)
- Household Products [?](#)
- TOXMAP [?](#)

Search All Databases

Enter term(s) to search all databases.

(e.g. asthma air pollution, ibuprofen fever, vinyl chloride)

TOXNET Search Options

- Search all databases: Enter term(s) in box above
- Search a specific database: Click database at left
- Database description: Click on the [?](#)

Env. Health & Toxicology



Portal to
environmental
health and
toxicology
resources

Support Pages

- ▶ Help
- ▶ TOXNET FAQ
- ▶ TOXNET Update Status
- ▶ Fact Sheet
- ▶ Database Description
- ▶ Training Manuals
- ▶ News

Additional Resource

- CPDB [?](#)

New →



TOXNET - Databases on toxicology, hazardous chemicals, environmental health, and toxic releases.

Select Database

- ChemIDplus [?](#)
- HSDB [?](#)
- TOXLINE [?](#)
- CCRIS [?](#)
- DART [?](#)
- GENETOX [?](#)
- IRIS [?](#)
- ITER [?](#)
- LactMed [?](#)
- Multi-Database [?](#)
- TRI [?](#)
- Haz-Map [?](#)
- Household Products [?](#)
- TOXMAP [?](#)

Additional Resource

- CPDB [?](#)

Search All Databases

Enter term(s) to search all databases.

(e.g. asthma air pollution, ibuprofen fever, vinyl chloride)

[Search](#) [Clear](#) [Help](#)

TOXNET Search Options

- Search all databases: Enter term(s) in box above
- Search a specific database: Click database at left
- Database description: Click on the [?](#)

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Portal to environmental health and toxicology resources

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Support Pages

- ▶ [Help](#)
- ▶ [TOXNET FAQ](#)
- ▶ [TOXNET Update Status](#)
- ▶ [Fact Sheet](#)
- ▶ [Database Description](#)
- ▶ [Training Manuals](#)
- ▶ [News](#)

Chemical names, ID numbers, or other attributes can be searched, singly or in combination.



TOXNET - Databases on toxicology, hazardous chemicals, environmental health, and toxic releases.

Select Database

- [ChemIDplus](#)
- [HSDB](#)
- [TOXLINE](#)
- [CCRIS](#)
- [DART](#)
- [GENETOX](#)
- [IRIS](#)
- [ITER](#)
- [LactMed](#)
- [Multi-Database](#)
- [TRI](#)
- [Haz-Map](#)
- [Household Products](#)
- [TOXMAP](#)

Additional Resource

- [CPDB](#)

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Portal to environmental health and toxicology resources.

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- ▶ [Database Description](#)
- ▶ [Training Manuals](#)
- ▶ [News](#)

Search All Databases

(e.g. asthma air pollution, ibuprofen fever, vinyl chloride)

References from Biomedical Literature

TOXLINE	Toxicology Literature Online	3938
DART	Developmental Toxicology Literature	201

Chemical, Toxicological, and Environmental Health Data

ChemIDplus	Chemical Identification/Dictionary	1
HSDB	Hazardous Substances Data Bank	38
CCRIS	Chemical Carcinogenesis Information	8
CPDB	Carcinogenic Potency Database	1
GENETOX	Genetic Toxicology Data	2
IRIS	Integrated Risk Information	1
ITER	International Toxicity Estimates for Risk	2
LactMed	Drugs and Lactation Database	0
TRI	Toxics Release Inventory	79
TOXMAP	Environmental Health e-Maps	Map It
Haz-Map	Occupational Exposure/Toxicology	Show me
Household Products	Health & Safety Information on Household Products	Show me

To search all or a combination of HSDB, CCRIS, GENETOX, IRIS, ITER, LactMed

Record counts may vary somewhat when databases are searched individually.



HSDB Search Results

Save
Checked Items

Sort

Details

History

Download

Modify Search

Basic Search

Browse Index

Help

TOXNET Home

Search

Clear

Limits

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

Items 1 through 20 of 38

Pages: 1 2 ▶

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 [ACRYLAMIDE](#)
79-06-1

More relevant records display
nearer the top of the list.

The following 37 records contain one or more of the requested chemical name(s) and all of the query terms anywhere in the record.

2 [ASPARAGINE](#)
70-47-3

3 [N-\(HYDROXYMETHYL\)ACRYLAMIDE](#)
924-42-5

4 [POLYACRYLAMIDE](#)
9003-05-8

5 [ACRYLONITRILE](#)
107-13-1

6 [STYRENE-7,8-OXIDE](#)

Note other chemical records in which
name acrylamide is mentioned.

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](#)

ACRYLAMIDE

CASRN: 79-06-1

For other data, click on the Table of Contents

Human Health Effects:

Human Health Effects is default display only for HSDB.

Toxicity Summary:

Search term(s) highlighted in red.

IDENTIFICATION: **Acrylamide** is a white crystalline solid produced from acrylonitrile, which is present as a residue in technical grades of **acrylamide**. **Acrylamide** is mainly used in the production of polymers and copolymers for various purposes. All **acrylamide** in the environment is man-made, the main source being the release of the monomer residues from polyacrylamide used in water treatment or in industry. HUMAN EXPOSURE: **Acrylamide** is readily absorbed by ingestion, inhalation, and through the skin. **Acrylamide** is toxic and an irritant. Cases of **acrylamide** poisoning show signs and symptoms of local effects due to irritation of the skin and mucous membranes and systemic effects due to the involvement of the central, peripheral, and autonomic nervous systems. Local irritation of the skin or mucous membranes is characterized by blistering and desquamation of the skin of the hands (palms) and feet (soles) combined with blueness of the hand and feet. Effects on the central nervous system are characterized by abnormal fatigue, sleepiness, memory difficulties, and dizziness. With severe poisoning, confusion, disorientation, and hallucinations occur. Truncal ataxia is a characteristic feature, sometimes combined with nystagmus and slurred speech. Excessive sweating in the limb extremities is a common observation. Sign of central nervous system and local skin involvement may precede peripheral neuropathy by as much as several weeks. Peripheral neuropathy can involve loss of tendon reflexes, impairment of vibration sense, loss of other sensation, and muscular wasting in peripheral parts of the extremities. Nerve biopsy shows loss of large diameter nerve fibers as well as regenerating fibers. Autonomic nervous system involvement is indicated by excessive sweating, peripheral vasodilation, and difficulties in micturition and defecation. After cessation of exposure to **acrylamide**, most cases recover, although the course of improvement is prolonged and can extend over months to years. No epidemiological data on cancer due to exposure to **acrylamide** are available and, from the available data, it is not possible to form a conclusion concerning the carcinogenicity of

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Customer Service: tehp@tehl.nlm.nih.gov.

Click here to view environmental
fate information.

To view system
search strategy

Hazardous
Substances
Data Bank

HSDB

Next Item

Search Results

Basic Search

Details

Other Files

Modify Search

TOXNET
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Item 1 of 38

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- [Occupational Exposure Standards](#)
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National Institutes of Health,
Department of Health & Human Services
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ACRYLAMIDE

CASRN: 79-06-1

For other data, click on the Table of Contents

Environmental Fate & Exposure:

Environmental Fate/Exposure Summary:

Acrylamide's production and use in the production of polyacrylamide and amide monomers may result in its release to the environment through various waste streams. If released to air, a vapor pressure of 0.007 mm Hg at 25 deg C indicates **acrylamide** will exist solely as a vapor in the ambient atmosphere. Vapor-phase **acrylamide** will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 1.4 days. The half-life for the reaction of vapor-phase **acrylamide** with ozone is estimated to be 6.5 days. **Acrylamide** is not expected to be susceptible to direct photolysis in sunlight since it does not absorb light with wavelengths >290 nm. If released to soil, **acrylamide** is expected to have very high mobility based upon an estimated K_{oc} of 10. Volatilization from moist soil surfaces is not expected to be an important fate process based upon an estimated Henry's Law constant of 1.8X10⁻⁹ atm-cu m/mole. Volatilization from dry soil surfaces is not expected based on **acrylamide's** vapor pressure. The nitrogen in **acrylamide** was recovered as inorganic nitrogen with recoveries after 3 and 14 days at 30 deg C ranging from 11-71% in Clarion soil and 74-95% in Canisteo soil, respectively. Results from these studies suggested that **acrylamide** is hydrolyzed in soil under aerobic conditions to produce ammonium ion, which is then oxidized to nitrite ion and nitrate ion. If released into water, **acrylamide** is not expected to adsorb to suspended solids and sediment based upon the estimated K_{oc}. In a river die-away test, 90% of **acrylamide** disappeared in approximately 150 hours. Volatilization from water surfaces is not expected to be an important fate process based upon this compound's Henry's Law constant. A BCF of 1 for fingerling trout, suggests the potential for bioconcentration in aquatic organisms is low. The hydrolysis half-life of **acrylamide** has been reported as >38 yrs. Occupational

The image shows a screenshot of a Microsoft Internet Explorer browser window titled "Search Details - Microsoft Internet Explorer". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The address bar contains the Alexa logo and a search bar with the text "Search", "Info", and "No Data". The main content area displays the following text:

Query:
(acrylamide OR propenamide OR ethylenecarboxamide OR akrylamid OR "acrylic amide")

The chemical name **acrylamide** was identified.
The following terms were added from ChemIDplus:

- propenamide**
- ethylenecarboxamide**
- akrylamid**
- acrylic amide**

CAS Registry Number: **79-06-1**

“Details” for
acrylamide search

Hazardous Substances Data Bank (HSDB) - Comprehensive, peer-reviewed toxicology data for about 5,000 chemicals.

LIMITS Search

Select Database

- ChemIDplus [?](#)
- **HSDB** [?](#)
- TOXLINE [?](#)
- CCRIS [?](#)
- DART [?](#)
- GENETOX [?](#)
- IRIS [?](#)
- ITER [?](#)
- LactMed [?](#)
- Multi-Database [?](#)
- TRI [?](#)
- Haz-Map [?](#)
- Household Products [?](#)
- TOXMAP [?](#)
- TOXNET Home [?](#)

Additional Resource

- CPDB [?](#)

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resources

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Support Pages

- ▶ Help
- ▶ Fact Sheet
- ▶ Sample Record
- ▶ HSDB Scientific Review Panel
- ▶ TOXNET FAQ

Search HSDB

acrylamide potato chips

Search

Clear

Help

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
- Administrative Information

Search

Browse the Index

Return to a clear search screen

Return to search screen with search terms intact

Hazardous Substances Data Bank
HSDB

Download Basic Search Details Other Files Modify Search

TOXNET Home
 Item 1 of 1
 NATIONAL LIBRARY OF MEDICINE

Limits Browse Index Help

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 Contract all categories [-]
 Expand all categories [+]
 Select Clear

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 - [Toxicity Summary](#)
 - [Evidence for Carcinogenicity](#)
 - [Human Toxicity Excerpts](#)
 - [Skin, Eye and Respiratory Irritations](#)
 - [Medical Surveillance](#)
 - [Populations at Special Risk](#)
 - [Probable Routes of Human Exposure](#)
 - [Average Daily Intake](#)
- [Emergency Medical Treatment](#)
 - [Emergency Medical Treatment](#)
 - [Antidote and Emergency Treatment](#)
- [Animal Toxicity Studies](#)
 - [Toxicity Summary](#)
 - [Evidence for Carcinogenicity](#)
 - [Non-Human Toxicity Excerpts](#)
 - [Ecotoxicity Excerpts](#)
 - [National Toxicology Program Studies](#)
 - [Non-Human Toxicity Values](#)
 - [Ecotoxicity Values](#)

ACRYLAMIDE
 CASRN: 79-06-1
For other data, click on the Table of Contents

Best Sections ← Most relevant first.

Food Survey Values :

Acrylamide levels were measured in foods in the 2003 FDA Total Diet Survey, which represents 286 ready-to-eat foods in the US food supply(1). **Acrylamide** was generally not detected (detection limit 10 ppb) or detected infrequently in dairy, eggs, fats/oils, beverages, fruits, vegetables, legumes, mixtures (casseroles, sandwiches, soups, and pizzas), and meat/poultry/fish(1). Snack foods (corn/tortilla **clups**, microwave popcorn, **potato clups**, pretzels) contained some of the highest levels of **acrylamide**, ranging from 46 to 536 ppb(1). **Acrylamide** was also detected relatively frequently in the grains/starches/baked good category, with the highest levels found in graham crackers (211-647 ppb) and butter-type crackers (348-425 ppb)(1). **Acrylamide** was detected relatively infrequently in baby food products, with the highest levels found in arrowroot cookies (105-267 ppb), sweet potatoes (30-117 ppb), and teething biscuits (128-235 ppb)(1).

[(1) US Food and Drug Administration; Exploratory Data on Acrylamide in Food FY 2003 Total Diet Study Results. March 2004. Available at: <http://www.cfsan.fda.gov/~dms/acrydat2.html> as of April 7, 2004.]**PEER REVIEWED**

← Hot-Linked Document

Food Survey Values :

Mean (ug/kg) **acrylamide** concentrations in various foods and food product groups from Norway, Sweden, Switzerland, the UK, and the US have been reported as: **potato** crisps/sweet **potato**: 1,312 (range 170-

Click to see acrylamide records in other databases.

Hazardous Substances Data Bank
HSDB

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- Emergency Medical Treatment
 - Emergency Medical Treatment
 - Antidote and Emergency Treatment
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 - Non-Human Toxicity Excerpts
 - Ecotoxicity Excerpts
 - National Toxicology Program Studies
 - Non-Human Toxicity Values
 - Ecotoxicity Values

ACRYLAMIDE
CASRN: 79-06-1
For other data, click on the Table of Contents

Best Sections

Food Survey Values :

Acrylamide levels were measured in foods in the 2003 FDA Total Diet Study (TDS) of ready-to-eat foods in the US food supply(1). **Acrylamide** was not detected (0 ppb) or detected infrequently in dairy, eggs, fats/oils, beverages, fruits, vegetables, legumes, mixtures (casseroles, sandwiches, soups, and pizzas), and meat/poultry/fish(1). Snack foods (corn/tortilla **chips**, microwave popcorn, **potato chips**, pretzels) contained some of the highest levels of **acrylamide**, ranging from 46 to 536 ppb(1). **Acrylamide** was also detected relatively frequently in the grains/starches/baked good category, with the highest levels found in graham crackers (211-647 ppb) and butter-type crackers (348-425 ppb)(1). **Acrylamide** was detected relatively infrequently in baby food products, with the highest levels found in arrowroot cookies (105-267 ppb), sweet potatoes (30-117 ppb), and teething biscuits (128-235 ppb)(1).

[(1) US Food and Drug Administration; Exploratory Data on Acrylamide in Food FY 2003 Total Diet Study Results. March 2004. Available at: <http://www.cfsan.fda.gov/~dms/acrydat2.html> as of April 7, 2004.]**PEER REVIEWED**

Food Survey Values :

Mean (ug/kg) **acrylamide** concentrations in various foods and food product groups from Norway, Sweden, Switzerland, the UK, and the US have been reported as: **potato** crisps/sweet **potato**: 1,312 (range 170-

[IRIS Record](#)
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ACRYLAMIDE

CASRN: 79-06-1

For other data, click on the [Table of Contents](#)

Substance Identification/Summary Table:

Substance Name: ACRYLAMIDE

CAS Registry Number: **79-06-1**

Risk Values - Summary Table:

Summary Risk Table for: ACRYLAMIDE							
Risk Value Type \ Organization	ATSDR¹	Health Canada²	IARC³	ITER⁴	NSF Intl⁵	RIVM⁶	U.S.EPA⁷
Noncancer Oral	--	--	--	--	--	--	✓
Cancer Oral	--	--	--	--	--	--	✓
Noncancer Inhalation	--	--	--	--	--	--	--
Cancer Inhalation	--	--	--	--	--	--	✓

✓ = Chemical evaluated and ITER data online.

Risk Data :

Risk Data - Noncancer Oral:

ITER Noncancer Oral Risk Table for: ACRYLAMIDE							
Risk Value Parameter\ Organization	ATSDR¹	Health Canada²	IARC³	ITER⁴	NSF Intl⁵	RIVM⁶	U.S.EPA⁷
Risk Value Name	--	--	--	--	--	--	RfD
Risk Value*	--	--	--	--	--	--	2E-4
Year	--	--	--	--	--	--	1988
Basis (Experimental)*	--	--	--	--	--	--	NOEL, 0.2
Basis (Adjusted)*	--	--	--	--	--	--	NA
Uncertainty Factor	--	--	--	--	--	--	1000
Critical Organ or Effect	--	--	--	--	--	--	Nervous System
Species	--	--	--	--	--	--	Rat
Study	--	--	--	--	--	--	Burek et al., 1980
View Specifics:	--	--	--	--	--	--	Click here

*In mg/kg body weight per day, unless otherwise specified.

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- [Risk Data](#)
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 - [Risk Data - Noncancer Oral](#)
 - [Risk Data - Cancer Oral](#)
 - [Risk Data - Noncancer Inhalation](#)
- [Risk Data](#)
 - [Risk Data - Noncancer Oral](#)
 - [Risk Data - Cancer Oral](#)

METHYLMERCURY

CASRN: 22967-92-6

For other data, click on the Table of Contents

Substance Identification/Summary Table:

Substance Name: METHYLMERCURY

CAS Registry Number: **22967-92-6**

Risk Values - Summary Table:

Summary Risk Table for: METHYLMERCURY

Risk Value Type \ Organization	ATSDRⁱ	Health Canadaⁱ	IARCⁱ	ITERⁱ	NSF Intⁱ	RIVMⁱ	U.S.EPAⁱ
Noncancer Oral	✓	--	--	✓	✓	✓	✓
Cancer Oral	✓	--	--	--	--	✓	✓
Noncancer Inhalation	✓	--	--	--	--	--	--
Cancer Inhalation	✓	--	--	--	--	✓	✓

✓ = Chemical evaluated and ITER data online.

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AMERICIUM, RADIOACTIVE

CASRN: NO CAS RN

This record contains information specific for compounds containing americium and americium in the zero valence state; all americium nuclides are radioactive. For general information on radiation, such as transportation, sampling, analytical methods, regulations, and spill clean-up, refer to the [IONIZING RADIATION](#) record.

For other data, click on the Table of Contents

Best Sections

Environmental Fate/Exposure Summary :

Most of the **radioactive americium** released to the environment occurred as a result of atmospheric testing of nuclear weapons in the 1950s and 1960s. Nuclear weapon testing injects **radioactive** material into the stratosphere, which results in wide dispersal of **radioactive americium** and other radionuclides. Routine releases of **radioactive americium** also occur from releases from nuclear reactors and reprocessing plants, and production and disposal of smoke detectors (**americium-241**, half-life=432.2 yrs) by producers and consumers. When released to the atmosphere, **radioactive americium** exists in the particulate-phase and is removed by wet and dry deposition. **Americium** has slight mobility in soils and sediments, and adsorbs strongly to metal oxides and clays, but may be transported on colloids. **Americium** occurs most commonly in the +3 oxidation state in the environment and the trivalent state is the only state of importance in biological systems. **Americium** bioconcentrates in aquatic organisms and accumulates in bones and muscles. Workers involved in producing ionization smoke detectors or other devices containing **americium (americium dioxide)**, workers at nuclear reactors or Department of Energy (DOE) facilities, and workers who use **americium**-containing devices (neutron backscatter sources for checking roof leaks and road undermining, and well logging equipment) may be exposed to higher levels of **americium**. Since atmospheric testing of nuclear weapons has been discontinued for many years and Chernobyl-related fallout was low in the US, current exposure of the general population of the US to **radioactive americium** is expected to be low. The primary route of exposure to **radioactive americium** for the general population is through inhalation of dust and ingestion of foods. (SRC)

PEER REVIEWED

General Manufacturing Information :

Americium is a metal of the actinide series which is produced synthetically by neutron activation of uranium or plutonium followed by beta decay. Twenty isotopes of **americium** are known, 232-Am through 248-Am, including three metastable states. All isotopes are **radioactive**. **Americium-243** and 241-Am, alpha emitters, are the longest lived with half-lives of 7,380 years

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Phenobarbital

CASRN: 50-06-6

For other data, click on the Table of Contents

LactMed Database

Drug Levels and Effects:

Summary of Use during Lactation:

There is a great deal of inter- and inpatient variability in excretion of **phenobarbital** into breastmilk. **Phenobarbital** in breastmilk apparently can decrease withdrawal symptoms in infants who were exposed in utero, but it can also cause drowsiness in some infants, especially when used with other sedating drugs. If **phenobarbital** is required by the mother, it is not necessarily a reason to discontinue breastfeeding. Monitor the infant for drowsiness, adequate weight gain, and developmental milestones, especially in younger, exclusively breastfed infants and when using combinations of psychotropic drugs. Sometimes breastfeeding might have to be limited or discontinued because of excessive drowsiness and poor weight gain. If there is concern, infant serum concentrations of **phenobarbital** can be obtained. Measurement of an infant serum level might help rule out toxicity if there is a concern.

Drug Levels:

In published reports of anticonvulsant use during breastfeeding, most women were taking a combination of anticonvulsants. Some other anticonvulsants (e.g., phenytoin, carbamazepine) stimulate the metabolism of other drugs including anticonvulsants, whereas others (e.g., valproic acid) inhibit the metabolism of other drugs. Therefore, the relationship of the maternal dosage to the concentration in breastmilk can be quite variable, making calculation of the weight-adjusted percentage of maternal dosage less meaningful than for other drugs in this database.

Maternal Levels. In women taking **phenobarbital** for 3 days, average milk levels at 23 hours after the last dose were as follows: 90 mg daily in 4 women; 0.85 mg/L (range 0.2 to 1 mg/L); 150 mg daily in 2 women

Carcinogenic Potency Database (CPDB)

The screenshot displays the TOXNET website interface. At the top left is the United States National Library of Medicine (NLM) logo. The main header features the TOXNET logo and the text 'Toxicology Data Network' over a background image of a person in a red cap working in a field. A navigation bar includes links for 'TOXNET PDA Access', 'SIS Home', 'About Us', 'Site Map & Search', and 'Contact Us'. Below the navigation bar, there are links for 'Env. Health & Toxicology' and 'TOXNET'. A descriptive line reads: 'TOXNET - Databases on toxicology, hazardous chemicals, environmental health, and toxic releases.'

The main content area is divided into three columns:

- Select Database:** A list of databases with question mark icons: ChemIDplus, HSDB, TOXLINE, CCRIS, DART, GENETOX, IRIS, ITER, LactMed, Multi-Database, TRI, Haz-Map, Household Products, and TOXMAP.
- Search All Databases:** A search box containing the text 'benzene'. Below the box is the text '(e.g. asthma air pollution, ibuprofen fever, vinyl chloride)'. There are 'Search', 'Clear', and 'Help' buttons.
- Env. Health & Toxicology:** A section with a small image and the text 'Portal to environmental health and toxicology resources' and a 'VISIT SITE' button.

At the bottom left, there is an 'Additional Resource' section with a list containing 'CPDB' with a question mark icon. A red arrow points to this 'CPDB' entry.

At the bottom right, there is a 'Support Pages' section with a list of links: Help, TOXNET FAQ, TOXNET Update Status, Fact Sheet, Database Description, Training Manuals, and News.



TOXNET - Databases on toxicology, hazardous chemicals, environmental health, and toxic releases.

Select Database

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- [• HSDB](#) ?
- [• TOXLINE](#) ?
- [• CCRIS](#) ?
- [• DART](#) ?
- [• GENETOX](#) ?
- [• IRIS](#) ?
- [• ITER](#) ?
- [• LactMed](#) ?
- [• Multi-Database](#) ?
- [• TRI](#) ?
- [• Haz-Map](#) ?
- [• Household Products](#) ?
- [• TOXMAP](#) ?

Additional Resource

- [• CPDB](#) ?

Env. Health & Toxicology



Portal to environmental health and toxicology resources.

[VISIT SITE](#)

Support Pages

- ▶ [Help](#)
- ▶ [TOXNET FAQ](#)
- ▶ [TOXNET Update Status](#)
- ▶ [Fact Sheet](#)
- ▶ [Database Description](#)
- ▶ [Training Manuals](#)
- ▶ [News](#)

Search All Databases

(e.g. asthma air pollution, ibuprofen fever, vinyl chloride)

References from Biomedical Literature

TOXLINE	Toxicology Literature Online	24954
DART	Developmental Toxicology Literature	489

Chemical, Toxicological, and Environmental Health Data

ChemIDplus	Chemical Identification/Dictionary	1
HSDB	Hazardous Substances Data Bank	1852
CCRIS	Chemical Carcinogenesis Information	13
CPDB	Carcinogenic Potency Database	2
GENETOX	Genetic Toxicology Data	352
IRIS	Integrated Risk Information	23
ITER	International Toxicity Estimates for Risk	10
LactMed	Drugs and Lactation Database	0
TRI	Toxics Release Inventory	980
TOXMAP	Environmental Health e-Maps	Map It
Haz-Map	Occupational Exposure/Toxicology	Show me
Household Products	Health & Safety Information on Household Products	Show me

Click this link to see CPDB Records

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TOXNET Home



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CPDB Search Results

▶ [Env. Health & Toxicology](#) ▶ [TOXNET](#) ▶ [CPDB](#)

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

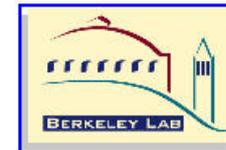
Items 1 through 2 of 2
Substance Names are sorted in [relevancy ranked](#) order.

Select Record	Substance Name
The following is the primary record for the chemical. All of the query terms were found.	
1 <input type="checkbox"/>	Benzene (hosted at UC Berkeley) ← Click this link for the record 71-43-2
The following record contains one or more of the requested chemical name(s) and all of the query terms anywhere in the record.	
2 <input type="checkbox"/>	1,4-Bis[2-(3,5-dichloropyridyloxy)]benzene (hosted at UC Berkeley) 76150-91-9



The Carcinogenic Potency Project

<http://potency.berkeley.edu/>



Benzene (CAS 71-43-2)

[SMILES](#), [InChI](#) and [Structure](#) are below.

Rats and Mice: Cancer Test Summary

Rat Target Sites		Mouse Target Sites		TD ₅₀ (mg/kg/day)	
Male	Female	Male	Female	Rat	Mouse
ezy nas orc ski sto vsc	ezy nas orc sto vsc	ezy hag hmo lun pre	ezy hmo lun mgl ova	169 ^m	77.5 ^{m,v}

Key to the Table Above

Positivity: For each chemical with a positive (carcinogenic) experiment in the [Carcinogenic Potency Database](#) (CPDB), results are included on carcinogenic potency (TD₅₀) in each species and target sites in males and females. Positivity is determined by an author's opinion in a published paper. If all experimental results in the CPDB are negative in a sex-species group, "no positive" appears. If the CPDB has no experiments in the sex-species group, "no test" appears. The summary presents the strongest evidence of carcinogenicity in each group. If there are both positive and negative experiments in a sex-species, the negative results are ignored in this Summary Table.

Target Site Codes: **ezy** = ear/Zymbal's gland. **hag** = harderian gland. **hmo** = hematopoietic system. **lun** = lung. **mgl** = mammary gland. **nas** = nasal cavity (includes tissues of the nose, nasal turbinates, paranasal sinuses and trachea). **orc** = oral cavity (includes tissues of the mouth, oropharynx, pharynx, and larynx). **ova** = ovary. **pre** = preputial gland. **ski** = skin. **sto** = stomach. **vsc** = vascular system. Target sites are listed if any author of published experimental results concluded that tumors were induced in that organ by the test agent. If there is more than one positive experiment in a sex-species, target sites listed may be from more than one experiment, e.g. if liver and lung are both listed, then liver may have been a target in one experiment and lung in another.

TD₅₀: Our standardized measure of carcinogenic potency, **TD₅₀**, is the daily dose rate in mg/kg body weight/day to induce tumors in half of test animals that would have remained tumor-free at zero dose. Whenever there is more than one positive experiment in a species, the reported TD₅₀ value is a [Harmonic Mean](#) calculated using the TD₅₀ value from the most potent target site in each positive experiment.

Superscripts: **m** = There is more than one positive experiment in the species, and TD₅₀ values from each positive experiment are used in the calculation of the reported Harmonic mean of TD₅₀. **v** = Variation is greater than ten-fold among statistically significant (two-tailed $p < 0.1$) TD₅₀ values from different positive experiments.

The Carcinogenic Potency Database (CPDB) is a unique and widely used international resource of the results of 6540 chronic, long-term animal cancer tests on 1547 chemicals. The CPDB provides easy access to the bioassay literature, with qualitative and quantitative analyses of both positive and negative experiments that have been published

Record annotated for display only.

Benzene: All Experiments and Citations in CPDB

The definition of each code in the plot below will appear in a pop-up window when the field name in the header line is clicked, e.g., [Strain](#), [Site](#), [Path](#). Each numbered line starts a new experiment and reports protocol information in black. Average daily dose-rates per kg body weight per day are in green. Remaining lines report experimental results in blue.

Abbreviations of fields in header line: # = the line number in the plot of [all CPDB](#) chemicals; Xpo = duration of dosing; Xpt = duration of experiment; Site = tissue; Path = tumor type; DR = dose-response; AuOp = author's opinion about carcinogenicity; LoConf, UpConf = confidence limits (99%) on TD50; Inc = tumor incidence for each dose group.

See [Guide](#) to reading the plot for details on each field, using an example of one experiment.

See [Help](#) to improve readability, or to fit the plot onto the screen or a printed page.

Chemical (Synonym) CAS

#	Species	Sex	Strain	Route	Xpo+Xpt	PaperNum	0 Dose	1 Dose	2 Dose	3 Dose	Literature Reference or NCI/NTP:Site Path		
Site	Path	Notes	TD50	DR	Pval	AuOp	LoConf	UpConf	Cntrl	1 Inc	2 Inc	3 Inc	Brkly Code
BENZENE			71-43-2										
615	M f	b6c	gav	24m24	TR289 :		0	17.7mg	35.4mg	70.7mg			
MXB	MXB			23.7mg	* P<.0005		14.9mg	50.7mg	17/50	28/50	41/50	42/50	lun:a/a,a/c; mgl:can,cas,sgc; mul:mlh,mlm,mlp, mlu,mno; ova:gct,lut,mtb,pcy,tua; spl:mlm,mlu,mno; ute:mlh; zym:sgc. M
MXB	MXB			24.6mg	* P<.0005		15.3mg	54.6mg	17/50	28/50	40/50	41/50	lun:a/a,a/c; mgl:can,cas,sgc; mul:mlh,mlm,mlp, mlu,mno; ova:gct,mtb; spl:mlm,mlu,mno; ute:mlh; zym:sgc. C
liv	hpa			38.1mg	Z P<.008		15.9mg	880.mg	1/50	8/50	(5/50)	4/50)	S
liv	MXA			53.6mg	Z P<.009		26.3mg	2.27gm	4/50	12/50	13/50	(7/50)	liv:hpa,hpc. S
ova	mtb			66.5mg	Z P<.0005	c	34.6mg	156.mg	0/50	1/50	12/50	(7/50)	
lun	MXA			83.6mg	* P<.002	c	44.0mg	354.mg	4/50	5/50	10/50	13/50	lun:a/a,a/c.
lun	a/c			117.mg	* P<.0005	c	63.4mg	390.mg	0/50	3/50	6/50	6/50	
ova	MXB			119.mg	* P<.0005		63.8mg	374.mg	0/50	2/50	7/50	5/50	ova:lut,pcy,tua. P
mgl	MXA			132.mg	* P<.0005	c	73.1mg	294.mg	0/50	2/50	5/50	10/50	mgl:can,sgc.
ova	MXA			146.mg	* P<.002		74.0mg	571.mg	1/50	1/50	6/50	8/50	ova:gcc,gct. S
ova	gct			157.mg	* P<.002	c	77.1mg	793.mg	1/50	1/50	6/50	7/50	
ova	tua h			295.mg	* P<.006	p	120.mg	3.25gm	0/50	0/50	3/50	3/50	
mgl	cas			382.mg	* P<.005	c	143.mg	3.12gm	0/50	0/50	1/50	4/50	
hag	can			509.mg	* P<.006		174.mg	5.94gm	0/50	0/50	0/50	4/50	S
MXA	MXA			79.1mg	* P<.04		34.3mg	n.s.s.	15/50	25/50	26/50	22/50	mul:1kn,mlh,mlm,mlp,mlu,mno,ule; spl:mlm,mlu, mno; ute:mlh. S

Record annotated for display only.

Mutagenicity in *Salmonella*: negative

SMILES Code for Benzene: C1=CC=CC=C1

InChI Code for Benzene: InChI=1/C6H6/c1-2-4-6-5-3-1/h1-6H

Source for SMILES and InChI: [USEPA Distributed Structure-Searchable Toxicity \(DSSTox\) Database](#)

Chemical Structure for Benzene:



Source for structure: [National Library of Medicine ChemDPlus](#)

See full CPDB [Summary Table](#) on 1547 chemicals. See [Full CPDB](#) for all results on 6540 experiments of 1547 chemicals.

A complete list of CPDB chemicals, which is searchable by name or by CAS number, is available [here](#).

For a compendium of CPDB results organized by target organ, which lists all chemicals in each species that induced tumors in each of 35 organs, see [Summary Table by Target Organ](#).

The CPDB is available in [several formats](#) that permit printing and downloading into spreadsheets and statistical databases.

1. [A plot](#) of the CPDB presents results of 1547 experiments on 6540 chemicals in an easily readable format that has been used in publications of the CPDB.
2. [A Screen version](#) plot for use on a single computer screen, with the same data.
3. [Excel version](#) of the same data.
4. [Tab-separated versions](#) of the same data, which can be easily read into databases.

A [Supplementary Dataset](#) gives details on dosing and survival for each experiment.

Relatively precise estimates of the lower confidence limit on the TD₁₀ (LTD₁₀) are readily calculated from the TD₅₀ and its lower confidence limit, which are reported in the CPDB. For researchers and regulatory agencies interested in LTD₁₀ values, we provide them in an [Excel spreadsheet](#).

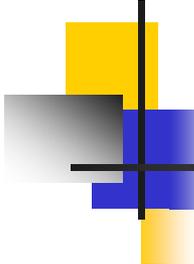
PDF versions of our publications of analyses using the CPDB are available, organized by [year](#) and by research [topic](#).

[Carcinogenic Potency Database Project \(CPDB\) Home Page](#)

For more information about this Web Page, contact [Lois Swirsky Gold, Ph.D.](#) (cpdb@potency.berkeley.edu).

Last updated: October 3, 2007

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Boolean Searching, Field Qualification, Other Search Features

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

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Long-term intermittent exposure to high ambient CO₂ causes respiratory disturbance 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, O₂ levels are relatively low (19 kPa, 144 mm Hg) and CO₂ levels are high (1 kPa, 7.6 mm Hg). There are, however, periods during ventilation of the submarine in which CO₂ levels drop and O₂ 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 detached from the shore (no gas changes); (2) during the cruise (chronic exposure to moderate (inhaled CO₂) levels of 2.3 to 5 mm Hg during nights 9 to 11 of the cruise (secondary to ventilation of the submarine); and (3) at the end of the cruise (chronic exposure to moderate (inhaled CO₂) levels of 2.3 to 5 mm Hg during nights 9 to 11 of the cruise). RESULTS: Sleep-disordered breathing was detected in 100% of the soldiers during the cruise. The PAT100 device (Itamar Medical, Ltd; Caesarea, Israel) to detect breathing data were categorized according to four CO₂ conditions: normal (inhaled CO₂ levels of 0 to 2 mm Hg during nights 9 to 11 of the cruise); acute high (inhaled CO₂ levels of 2.3 to 5 mm Hg during nights 9 to 11 of the cruise); moderate (inhaled CO₂ levels of 2.3 to 5 mm Hg during nights 9 to 11 of the cruise); and severe (inhaled CO₂ levels of 5 to 7 mm Hg during nights 9 to 11 of the cruise). CONCLUSIONS: Sleep-disordered breathing is a common problem in submariners during the cruise. The use of the PAT100 device to detect breathing data during the cruise is a useful tool for the study of sleep-disordered breathing in submariners.

Related Articles - Link
Links
▶ Compound via MeSH
▶ Substance via MeSH
▶ Books
▶ LinkOut

The following [LinkOut](#) resources are supplied by external providers. These providers are responsible for maintaining the links.

1: [Margel D et al](#) Long-term intermittent exposu...[PMID: 14605040]

Full Text Sources

	FREE HighWire Press	Full Text
	EBSCO	Full Text
	MD Consult	Full Text
	Ovid Technologies, Inc.	Full Text
	ProQuest Information and Learning	PDF

Libraries

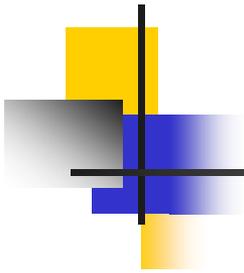
Medical

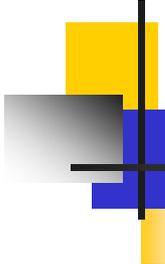
FREE MEDLINEplus Health Information
Sleep Apnea

Molecular Biology Databases

FREE HSDB
CARBON DIOXIDE

Display LinkOut Show: 20 Sort by Send to





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]

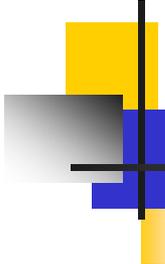
Search for **oral ld50 caffeine male rabbits** and click on **caffeine** record.
Note: On target hit displays first.

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)**. Also that the ITER database additionally contains non-carcinogenic risk information from ATSDR



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]

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

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 (National Institute for Public Health and the Environment) and the U.S. EPA compare in their non-cancer oral risk values for chloroform? [ITER]

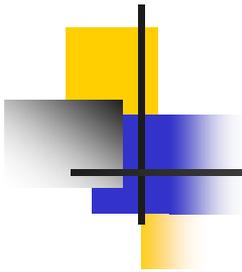
Search for **chloroform**. View **Risk Data: Non-Cancer Oral Table**.

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

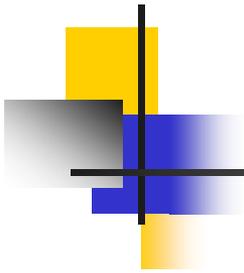
12. To what extent is the anticonvulsant carbamazepine found in the serum of breastfed infants whose mothers take the drug?

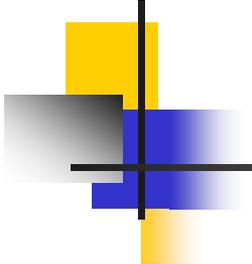
Search for **carbamazepine** and review Drug Levels/Infant Levels.



Part IV

TOXLINE and Other Bibliographic Files

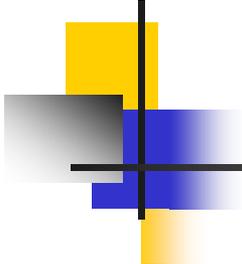




TOXLINE

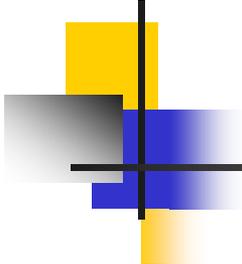
TOXicology Literature onLine

- 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 (and earlier) to date
- Drawn from Secondary Sources, varying unit record formats
- Over 3 ½ million toxicology related records
- Recent consolidation of TOXLINE Core and TOXLINE Special



TOXLINE Components

- PubMed/MEDLINE – Major Component of TOXLINE and containing standard biomedical/toxicology literature
- Some features of PubMed:
 - MeSH Searching
 - Limit by field, publication type, age, gender, language, human or animal, etc.
 - MyNCBI – to store and update search strategies
 - Related articles
 - LinkOut + Links to Books
 - Interlibrary Loan (Loansome Doc)

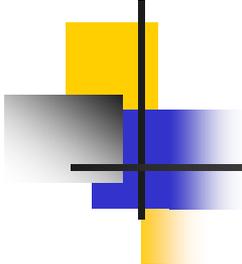


TOXLINE Components (Continued)

- 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)

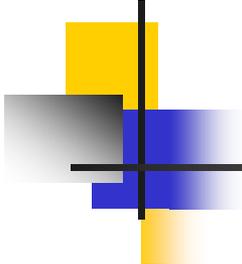
- Special Journal and Other Research Literature
 - Developmental and Reproductive Toxicology (DART)
 - International Labour Office (CIS)
 - Swedish National Chemicals Inspectorate (RISKLINE)

- Meeting Abstracts (MTGABS)



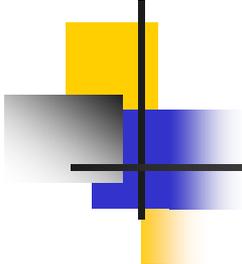
TOXLINE Components (continued)

- 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)
 - Health Aspects of Pesticides Abstract Bulletin (HAPAB)
 - International Pharmaceutical Abstracts (IPA)
 - NIOSHTIC (NIOSH)
 - Pesticides Abstracts (PESTAB)
 - Poisonous Plants Bibliography (PPIB)
 - Toxicological Aspects of Environmental Health (BIOSIS)



More About TOXLINE

- Relevancy Ranking
- Links to PubMed Citations
- Automatic Mapping to MeSH terms – e.g.
passive smoking --- tobacco smoke pollution
- Related Articles



Another Toxicology Literature File

Developmental and Reproductive Toxicology (DART)

Over 100,000 Records

- Covers Developmental and Reproductive Toxicology (including Teratology) literature since 1965
- Funded by the U.S. Environmental Protection Agency, National Institute of Environmental Health Sciences, National Center for Toxicological Research (of the FDA), and NLM



Toxicology Literature Online (TOXLINE) - References from toxicology literature.

Select Database

- ChemIDplus [?](#)
- HSDB [?](#)
- **TOXLINE** [?](#)
- CCRIS [?](#)
- DART [?](#)
- GENETOX [?](#)
- IRIS [?](#)
- ITER [?](#)
- LactMed [?](#)
- Multi-Database [?](#)
- TRI [?](#)
- Haz-Map [?](#)
- Household Products [?](#)
- TOXMAP [?](#)
- TOXNET Home [?](#)

Additional Resource

- CPDB [?](#)

Search TOXLINE

(e.g. asphalt fumes roofers, calcium aging, Neville DM autoimmune)

For chemicals, add synonyms and CAS numbers to search:

Yes No

Include PubMed records:

Yes No

Env. Health & Toxicology



Portal to environmental health and toxicology resources

[VISIT SITE](#)

Support Pages

- ▶ Help
- ▶ Fact Sheet
- ▶ Sample Record
- ▶ TOXNET FAQ
- ▶ Importing Citations into Reference Manager

Enter chemical names, CAS Registry Numbers, other terms, etc.



TOXLINE Search Results

SEARCH RESULTS PAGE

toluidine bladder cancer

Search

Clear

Limits

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

Items 1 through 20 of 96

Pages: 1 2 3 4 5 ▶

References are sorted in *relevancy ranked* order.

Click on *Sort* to change the order of the retrieved References.

Save
Checked Items

Sort

Details

History

Download

Modify Search

Basic Search

Browse Index

Help

TOXNET Home

Select Record	Reference
1 <input type="checkbox"/>	<p>Excess number of bladder cancers in workers exposed to ortho-toluidine and aniline. Ward E; Carpenter A; Markowitz S; Roberts D; Halperin W J Natl Cancer Inst. 1991, Apr 3; 83(7):501-6. [Journal of the National Cancer Institute.] [PubMed] PubMed Citation </p>
2 <input type="checkbox"/>	<p>Monitoring of aromatic amine exposures in workers at a chemical plant with a known bladder cancer excess. Ward EM; Sabbioni G; DeBord DG; Teass AW; Brown KK; Talaska GG; Roberts DR; Ruder AM; Streicher RP J Natl Cancer Inst. 1996, Aug 7; 88(15):1046-52. [Journal of the National Cancer Institute.] [PubMed] PubMed Citation </p>
3 <input type="checkbox"/>	<p>Continued epidemic of bladder cancer in workers exposed to ortho-toluidine in a chemical factory. Markowitz SB; Levin K J Occup Environ Med. 2004, Feb; 46(2):154-60. [Journal of occupational and environmental medicine / American College of Occupational and Environmental Medicine 1 [PubMed]</p>

SELECTED RECORD PAGE

To view related records

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

toluidine bladder cancer

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

Item 1 of 96
PubMed Citation

Excess number of bladder cancers in workers exposed to ortho-toluidine and aniline.

Authors:

Ward E
Carpenter A
Markowitz S
Roberts D
Halperin W

Search terms highlighted in red

Author Address: Industrywide Studies Branch, National Institute for Occupational Safety and Health, Cincinnati, Ohio 45226.

Source: J Natl Cancer Inst. 1991, Apr 3; 83(7):501-6. [Journal of the National Cancer Institute.]

Comments:

Hotlinked terms in blue

Comment in: J Natl Cancer Inst. 1991 Nov 20;83(22):1686-7 (medline/1749022)
Comment in: J Natl Cancer Inst. 1991 Oct 16;83(20):1507-8 (medline/1920498)
Comment in: J Natl Cancer Inst. 1994 Jan 5;86(1):59-62 (medline/8271266)

Abstract:

A retrospective cohort study of the incidence of **bladder cancer** was conducted in response to a union request for an evaluation of a possible excess number of cases of **bladder cancer** at a chemical plant in western New York State. Workers at the plant were exposed to two potential bladder carcinogens--ortho-**toluidine** (o-**toluidine**) and aniline. Incidence rates of **bladder cancer** among workers at the plant were compared with those of the population of New York State (excluding New York City). Among all 1749 workers at the plant, 13 cases of **bladder cancer** were observed versus 3.61 expected [standardized incidence ratio (SIR) = 3.60; 90% confidence interval (CI) = 2.13-5.73]. Among the 708 workers who worked in areas in which o-**toluidine** and aniline were used, 7 cases were observed versus 1.08 expected (SIR = 6.48; 90% CI = 3.04-12.2). Among the 288 maintenance, shipping, and janitorial workers thought to have been possibly exposed, 4 cases were observed versus 1.09 expected (SIR = 3.66; 90% CI = 1.25-8.37). Among the remaining 753 workers who were probably not exposed, 2 **bladder cancers** were observed versus 1.43 expected (SIR = 1.39; 90% CI = 0.25-4.39). Increased risk of **bladder cancer** was strongly associated with increased duration of employment in the department where o-**toluidine** and aniline were used (P less than .001). Among workers with 10 or more years of employment in the department, the SIR was 27.2 (90% CI = 11.8-53.7). o-**Toluidine** is an animal carcinogen more potent than aniline and is known to produce bladder tumors in rats; hence, it is more likely that o-**toluidine** is responsible for the observed excess number of cases of **bladder cancer**, although aniline may have played a role.

Medical Subject Headings (MeSH):

- Adult
- Aged
- Aniline Compounds/*toxicity
- Bladder Neoplasms/*chemically induced/epidemiology**
- Cohort Studies
- Female
- Humans
- Male
- Middle Aged
- Occupational Exposure
- Retrospective Studies
- Risk Factors
- Smoking/adverse effects
- Toluidines/*toxicity**

CAS Registry Numbers:

- Aniline Compounds (0)
- Toluidines (0)**
- aniline (62-53-3)
- 2-toluidine (95-53-4)**

Language: English

International Standard Serial Number: 0027-8874 (Print)

Publication Types:

Journal Article

Entry Month: 1991

Title Abbreviation: J Natl Cancer Inst

Year of Publication: 1991

Last Revision Date: April 19, 1991

Medline Citation: NLM

Country: UNITED STATES

Citation Subset: IM

Medline Title Abbreviation: Journal of the National Cancer Institute

Stat: MEDLINE

← PubMed File

Document Number: medline/2005633

HISTORY

Search **TOXLINE** for

- Search History will be lost after one hour of inactivity.
- To combine searches use # before search number. e.g. #2 AND #6.
- Searches may not be combined across databases.

Search	Database	Query	Time	Result
# 6	toxline	(" bladder cancer " " bladder neoplasms ") AND (toluidine OR 26915-12-8 [m])	15:47:58	96
# 5	lact	(phenobarbital OR phenobarbital OR phenobarbitone OR phenemal OR luminal OR eskabarb OR sevenal OR phob OR phenyral OR phenylethylmalonylurea OR phenonyl OR phenoluric OR "phenobarbituric acid" OR phenobal OR nunol OR noptil OR neurobarb OR lubrokak OR lubergal OR lixophen OR liquital OR lepinaletten)	15:44:18	5
# 4	hsdb	[tox] [care] [htox] [htxy] [seri] [warn] [meds] [popl] [rtex] [body] [avdi] [minf] [envs] [rtex] [body] [avdi] [nats] [arts] [fate] [bioc] [abio] [bioc] [koc] [vws] [watc] [effl] [seds] [atmc] [food] [plnt] [fish] [anml] [milk] acrylamide potato chips [oevc]	15:40:09	1
# 3	hsdb	(acrylamide OR propenamide OR ethylenecarboxamide OR akrylamid OR "acrylic amide")	15:30:17	38
# 2	toxline, dart, hsdb, iris, iter, genetox, ccris, lact, tri2004, chemid, hpd, hazmap	(acrylamide OR propenamide OR ethylenecarboxamide OR akrylamid OR "acrylic amide" OR 79-06-1 [m])	15:29:25	5012
# 1	hsdb	(acrylamide OR propenamide OR ethylenecarboxamide OR akrylamid OR "acrylic amide")	15:28:59	38

Clear History

To combine search statements or enter a new search.

A way to review your search strategies.

"LIMITS" Search

Toxicology Literature Online (TOXLINE) - References from toxicology literature.

Select Database

- [• ChemIDplus](#)
- [• HSDB](#)
- [• TOXLINE](#)
- [• CCRIS](#)
- [• DART](#)
- [• GENETOX](#)
- [• IRIS](#)
- [• ITER](#)
- [• LactMed](#)
- [• Multi-Database](#)
- [• TRI](#)
- [• Haz-Map](#)
- [• Household Products](#)
- [• TOXMAP](#)
- [• TOXNET Home](#)

Search TOXLINE

Add chemical synonyms and CAS numbers to search: Yes No

Include PubMed records: Yes No

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

Maximum records returned

Year of Publication:

through ←

Only search documents added in the last months.

TOXLINE Components

All

ANEUPL

BIOSIS

CIS

CRISP

DART (non-PubMed)

Language

All

English

Afrikaans

Arabic

Armenian

Azerbaijani

To select more than one component, click while holding the CTRL (PC) or CMD (Mac) key.

Full Search:
Nickel AND (worker* OR
industr* OR occupation*)

Can select range of years



TOXLINE Search Results

Save
Checked Items

Sort

Details

History

Download

Modify Search

Basic Search

Browse Index

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TOXNET Home

Nickel AND (worker* OR industr* OR

Search

Clear

Limits

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

Items 1 through 20 of 262

Page 1 of 14.

Go

to page



References are *unsorted*.

Select
Record

Reference

- Chelators as antidotes of metal toxicity: therapeutic and experimental aspects.**
Blanusa M; Varnai VM; Piasek M; Kostial K
Curr Med Chem. 2005; 12(23):2771-94. [Current medicinal chemistry] [PubMed]
[PubMed Citation](#)
- Occupational allergic diseases as a clinical model to approach specific environmental reactivity.**
Cirla AM
Acta Biomed. 2005; 76 Suppl 2:45-9. [] [PubMed]
[PubMed Citation](#)
- Carcinogenic effect of nickel compounds.**
Lu H; Shi X; Costa M; Huang C
Mol Cell Biochem. 2005, Nov; 279(1-2):45-67. [Molecular and cellular biochemistry] [PubMed]
[PubMed Citation](#)



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

◀ Item 2 of 260 ▶

[PubMed Citation](#)

Exposure to fuel-oil ash and welding emissions during the overhaul of an oil-fired boiler.

Authors:

[Liu Y](#)
[Woodin MA](#)
[Smith TJ](#)
[Herrick RF](#)
[Williams PL](#)
[Hauser R](#)
[Christiani DC](#)

Author Address: Department of Environmental Health, Harvard School of Public Health, Boston, Massachusetts, USA. youcheng.liu@yale.edu

Source: J Occup Environ Hyg. 2005, Sep; 2(9):435-43. [Journal of **occupational** and environmental hygiene.]

Abstract:

The health effects of exposure to vanadium in fuel-oil ash are not well described at levels ranging from 10 to 500 microg/m³. As part of a larger **occupational** epidemiologic study that assessed these effects during the overhaul of a large oil-fired boiler, this study was designed to quantify boilermakers' exposures to fuel-oil ash particles, metals, and welding gases, and to identify determinants of these exposures. Personal exposure measurements were conducted on 18 boilermakers and 11 utility **workers** (referents) before and during a 3-week overhaul. Ash particles < 10 microm in diameter (PM₁₀, mg/m³) were sampled over full work shifts using a

Related
Records

Search Results

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one-stage personal size selective sampler containing a polytetrafluoroethylene filter. Filters were digested using the Parr bomb method and analyzed for the metals vanadium (V), **nickel** (Ni), iron (Fe), chromium (Cr), cadmium (Cd), lead (Pb), manganese (Mn), and arsenic (As) by inductively coupled plasma mass spectrometry. Nitrogen dioxide (NO₂) was measured with an Ogawa passive badge-type sampler and ozone (O₃) with a personal active pump sampler. Time-weighted average (TWA) exposures were significantly higher ($p < 0.05$) for boilermakers than for utility **workers** for PM₁₀ (geometric mean: 0.47 vs. 0.13 mg/m³), V (8.9 vs. 1.4 microg/m³), Ni (7.4 vs. 1.8 microg/m³) and Fe (56.2 vs. 11.2 microg/m³). Exposures were affected by overhaul time periods, tasks, and work locations. No significant increases were found for O₃ or NO₂ for boilermakers or utility **workers** regardless of overhaul period or task group. Fuel-oil ash was a major contributor to boilermakers' exposure to PM₁₀ and metals. Vanadium concentrations sometimes exceeded the 2003 American Conference of Governmental **Industrial** Hygienists (ACGIH) threshold limit value.

Medical Subject Headings (MeSH):

Adult
Air Pollutants, **Occupational**/adverse effects/*analysis
Environmental Monitoring/*methods
Fuel Oils/*analysis/toxicity
Humans
Inhalation Exposure/adverse effects/*analysis
Middle Aged
Nitrogen Dioxide/analysis
Occupational Exposure/adverse effects/*analysis
Ozone/analysis
Particle Size
Power Plants/instrumentation
Research Support, U.S. Gov't, Non-P.H.S.
Respiratory Protective Devices
Risk Assessment/*methods
Threshold Limit Values
Vanadium/*analysis/toxicity
*Welding

CAS Registry Numbers:

Air Pollutants, **Occupational** (0)
Ozone (10028-15-6)
Nitrogen Dioxide (10102-44-0)
Vanadium (7440-62-2)

Language: English

International Standard Serial Number: 1545-9624 (Print)

Publication Types:

Journal Article

Entry Month: 2005

Title Abbreviation: J Occup Environ Hyg

Year of Publication: 2005

Last Revision Date: July 28, 2005

Medline Citation: NLM

Country: United States

Citation Subset: IM

Medline Title Abbreviation: Journal of **occupational** and environmental hygiene

Stat: MEDLINE

Document Number: medline/16048845

Search PubMed for

[Limits](#) [Preview/Index](#) [History](#) [Clipboard](#) [Details](#)

Display AbstractPlus Show 20 Sort by Send to

All: 1 Review: 0

1: [Occup Environ Hyg.](#) 2005 Sep;2(9):435-43.

[MetaPress](#) [Links](#)

Exposure to fuel-oil ash and welding emissions during the overhaul of an oil-fired boiler.

[Liu Y](#), [Woodin MA](#), [Smith TJ](#), [Herrick RE](#), [Williams PL](#), [Hauser R](#), [Christiani DC](#).

Department of Environmental Health, Harvard School of Public Health, Boston, Massachusetts, USA.
youcheng.liu@yale.edu

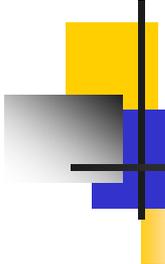
The health effects of exposure to vanadium in fuel-oil ash are not well described at levels ranging from 10 to 500 microg/m(3). As part of a larger occupational epidemiologic study that assessed these effects during the overhaul of a large oil-fired boiler, this study was designed to quantify boilermakers' exposures to fuel-oil ash particles, metals, and welding gases, and to identify determinants of these exposures. Personal exposure measurements were conducted on 18 boilermakers and 11 utility workers (referents) before and during a 3-week overhaul. Ash particles < 10 microm in diameter (PM(10), mg/m(3)) were sampled over full work shifts using a one-stage personal size selective sampler containing a polytetrafluoroethylene filter. Filters were digested using the Parr bomb method and analyzed for the metals vanadium (V), nickel (Ni), iron (Fe), chromium (Cr), cadmium (Cd), lead (Pb), manganese (Mn), and arsenic (As) by inductively coupled plasma mass spectrometry. Nitrogen dioxide (NO(2)) was measured with an Ogawa passive badge-type sampler and ozone (O(3)) with a personal active pump sampler. Time-weighted average (TWA) exposures were significantly higher (p < 0.05) for boilermakers than for utility workers for PM(10) (geometric mean: 0.47 vs. 0.13 mg/m(3)), V (8.9 vs. 1.4 microg/m(3)), Ni (7.4 vs. 1.8 microg/m(3)) and Fe (56.2 vs. 11.2 microg/m(3)). Exposures were affected by overhaul time periods, tasks, and work locations. No significant increases were found for O(3) or NO(2) for boilermakers or utility workers regardless of overhaul period or task group. Fuel-oil ash was a major contributor to boilermakers' exposure to PM (10) and metals. Vanadium concentrations sometimes exceeded the 2003 American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value.

PMID: 16048845 [PubMed - indexed for MEDLINE]

Related Links

- ▶ Pulmonary function in workers exposed to low levels of fuel-oil ash. [J Occup Environ Med. 1999]
- ▶ Estimation of personal exposures to particulate matter and metals in boiler overhaul [J Occup Environ Med. 2005]
- ▶ Molecular markers of acute upper airway inflammation in workers exposed to fuel-oil ash. [Am J Respir Crit Care Med. 1998]
- ▶ Acute respiratory symptoms in workers exposed to vanadium-rich fuel-oil ash. [Am J Ind Med. 2000]
- ▶ Urine vanadium concentrations in workers overhauling an oil-fired boiler. [Am J Ind Med. 1998]
- ▶ [See all Related Articles...](#)

Display AbstractPlus Show 20 Sort by Send to



TOXNET Exercises

TOXICOLOGY LITERATURE FILES

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

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

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

Search for **phosphoric acid** in query box. Click on **Details** button to view the search strategy. Navigate the retrieval pages. Click on records of interest and on hot-linked data – e.g. keywords/MeSH headings, author names, CAS registry numbers. Check for related records.

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

Try a **Limits** search. Enter **diet breast cancer** in the query box. Limit to **Titles**.

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

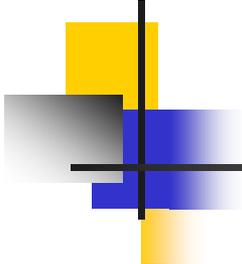
Search for **arthritis celebrex** in the query box.

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

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]

Select DART from the TOXNET menu. Search for **alcohol fetus** in the query box.



TOXNET Exercises (continued)

7. Search the toxicology subset of PubMed to find articles on toxicological aspects of jellyfish. Search for articles published from 2000-2003 in English. [PubMed toxicology limits].

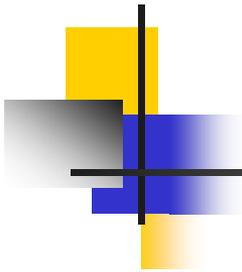
Go to PubMed at <http://pubmed.gov>. Click on **Limits**. Enter **jellyfish** in the search query box. Limit the search to the toxicology subfile, the publication dates to 2000-2003 and the language to English.

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

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

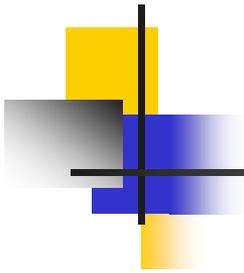
9. Use the HISTORY feature to look for hospital or medical waste incineration in TOXLINE. [TOXLINE]

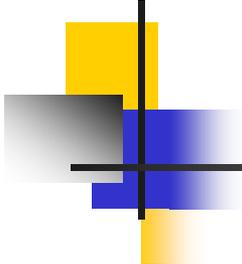
First search for **“hospital waste” incinerat***. (Using quotes looks for the terms together as a phrase. The asterisk is for truncation and searches for words such as incinerate, incineration, etc.) Then search for **“medical waste” incinerat***. Press the HISTORY button and combine your two searches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



Part V

TRI, Specialty Files, New Initiatives

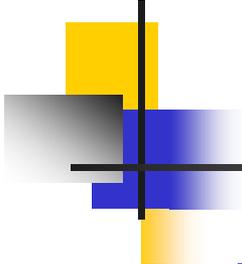




Toxics Release Inventory (TRI) U.S. Environmental Protection Agency (EPA)

TRI 87-06 (20 years) – About 1,738,086 Records

- 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 1990



Toxics Release Inventory (TRI) - Annual environmental releases of over 600 toxic chemicals by U.S. facilities.

- Select Database**
- ChemIDplus ?
 - HSDB ?
 - TOXLINE ?
 - CCRIS ?
 - DART ?
 - GENETOX ?
 - IRIS ?
 - ITER ?
 - LactMed ?
 - Multi-Database ?
 - **TRI ?**
 - Haz-Map ?
 - Household Products ?
 - TOXMAP ?
 - TOXNET Home ?

- Additional Resource**
- CPDB ?

Search TRI

Chemical Name or CAS Registry Number

Add synonyms and CAS numbers to search:
 Yes No

TRI Files:

<input type="checkbox"/> TRI2005	<input checked="" type="checkbox"/> TRI2004	<input checked="" type="checkbox"/> TRI2003
<input checked="" type="checkbox"/> TRI2002	<input type="checkbox"/> TRI2001	<input type="checkbox"/> TRI2000
<input type="checkbox"/> TRI1999	<input type="checkbox"/> TRI1998	<input type="checkbox"/> TRI1997
<input type="checkbox"/> TRI1996	<input type="checkbox"/> TRI1995	<input type="checkbox"/> TRI1994
<input type="checkbox"/> TRI1993	<input type="checkbox"/> TRI1992	<input type="checkbox"/> TRI1991
<input type="checkbox"/> TRI1990	<input type="checkbox"/> TRI1989	<input type="checkbox"/> TRI1988
<input type="checkbox"/> TRI1987		

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.)

State City/State
 County/State Zip

Standard Industrial Classification Code
 (Separate multiple entries with commas)

Greater Than for

Env. Health & Toxicology

Portal to environmental health and toxicology resources

- Support Pages**
- ▶ Help
 - ▶ Fact Sheet
 - ▶ Sample Record
 - ▶ TOXNET FAQ

Select all years or any combination.

Geographic search included

Can range from 0 and in power of 10 amounts to 100,000,000 lbs.

Ranging by total release amount. Can also range on air, water, land, underground injection or click on "No Release Selected."

To view summary environmental and off-site waste transfer release totals.

Calculate Release!

Save Checked Items

Sort

Details

History

Download

Modify Search

New Search

Browse Index

Help

TOXNET Home

TOXNET
Toxicology Data Network

SIS Home | About Us | Site Map & Search | Contact Us

TRI2004, TRI2003, TRI2002
Search Results

▶ Env. Health & Toxicology ▶ TOXNET ▶ TRI2004, TRI2003, TRI2002

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

Map it with TOXMAP

TRI2004: 0 TRI2003: 1 TRI2002: 1
Click on the database name to repeat the search in that database

Items 1 through 2 of 2
*Facility/Substance Names are **unsorted**.*

Select Record	Database	Facility/Substance Name
1 <input type="checkbox"/>	TRI2003	YORK CASKET MISSOURI METHYL ETHYL KETONE MARSHFIELD, MO
2 <input type="checkbox"/>	TRI2002	YORK CASKET MISSOURI METHYL ETHYL KETONE MARSHFIELD, MO

Contract all categories

Expand all categories

Contents

Select

Clear

-  [FULL RECORD](#)
-   [Facility Identification](#)
-   [Substance Identification](#)
-   [Environmental Release of Chemical](#)
-   [Waste Treatment](#)
-   [Off-Site Waste Transfer](#)
-   [Source Reduction and Recycling](#)
-   [Administrative Information](#)

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[Freedom of Information Act](#), [Accessibility](#)
Customer Service: tehip@tehl.nlm.nih.gov.

Mapping capability.



TRI2003

METHYL ETHYL KETONE
YORK CASKET MISSOURI
MARSHFIELD, MO

For other data, click on the Table of Contents

Facility Identification:

Facility Name/Address:

YORK CASKET MISSOURI
521 GEORGE ST
MARSHFIELD, (WEBSTER County) MO 65706

EPA Facility Number: 65706YRKQL197GE

EPA Region: 7

Federal Facility Status: Commercial

Covered Facility: 0

FIPS State/County Code: 29225

Public Contact: ANN YORK

Public Contact Telephone Number: (765) 966-1576

Standard Industrial Classification Code:

[3995](#) (Burial caskets)

Latitude: 37 degrees 19 minutes 56 seconds

Longitude: 92 degrees 55 minutes 28 seconds

Centroid Latitude: 37 degrees 33 minutes 2222 seconds

Centroid Longitude: 92 degrees 92 minutes 4444 seconds

Facility Dun & Bradstreet Number: 062343406

EPA Identification Number: NA

NPDES Permit Number: NA

UIC ID Number: NA

Parent Company Name: MATTHEWS INTERNATIONAL CORP

Parent Company Dun & Bradstreet Number: 004341533

Substance Identification:

CAS Registry Number: 78-93-3

Trade Secret Status: 0

Trade Secret Chemical Name: NA

Mixture Component Identity: NA

Manufacturing Uses:

Processing Uses: (2c) As an article component

Other Uses and Activities: (3a) As a chemical processing aid

Maximum Amount on Site: Mean - 5000 lbs

Environmental Release of Chemical:

Non-Point Air Emissions Estimates:

Non-Point Air Release: 2,500 lbs./rep yr. 2003

Basis of Estimate: (C) Mass Balance Calculations

Point Air Emissions Estimates:

Point Air Release: 24,100 lbs./rep yr. 2003

Basis of Estimate: (C) Mass Balance Calculations

Total Air Release: 26,600 lbs./rep yr. 2003

Water Discharge Estimates:

Receiving Stream: NA

Water Release: NA

Total Water Release: 0 lbs./rep yr. 2003

Releases to Underground Injection:

Underground Injection Well Class: Underground Injection On-site to Class I wells

Underground Injection Release: NA

Underground Injection Well Class: Underground Injection On-site to Class II-V wells

Underground Injection Release: NA

Underground Injection Total: 0 lbs./rep yr. 2003

Land Release Estimates:

Disposal Method: RCRA Subtitle C Landfills

Land Release: NA

Disposal Method: Other Landfills

Land Release: NA

Disposal Method: Land Treatment/Application/Farming

Land Release: NA

Disposal Method: RCRA Subtitle C Surface Impoundments

Land Release: NA

Disposal Method: Other Surface Impoundment

Land Release: NA

Disposal Method: Other Disposal

Land Release: NA

Total Land Release: 0 lbs./rep yr. 2003

Total Environmental Release: 26,600 lbs./rep yr. 2003

Waste Treatment:

Treatment Methods/Efficiency:

General Wastestream: (N) Not Applicable

Sequential Treatment: NA

Influent Concentration: NA

Treatment Efficiency: 0%

Basis of Treatment Data: NA

Off-Site Waste Transfer:

Publicly Owned Treatment Works:

Name: NA

Street Address: NA

City: NA

State: NA

ZIP Code: NA

County: NA

Basis of Estimate: NA

Total POTW Transfer: 0 lbs./rep yr. 2003

Other Off-Site Locations:

Off-Site EPA ID: NA
 Off-Site Name: NA
 Street Address: NA
 City: NA
 State/Province: NA
 ZIP Code: NA
 County: NA
 Country: UNITED STATES
 Control: OTHER

Other Off-Site Location Transfer:

Total Off-Site Locations Transfer: 0 lbs./rep yr. 2003

Source Reduction and Recycling:**Source Reduction and Recycling Table:**

	PRIOR (2002)	CURRENT (2003)	PERCENT CHANGE	NEXT (2004)	FUTURE (2005)
On-site Disposal to Class I Underground Injection Wells, RCRA Subtitle C Landfills, and Other Landfills	NA	NA	NA	NA	NA
Other On-site Disposal or Other Releases	24,000	26,600	10.83 %	26,600	26,600
Off-site Disposal to Class I Underground Injection Wells, RCRA Subtitle C Landfills, and Other Landfills	NA	NA	NA	NA	NA
Other Off-site Disposal or Other Releases	NA	NA	NA	NA	NA

Total Disposal or Releases (A)	24,000	26,600	10.83 %	26,600	26,600
On-Site Energy Recovery	NA	NA	NA	NA	NA
Off-Site Energy Recovery	NA	NA	NA	NA	NA
On-Site Recycling	NA	NA	NA	NA	NA
Off-Site Recycling	NA	NA	NA	NA	NA
On-Site Treated	NA	NA	NA	NA	NA
Off-Site Treated	NA	NA	NA	NA	NA
Total Used for Energy Recovery, Recycled or Treated (B)	0	0	NA	0	0
Totals (A+B)	24,000	26,600	10.83 %	26,600	26,600

On-Site Recycling Methods Current Year: NA

On-Site Energy Recovery Methods Current Year: NA

Source Reduction Identifiers:

Source Reduction Activities: NA

Source Reduction Activities: (W58) Other process modifications

Source Reduction Methods: (T05) Employee recommendation (independent of a formal company program)

Source Reduction Activities: (W51) Instituted recirculation within a process

Source Reduction Methods: (T05) Employee recommendation (independent of a formal company program)

Source Reduction Activities: (W13) Improved maintenance scheduling, recordkeeping, or procedures

Source Reduction Methods: (T05) Employee recommendation (independent of a formal company program)

Accidental Release Total: 0 lbs./rep yr. 2003

Production Ratio/Activity Index: 0000001.10

Administrative Information:

Submission Number: 1303201319035

Form Type: FORM R - LONG

Reporting Year: 2003



TOXMAP

Environmental Health e-Maps

Home TRI Facilities TRI Releases TRI Trends Superfund Combo Search Help

Search Edit Search Display Map Set Region Other Data

Search Results

[Edit Search] [Start over](#)

Show search details

Methyl ethyl ketone (78-93-3)

TRI - 1 on-site TRI release reported in search results [Print this map](#)



0 613mi

MAP CONTROLS

TRI	Superfund	Demographic
<input type="radio"/> None	<input checked="" type="radio"/> None	<input checked="" type="radio"/> None
<input type="radio"/> Facilities	<input type="radio"/> All NPL	<input type="radio"/> Population Density - 2000
<input checked="" type="radio"/> Releases : 2005	<input type="radio"/> NPL Final	
	<input type="radio"/> NPL Deleted	
	<input type="radio"/> NPL Proposed	

[Apply other demographics](#)

[Search chemical](#) | [Define a combo map](#) | [Start over](#)

Legend [brief | detailed]



1 lbs Release Amount 26,600 lbs

Apply to this map

- [U.S. Census Data](#)
- [Income Data](#)
- [Health Data](#)
- [Reference Data](#)

See details for this map

Facilities reporting to TRI

[Hide list](#)

Page 1 of 1
(1 releases total)

- YORK CASKET MISSOURI

More Chemical Information

NLM

- [Toxicology Databases](#)
- [Human Health Effects](#)
- [Manufacturing/Use Info](#)
- [Env. Fate / Exposure](#)

CDC

- [ToxFAQs](#)
- [Public Health Assessments](#)
- [All Documents](#)

Toxicology Articles for this Chemical and Map

[Search TOXLINE](#)

- What is the "Superfund" Program?
- What kinds of chemicals are found at Superfund sites?
- What is the "National Priorities List" (NPL)?
- Whom do I contact with questions and/or suggestions? more...

TRI Facilities (sorted by release amount)

1. YORK CASKET MISSOURI

521 GEORGE STREET
MARSHFIELD, MO 65706

[Google Maps](#)

TRI Facility ID: 65706YRKQL197GE

[top](#)

Latitude[?]: 37° 19' 55" N

Longitude: 92° 55' 25" W

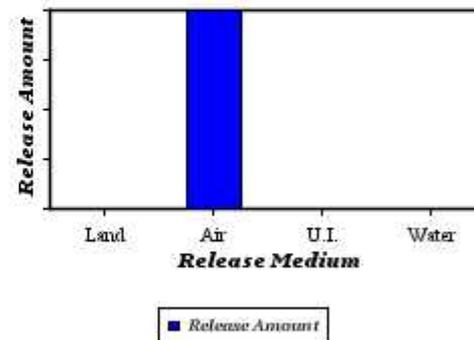
Emissions Estimates:

Methyl ethyl ketone

Release Medium	Release Amount (lbs./rep yr. 2003- 2005)
Air	26,600
TOTAL	26,600

- [▶ All chemicals reported by this facility](#)
- [▶ Releases summary table for this facility](#)

Distribution By Medium^{*}



^{*} Small values may not be visible on chart. Refer to the Emissions Estimates table.



Toxics Release Inventory (TRI) Program

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[EPA Home](#) > [Toxics Release Inventory Program](#) > Methyl Ethyl Ketone (MEK) To Be Removed From The Toxics Release Inventory (TRI) List

Methyl Ethyl Ketone (MEK) To Be Removed From The Toxics Release Inventory (TRI) List: No Reports Are Required For The 2004 Reporting Year

- [Why is MEK being removed from the TRI List?](#)
- [What type of notice will EPA publish?](#)
- [Why are no MEK reports required for reporting year 2004?](#)
- [Should facilities that have already filed a 2004 TRI report for MEK withdraw those reports?](#)
- [How can I get more background on EPA's TRI Program?](#)
- [What is the status of the petition to remove MEK from the Clean Air Act list of hazardous air pollutants?](#)

Q: Why is MEK being removed from the TRI List?

A: EPA is taking the regulatory action necessary to remove MEK from the TRI list as required by the District Court.

In March of 1998, EPA denied a petition from the Ketones Panel of the Chemical Manufacturers Association (CMA) to remove MEK from the TRI list (63 FR 15195). The American Chemistry Council (ACC) (formerly CMA) challenged EPA's decision in U.S. District Court for the District of Columbia. On March 26, 2004, the District Court upheld EPA's petition denial on the basis that EPA's denial of the petition was lawful and appropriate. ACC appealed the District Court's decision to the D.C. Circuit Court of Appeals. On May 10, 2005, the D.C. Circuit Court vacated the District Court's decision and remanded "so that it can direct EPA to delete MEK from the TRI." The Circuit Court issued its mandate on June 13, 2005.

Q: What type of notice will EPA publish?

A: A final rule that removes MEK from the TRI list pursuant to the Court's order has been signed and will publish in the Federal Register shortly. The rule will make the removal of MEK effective for the 2004 reporting year.

Q: Why are no MEK reports required for reporting year 2004?

A: EPA will not require facilities to report MEK for the 2004 reporting year because the court order removing MEK from the TRI was issued before July 1, 2005. The final rule states that TRI facilities are not required to report releases of and other waste management information on MEK that occurred during the 2004 reporting year or for activities in the future.

Q: Should facilities that have already filed a 2004 TRI report for MEK withdraw those reports?

A: No, there is no need for facilities to withdraw MEK reports that they have already filed for reporting year 2004. EPA will not be including those reports in the 2004 public Toxics Release Inventory.

Browse TRI Topics
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Reporting Materials
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ME Software
TRI Chemicals
TRI PBT Chemicals
Laws, Regulations
and Executive Order
Guidance Documents
State TRI Programs
International TRI



Haz-Map
Occupational Exposure to Hazardous Agents

Search 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.

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Last updated: November 23, 2007



Search as  Agent  Disease  Job  Text Search

[Haz-Map Search](#)

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[Haz-Map Help](#)

[Glossary](#)

[References](#)

Browse Haz-Map

[Search TOXNET](#)

carpenters was searched as word(s) in all of the text fields. Results are sorted in relevancy ranked order.

Search results: 2 record(s) found in Agents table. [Next Section](#)

- [Wood dust, all soft and hard woods](#)
- [Chlorothalonil](#)

Search results: 1 record(s) found in Diseases table. [Next Section](#) [Back to Top](#)

- [Nasal sinus cancer](#)

Search results: 3 record(s) found in Jobs table. [Next Section](#) [Back to Top](#)

- [Helpers--Carpenters](#)
- [Carpenters](#)
- [Cabinetmakers & Bench Carpenters](#)

Search results: 1 record(s) found in Industries table. [Next Section](#) [Back to Top](#)

- [Finish Carpentry Contractors](#)

Browse Haz-Map	
Disease/Syndrome	Nasal sinus cancer
Category	Cancer, Occupational
Acute/Chronic	Chronic
Comments	A sentinel health event (occupational) associated with exposure to hardwood dusts (woodworkers, cabinet and furniture makers); radium (radium processors, dial painters); chromates (producers, processors & users); nickel (smelting & refining); chlorophenols (sawmill workers & carpenters); and an unknown agent (boot & shoe industry); [Mullan] Agents associated with sino-nasal cancer include cigarette smoking, wood and leather dust, nickel refining, chromates, mustard gas manufacturing, isopropanol manufacturing, and possibly welding. [LaDou, p. 296] Softwood dust is associated with squamous cell carcinoma, and hardwood dust is associated with adenocarcinoma of the nasal cavity. An increased risk exists for sawmill workers, furniture workers, wood products workers, and carpenters. No increased risk exists for workers in forestry, logging, or paper and pulp. [Dement J. Wood Dust. In: Bingham E, Cohnssen B, Powell C, eds. Patty's Toxicology, 5th ed. New York: John Wiley & Sons; 2001:619-49] Seventy percent of patients with sinonasal adenocarcinoma reported in Denmark between 1965 and 1974 had worked for many years in wood-working jobs. [Skov T, Mikkelsen S, Svane O, Lyng E. Reporting of occupational cancer in Denmark. Scand J Work Environ Health 1990;16:401-5]
Latency/Incubation	Years to decades
Diagnostic	Biopsy
ICD-9 Code	160.0

Highlight terms in text and click

Browse Haz-Map	
Agent Name	Wood dust, all soft and hard woods
Major Category	Biological Agents
Category	Wood Dusts & Extracts
Description	Dust from various types of wood;
Comments	Softwood dust is associated with squamous cell carcinoma, and hardwood dust is associated with adenocarcinoma of the nasal cavity. An increased risk for nasal sinus cancer exists for sawmill workers, furniture workers, wood products workers, and carpenters. No increased risk exists for workers in forestry, logging, or paper and pulp. [Dement J. Wood Dust. In: Bingham E, Cohnssen B, Powell C, eds. Patty's Toxicology, 5th ed. New York: John Wiley & Sons; 2001:619-49] The nontropical woods such as white pine rarely cause allergic contact dermatitis in carpenters. [Marks, p.314] "Occupational asthma due to Western red cedar dust exposure is the most common type of occupational asthma in the Pacific Northwest." [Chan-Yeung & Malo, 1994] There are many other wood dusts that can cause asthma including oak, mahogany, African maple, Central American walnut, ash, ebony, cinnamon, etc. IARC classifies hardwoods as human carcinogens.
Exposure Assessment	
Skin Designation (ACGIH)	No
TLV (ACGIH)	1 mg/m3(beech and oak hardwood), 5 mg/m3(softwood)
STEL (ACGIH)	10 mg/m3(softwood)
Explanatory Notes	Notice of Intended Change (for 2002): TLV = 2 mg/m3 for nonallergenic and noncarcinogenic wood dust, 0.5 mg/m3 for Western red cedar, and 1mg/m3 for other respiratory allergenic wood dust, birch, mahogany, teak, walnut, oak and beech; [ACGIH]
Adverse Effects	
IARC Carcinogen	Known Carcinogen

Browse Haz-Map	
Job Name	Carpenters
Definition	Construct, erect, install, or repair structures and fixtures made of wood, such as concrete forms; building frameworks, including partitions, joists, studding, and rafters; wood stairways, window and door frames, and hardwood floors. May also install cabinets, siding, drywall and batt or roll insulation. Include brattice builders who build doors or brattices (ventilation walls or partitions) in underground passageways to control the proper circulation of air through the passageways and to the working places. [SOC] "The nontropical woods (e.g., white pine) used by carpenters rarely cause allergic contact dermatitis." [Marks, p. 314]
Category	Construction
SOC Code	47-2031

Browse Haz-Map	
Industry Name	Finish Carpentry Contractors
Comments	Carpenters and joiners had increased risk for nasal cancer and Hogkin's lymphoma from wood dust and solvents. [BC Cancer Agency]
Description	This industry comprises establishments primarily engaged in finish carpentry work. The work performed may include new work, additions, alterations, maintenance, and repairs.
Category	Construction
NAICS Code	238350
Related Information in Haz-Map	
Job Tasks	High risk job tasks associated with this industry: <ul style="list-style-type: none"> • Apply arsenic preservatives to wood • Installed insulation before 1975 • Machine allergenic wood and inhale dust • Remove insulation installed before 1975 • Remove lead coatings • Saw or sand arsenic-treated wood • Spray epoxy or polyurethane paint, shellac, lacquer, or varnish • Use epoxy, isocyanate, or formaldehyde-resin adhesives, finishes, or sealants • Use n-hexane as a solvent in glues, coatings, or degreasers • Use polyfunctional aziridine hardener in paints, varnishes, or other coatings

Household Products Database

National Institutes of Health
National Library of Medicine
Specialized Information Services



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Products

Ingredients

MSDS

Quick Search

Browse & Search

- [Products](#)
- [Ingredients](#)
- [Material Safety Data Sheet \(MSDS\)](#)

Support Pages

- [About](#)
- [FAQ](#)
- [Help](#)
- [Glossary](#)
- [Contact Us](#)

- [Other Resources](#)

Health & Safety Information on Household Products

What's under your kitchen sink, in your garage, in your bathroom, and on the shelves in your laundry room? Learn more about what's in these products, about potential health effects, and about safety and handling.

Information in the Household Products Database is taken from a variety of publicly available sources, including brand-specific labels and Material Safety Data Sheets ([MSDS](#)) prepared by manufacturers.

[Find a product...](#)

For advice if someone is 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



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MSDS

Browse by
Categories

Browse
Alphabetically

Search

Choose a Product Category



Auto Products

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



Inside the Home

Air Freshener, Bleach,
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...

Arts & Crafts

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



Pet Care

Flea & Tick Control, Litter,
Stain/Odor Remover,
and more...



Home Office

Ink, Toner, Correction Fluid,
Electronics Cleaners,
Pens, and more...

Home

Products

Ingredients

MSDS

Browse by Categories

Browse Alphabetically

Search

Search as in

Brand Information

Brand Name: Old Spice Shave Cream
Form: aerosol foam
Product Category: Personal care/use >> Men's Products >> shaving cream/gel
Customer Service No.: 800-262-1637
Date Entered: 2001-05-31
Related Items: [Products with similar usage in this database](#)

Manufacturer

Manufacturer: Procter & Gamble Co.
Address: P.O. Box 599
City: Cincinnati
State: OH
Zip Code: 45201
Telephone Number: 513-983-1100
Fax Number: 513-562-4600
Toll Free Number: 800-543-7270
Date Info Verified: 2003-01-01
Related Items: [Products by this manufacturer](#)

Health Effects

The following information (Health Effects, Handling/Disposal, and Ingredients) is taken from the product label and/or the [Material Safety Data Sheet \(MSDS\)](#) prepared by the manufacturer. The National Library of Medicine does not evaluate information from the product label or the Material Safety Data Sheet.

Acute Health Effects: From MSDS:
ROUTES OF ENTRY: Skin, oral, eye, inhalation
HEALTH HAZARDS (ACUTE AND CHRONIC): Acute - eye: mild transient irritation; oral: gastrointestinal irritation.
Chronic - N/K

SIGNS OF SYMPTOMS OF EXPOSURE: Eye - transient burning/stinging/tearing
Oral - nausea, vomiting, diarrhea

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/K

Chronic Health Effects: MSDS: Chronic: None known
Carcinogenicity: The manufacturer's Material Safety Data Sheet (MSDS) does not address the subject of carcinogenicity.

First Aid: MSDS: EMERGENCY AND FIRST AID PROCEDURES: Eye - flush with water for 15 minutes;
Oral - dilute with fluids; Skin - rinse thoroughly with water.

Health Rating: N
Flammability Rating: N
Reactivity Rating: N
HMIS Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe;
N = No information provided by manufacturer; * = Chronic Health Hazard

MSDS Date: 1998-08-19

Handling/Disposal

Handling: MSDS: PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Store in a cool dry area in a properly labeled, tightly closed container.
OTHER PRECAUTIONS: Do not expose to heat or ignition source.

Disposal: MSDS: WASTE DISPOSAL METHOD:
Dispose in accordance with local, state, and Federal regulations.

Ingredients from MSDS/Label

Chemical	CAS No / Unique ID	Percent
Isobutane	000075-28-5	
Butane	000106-97-8	
Propane	000074-98-6	
Fragrance(s)/Perfume(s)	000000-00-1	
Lanolin	008006-54-0	
Stearic acid	000057-11-4	
Triethanolamine	000102-71-6	
Sodium lauryl sulfate (SLS)	000151-21-3	
Laureth-23	999999-11-0	
Methylparaben	000099-76-3	
Aloe extract	008001-97-6	
Water	007732-18-5	

Highlight terms in text
and click

Note: Brand names are trademarks of their respective holders.
Information is extracted from Consumer Product Information Database ©2004 by DeLima Associates. All rights reserved.

[About](#) | [FAQ](#) | [Product Recalls](#) | [Help](#) | [Glossary](#) | [Contact Us](#) | [Other Resources](#) | [Home](#)

Specialized Information Services: U.S. National Library of Medicine,
8600 Rockville Pike, Bethesda, MD 20894
National Institutes of Health, Department of Health & Human Services
Copyright, Privacy, Freedom of Information Act, Accessibility
Customer Service: help@nlm.nih.gov
Last Updated: May 12, 2004

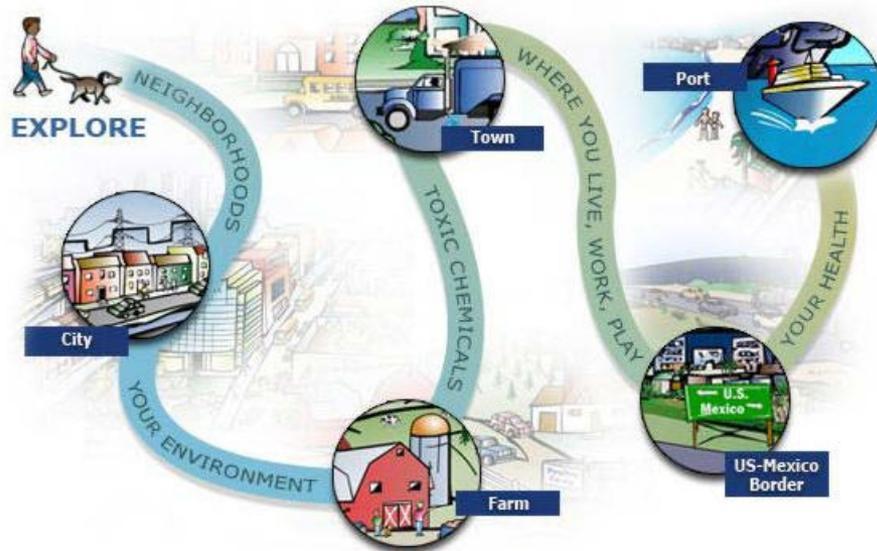


Tox Town

Environmental health concerns and toxic chemicals where you live, work, and play

Search

- Home
- Text Version
- Español
- Neighborhoods
- Locations
- Chemicals
- A-Z Index
- A-Z Disasters
- For Teachers
- What's New
- Site Map



Happy Birthday to Tox Town!

- ◆ Tox Town is 5 years old. Check out its new home page and [design](#).

I want to...

- ◆ Explore Tox Town [neighborhoods](#)
- ◆ Find toxic [chemicals](#) and hazardous substances
- ◆ Find topics about [health and the environment](#)
- ◆ Find [classroom resources](#)

[About](#) [Help](#) [Clip Art & Promotional Materials for Tox Town](#)

[E-mail Updates](#) [Contact Us: \[tehip@tehl.nlm.nih.gov\]\(mailto:tehip@tehl.nlm.nih.gov\)](#)

U.S. National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20894
1-888-FIND-NLM

[National Institutes of Health](#) [Department of Health & Human Services](#)

Developed by [Specialized Information Services](#), [Environmental Health and Toxicology](#)

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We subscribe to the [HONcode principles](#) of the [Health On the Net Foundation](#). Accredited 06/2007.

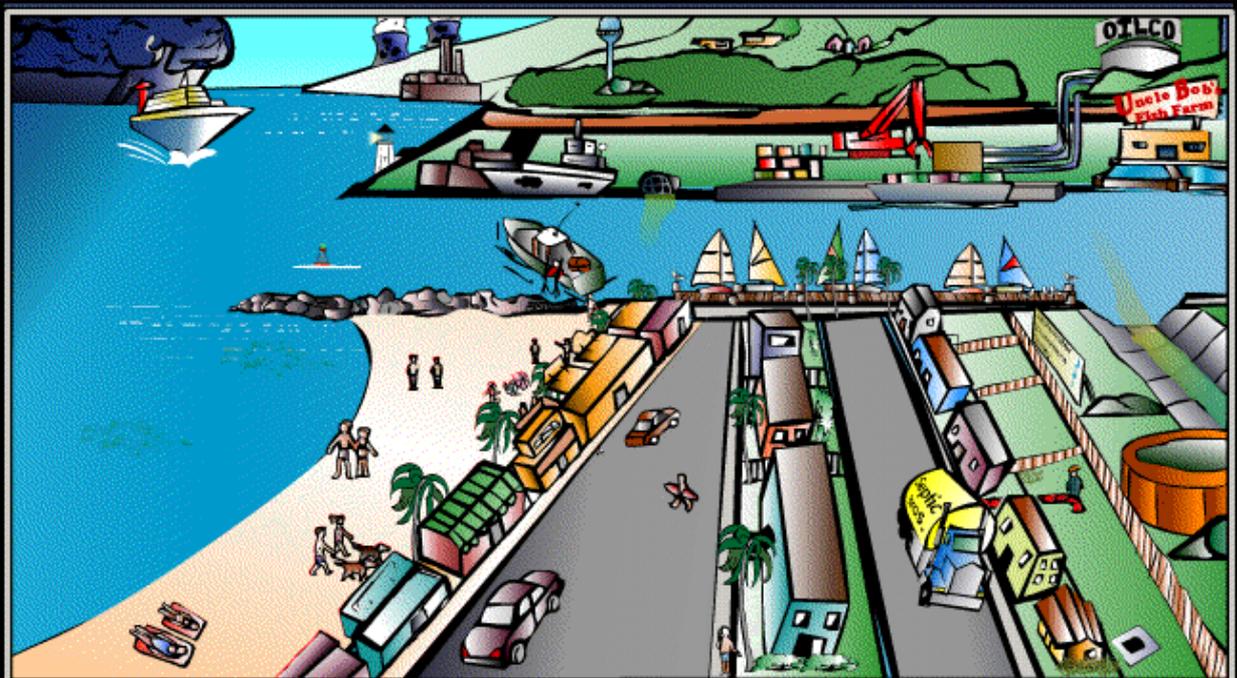


Tox Town

Environmental health concerns and toxic chemicals where you live, work, and play

Search

- Home
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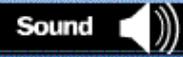
Welcome to the Port

An introduction to toxic chemicals and environmental health risks you might encounter in everyday life, in everyday places.

- Neighborhoods**
 Select a view of the Town, City, US-Mexico Border, Farm or Port to learn about suburban, urban, rural, border and coastal health risks.
- Locations**
 Click on a location in the neighborhood, and find out more about the chemicals and health risks that could be in that location.
- Chemicals**
 Roll your mouse over a chemical name to see where it might be found in the neighborhood. Then click the button for selected information on that chemical.
- Are these chemicals in MY community?**

- Algae Blooms
- Beach
- Cruise Ship
- Fish Farm
- Septic System
- River
- All Locations

- Arsenic
- Asbestos
- Benzene
- Carbon Monoxide
- Chromium
- Lead
- All Chemicals



- City
- Farm
- Town
- Border
- Port

REMM - Radiation Event Medical Management

<http://remm.nlm.gov>

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

REMM HOME | CONTACT US | SITE MAP | ABOUT REMM

REMM RADIATION EVENT MEDICAL MANAGEMENT

Guidance on Diagnosis & Treatment for Health Care Providers

SEARCH

WHAT KIND OF EMERGENCY? | INITIAL EVENT ACTIVITIES | PATIENT MANAGEMENT | MANAGEMENT MODIFIERS | TOOLS & GUIDELINES

WHAT KIND OF EMERGENCY?

- Radiological Dispersal Devices:
Dirty Bomb, Other Dispersal Methods, Hidden Sealed Source
- Nuclear Explosions: Weapons, Improvised Nuclear Devices
- Nuclear Reactor Accidents
- Transportation Accidents
- Discovering an Event

INITIAL EVENT ACTIVITIES

- Onsite Activities
- Triage Guidelines
- Hospital Activities

OTHER AUDIENCES

- First Responders in the Field
- Mental Health Professionals
- Hospitals
- Public Information Officers
- Radiation Safety and Protection
- Preplanning
- Practices and Drills

ABOUT THIS SITE

- What Are the Goals of This Site?
- Who Produced This Site?
- Disclaimers
- List of Consultants
- Join the REMM ListServ
- Contact us: Provide Site Feedback
- Download REMM to Your Computer
- System Requirements (e.g., Allow Pop-ups)

PATIENT MANAGEMENT

- Choose Appropriate Algorithm:
Evaluate for Contamination/Exposure
- Contamination
- Exposure (Acute Radiation Syndrome)
- Exposure + Contamination

MANAGEMENT MODIFIERS

- Radiation + Trauma
- Burn Triage and Treatment
- Mass Casualty
- Psychological Issues
- Specific Populations

TOOLS & GUIDELINES

- Dose Estimator for Exposure
- Template for Hospital Orders
- Use of Blood Products
- Follow-up Instructions
- Population Monitoring
- Management of the Deceased
- Develop a Hospital Medical Response Team
- Develop a State Response Plan
- Equip an Emergency Department for Decontamination

REFERENCE/DATA CENTER

- Training and Education
- Dictionary
- Animations, Illustrations, Photos
- Emergency Contacts
- Abbreviations
- Understanding Radiation
- Sources of Radiological/Nuclear Information

FEATURES

- Population Monitoring in Radiation Emergencies: A Guide for State and Local Public Health Planners, 8/2007 (HHS/CDC)
- HHS Public Health Emergency Medical Countermeasures Plan for Chemical, Biological, Radiological and Nuclear (CBRN) Threats, 4/2007 (HHS)
- Medical Countermeasures Against Radiological and Nuclear Threats (NIH/NIAD)

QUICK LINKS

- **New Users: Where Do I Start?**
- Patient Management Algorithms
- Print Algorithms & Tables
- Isotopes of Interest
- Countermeasures
- Decontamination Procedures
- Dose Estimator for Exposure
- Manage ARS Subsyndromes
- Hematopoietic Subsyndrome
- Time/Dose Effects in ARS
- Strategic National Stockpile
- Animations, Illustrations, Photos
- Dictionary
- Emergency Contacts
- **Download This Site (10/2007)**

OTHER WEB RESOURCES

■ AFRI	■ HHS
■ AHRQ	■ IAEA
■ CDC	■ ICRP
■ CRCPD	■ NCRP
■ DHS	■ NRC
■ DOE	■ OSHA
■ EPA	■ REAC/TS
■ FDA	■ WHO



Dietary Supplements Labels Database

brands, ingredients, and references

Specialized Information Services [Home](#) | [About](#) | [FAQ](#) | [Glossary](#) | [Related Resources](#) | [Contact](#) | [Help](#)

Browse & Search

- ▼ Brands
- ▼ Active Ingredients
- ▼ Manufacturers



Cassia Marilandica

The Dietary Supplements Labels Database offers information about ingredients in more than two thousand selected brands of dietary supplements. It enables users to determine what ingredients are in specific brands and to compare ingredients in different brands. Information is also provided on the health benefits claimed by manufacturers. **These claims by manufacturers have not been evaluated by the Food and Drug Administration. Companies may not market as dietary supplements any products that are intended to diagnose, treat, cure or prevent any disease.**

Ingredients of dietary supplements in this database are linked to other National Library of Medicine databases such as [MedlinePlus®](#) and [PubMed®](#) to allow users to understand the characteristics of ingredients and view the results of research pertaining to them, including the following characteristics:

- Uses in humans
- Adverse effects
- Mechanism of action

The Database can be searched by brand names, uses noted on product labels, specific active ingredients, and manufacturers.

Warnings and Recalls from the U.S. Food and Drug Administration (FDA), related to specific ingredients and supplement brands have also been provided.

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Environmental Health and Toxicology

SIS Specialized Information Services



[SIS Home](#) > [Environmental Health and Toxicology](#) > [Enviro-Health Links](#)

Enviro-Health Links - Education, Careers, and Outreach

- ▶ [Academic Program Directories](#)
- ▶ [Continuing Education and Tutorials](#)
- ▶ [Distance Learning](#)
- ▶ [Education Outreach](#)
- ▶ [K-12 Education](#)
- ▶ [Miscellaneous Specialized Resources](#)
- ▶ [General Science Resources](#)
- ▶ [Accreditation Boards](#)
- ▶ [Career Resources](#)
- ▶ [Professional Societies](#)
- ▶ [International Resources](#)

More to Explore

[Environmental Health Information Outreach](#)

[ToxTutor](#)

[Tox Web Links](#)

This Web site aggregates resources related to toxicology and environmental health education, its study and teaching, career paths and opportunities, including accreditation, and outreach for the public.

Academic Program Directories

{Formal undergraduate and graduate on - site programs leading to degrees}

- Graduate Programs in Toxicology
 - [Academic and Post - Doctoral Programs and Web Sites](#)
{U.S. Society of Toxicology}



United States
National Library
of Medicine

ToxSeek

 Meta-Search & Clustering Engine
for Environmental Health and Toxicology



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Clear selection(s)

<input checked="" type="checkbox"/> NLM TOXNET	<input type="checkbox"/> NIH	<input type="checkbox"/> International
<input checked="" type="checkbox"/> HSDB	<input type="checkbox"/> NCI	<input type="checkbox"/> WHO
<input checked="" type="checkbox"/> TOXLINE	<input type="checkbox"/> NIEHS	<input type="checkbox"/> IPCS INCHEM
<input checked="" type="checkbox"/> ALTBIB	<input checked="" type="checkbox"/> U.S. Government	<input type="checkbox"/> IPCS INTOX
<input checked="" type="checkbox"/> CCRIS	<input type="checkbox"/> AgNIC	<input checked="" type="checkbox"/> Other Resources
<input checked="" type="checkbox"/> ChemIDplus	<input type="checkbox"/> ATSDR	<input type="checkbox"/> ACS
<input checked="" type="checkbox"/> DART	<input type="checkbox"/> CDC	<input type="checkbox"/> AWMA
<input checked="" type="checkbox"/> GENE-TOX	<input type="checkbox"/> CDC - NIOSH	<input type="checkbox"/> CPDB
<input checked="" type="checkbox"/> Haz-Map	<input type="checkbox"/> CDC - elCosh	<input type="checkbox"/> EXTOXNET
<input checked="" type="checkbox"/> Household Products	<input type="checkbox"/> CDC - NASD	<input type="checkbox"/> NSC
<input checked="" type="checkbox"/> IRIS	<input type="checkbox"/> CPSC	<input type="checkbox"/> Scorecard
<input checked="" type="checkbox"/> ITER	<input type="checkbox"/> CSB	<input type="checkbox"/> SRC
<input checked="" type="checkbox"/> LactMed	<input type="checkbox"/> DOE	
<input checked="" type="checkbox"/> TRI-2004	<input type="checkbox"/> DOE - Energy Citations	
<input checked="" type="checkbox"/> Tox Town	<input type="checkbox"/> DOE - Environmental Policy & Guidance	
<input checked="" type="checkbox"/> TOXMAP	<input type="checkbox"/> DOL - MSHA	
<input checked="" type="checkbox"/> Other NLM	<input type="checkbox"/> DOL - OSHA	
<input checked="" type="checkbox"/> MedlinePlus	<input type="checkbox"/> EPA	
<input checked="" type="checkbox"/> PubMed	<input type="checkbox"/> EPA Envirofacts	
<input checked="" type="checkbox"/> Arctic Health	<input type="checkbox"/> EPA HPV	
<input checked="" type="checkbox"/> Bookshelf	<input type="checkbox"/> FDA	
<input checked="" type="checkbox"/> ClinicalTrials.gov	<input type="checkbox"/> FDA - CBER	
<input checked="" type="checkbox"/> DIRLINE	<input type="checkbox"/> FDA - CDER	
<input checked="" type="checkbox"/> PubMed Central	<input type="checkbox"/> USA.gov	
<input checked="" type="checkbox"/> NLM Catalog	<input type="checkbox"/> NAL - AGRICOLA	
<input checked="" type="checkbox"/> PubChem	<input type="checkbox"/> NAL - CATALOG	
	<input type="checkbox"/> USDA	



Search only: [NLM TOXNET](#) [Other NLM](#) [NIH](#) [U.S. Government](#) [International](#) [Other Resources](#)

[New search](#) [Modify search](#)

[Hide hits](#)

NLM TOXNET

HSDB - 3	TOXLINE - 422	ALTBIB - 0	CCRIS - 2
ChemIDplus - 1	DART - 7	GENE-TOX - 0	Haz-Map - 0
Household Products - 0	IRIS - 0	ITER - 0	LactMed - 0
TRI-2004 - 0	Tox Town - Timeout	TOXMAP - 0	

Other NLM

MedlinePlus - 0	PubMed - 325	Arctic Health - 0	Bookshelf - 0
ClinicalTrials.gov - 0	DIRLINE - 0	PubMed Central - 57	NLM Catalog - 2
PubChem - 1			

72 Initial Results ⓘ for: **PFOA...**

⊕ **Result Clusters**

in Relevance Order ▾

1 2 3 4 5 6 Next >

in Relevance Order ▾

- ⊖ **perfluorooctanoic acid (29)**
 - **Perfluorooctanoic Acid in the Mouse (3)**
 - **elimination of perfluorooctanoic acid in male (2)**
 - **Pregnancy Loss**

[PERFLUOROOCCTANOIC ACID](#) [Preview]

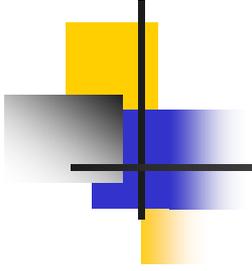
HSDB - Synonym: pfoa335-67-1 [Source: HSDB](#)

[PERFLUOROOCCTANOIC ACID](#) [Preview]

CCRIS - Synonym: pfoa335-67-1 [Source: CCRIS](#)

[Pregnancy Loss Associated with Exposure to Perfluorooctanoic Acid in the Mouse.](#) [Preview]

Lau C; Thibodeaux JR; Thai L; Hanson RG; Blanton MR; Hunter ES; Abbott BD; Strynar MJ Birth Defects Res A Clin Mol Teratol 2005 May;73(5):358 [Source: DART 1.](#)



More to Come

- Updating and Expansion of HSDB's Med Surveillance
- World Library of Toxicology, Chemical Safety, and Environmental Health
- Revision of Tox-Tutor in partnership with U.S. SOT
- TOXREF – Therapeutic/Normal, Toxic, Lethal Levels of chemicals in biological samples
- Environmental Health Nomenclature Collaboration
- Environmental Information Coalition/Earth Portal

Drug Information Portal

Drug Information Portal

Quick Access to over 12,000 Selected Drugs



United States
National Library of Medicine
National Institutes of Health

Drug News and Features

NLM Drug Resources

NLM Research Resources

Drug Resources by Category

Other Drug Resources



Go

Search for a drug by a name, such as Valium.

[Show List of Resources](#) searched by Drug Information Portal.

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National Institutes of Health, Health & Human Services
Freedom of Information Act



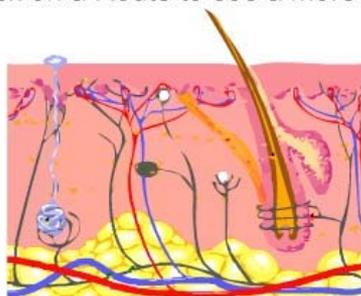
ToxLearn



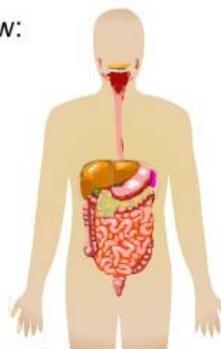
How Is Dose Measured?

Measuring the **absorbed dose** is more difficult than quantitating the **exposure** dose since it requires information about the way that different animals absorb agents through various routes of exposure (e.g. ingestion, inhalation, dermally) and under differing conditions; e.g., absorption through a young male rat's skin vs. absorption through drinking water in an aged female monkey. Information about absorption is collected through laboratory experiments, generally performed on a limited number of animals. Because of ethical and other considerations, such laboratory studies are generally performed on rodents and rarely on humans. As a result, there is a considerable level of uncertainty in extrapolating the effects of absorbed dose from laboratory animal studies to humans.

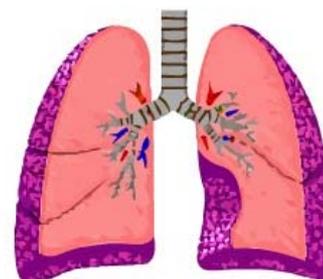
Click on a Route to see a More detailed view:



Dermally



Ingestion



Inhalation

Section: 3 Page: 3

Slide 10 of 17



Audio On

[Repeat Page](#)

[Glossary](#)

[Contents](#)

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World Library of Toxicology

World Library of Toxicology,
Chemical Safety, & Environmental Health



Home Africa Antarctica Asia Central America Europe Middle East North America Oceania South America

Select a country ▼ Select an International Organization ▼ Enter Search Terms Go ▶



GLOBALERT RESOURCES NLM TEHIP

Antarctica/Polar Regions

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National Institutes of Health, Department of Health & Human Services

About | Contact



World Library of Toxicology ▶ Europe

Select a country ▼ | Select an International Organization ▼ | Enter Search

Europe

[View Map](#) | [Regional Information](#)

Participating Countries and Regions



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Belgium



Czech Republic



Denmark



Finland



France



Germany



Italy



Netherlands



Norway



Poland



Portugal



Russia



Spain



Sweden



Switzerland



Turkey



United Kingdom

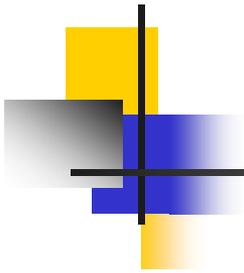


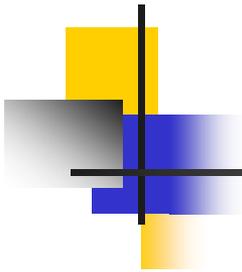
[GLOBALERT](#)

[RESOURCES](#)

[NLM TEHIP](#)

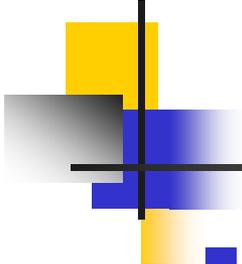
[About](#) | [Contact](#)





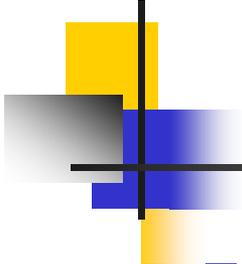
Part VI

Non-NLM Resources



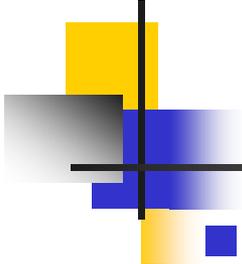
Professional Associations

- 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>

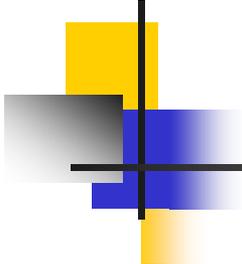


U.S. Government Resources (continued)

- 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.csb.gov>

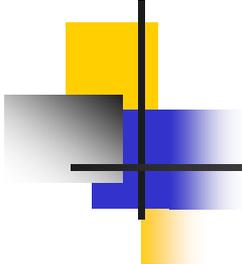
Some State Government Sites

- 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.com>
- Scorecard (from Environmental Defense) – <http://www.scorecard.org>
- Environmental Fate Databases & more (from Syracuse Research Corporation) – <http://www.syrres.com/eSc/efdb.htm>
- EXTOXNET (pesticide information) – <http://ace.orst.edu/info/extoxnet>

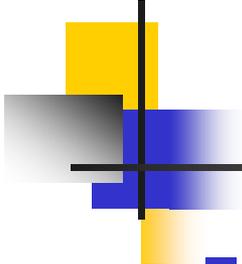


Some Chemical Databases (continued)

- 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/>

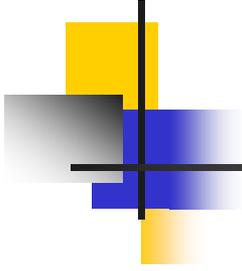
Also Consider:

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



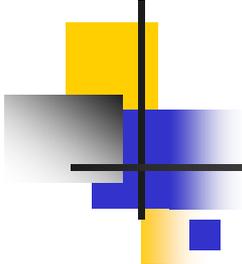
Other Web Sites

- 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.ncseonline.org>
- Society of Environmental Journalists – <http://www.sej.org>
- TEHIP/NLM Web Links – <http://sis.nlm.nih.gov/enviro/toxweblinks.html>



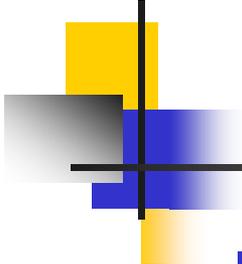
Some Commercial (\$) Databases

- BIOSIS (Thomson Scientific) – <http://www.biosis.org>
- Chemical Abstracts & CAS Registry – Chemical Abstracts Service – <http://www.cas.org> (also <http://stnweb.cas.org>)
- CCINFOweb (some resources including 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>



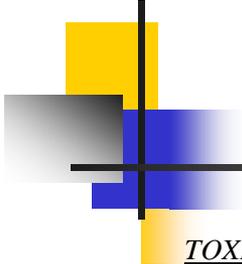
Some Commercial (\$) Databases (continued)

- EMBASE – Elsevier – <http://www.embase.com>
- Environment Abstracts – CIS - <http://www.lexisnexis.com>
- MICROMEDEX Databases – MICROMEDEX – <http://www.micromedex.com>
- Science Direct - Elsevier - <http://www.sciencedirect.com/>
- STN (from ACS/CAS) - <http://www.cas.org/stn.html>
- Toxicology Abstracts – Cambridge Scientific Abstracts – <http://www.csa.com>
- Web of Science – Thomson Scientific – <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
 - Metacrawler – <http://www.go2net.com>
 - Dogpile – <http://www.dogpile.com>
 - Ask.com – <http://www.ask.com>
- Searchenginewatch – <http://www.searchenginewatch.com>
- Mailing List Directories – CATALIST - <http://www.lsoft.com/lists/listref.html>
- And Remember ToxSeek



TOXNET Exercises

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 “Search.” Click the top, left button “Calculate Release.”

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

After above search, use the browser’s “back” button to return to the “TRI Search Results” screen. Click on the Lesaffre Yeast Corporation record. Click on “Environmental Release of Chemical” in the Table of Contents. Scroll down to “Water Discharge Estimates.”

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 Agilent Techs’ Newark, California facility transfer any 1,2,4-trichlorobenzene off-site for treatment in 1996? How much? Where to?

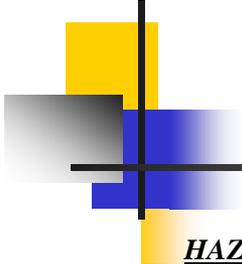
In TRI96, search for **1,2,4-trichlorobenzene** in the “chemical” query box, **agilent techs** in the “facility name” query box, and **newark california** in the “facility location (city/state)” query box. Click “Search.” Click on “Off-Site Waste Transfer” in the Table of Contents.

5. What chemicals have been reported released in amounts over 1,000,000 pounds via underground injection in Texas in 1999, and what is the total sum of these releases.

In TRI99, search for Texas as a state under Facility Location, and greater than 1,000,000 pounds as a range. Sorting the results will provide a clear display of the chemicals. Click on the Calculate Release button to view the sum total of the underground injection releases.

6. How many individual TRI98 reports have been filed on barium compounds? Display the U.S. geographical distribution of reported releases.

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. Click on “Map it with TOXMAP” to view a map of releases.



TOXNET Exercises (continued)

HAZ-MAP

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

Click on **High Risk Jobs/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 and hide 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?

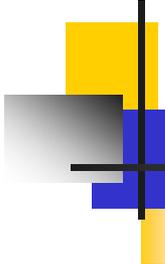
Enter **Windex** in query box. Click on your choice of Windex cleaner. View ingredient and health effects information.

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

Click on the “Products” tab. 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?

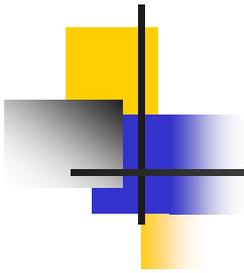
Click on Ingredients. Enter **triclosan** in query box. Click on triclosan. Scan list of products.



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 2005 11th 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 on **pesticides**. Also, look over the article on Acid Rain in NCSE's Encyclopedia of Earth. [www.ncseonline.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 Society of Environmental Toxicology and Chemistry's 5th World Congress be held? [www.setac.org]
9. What is New Jersey's percentile ranking among states in health risks from hazardous air pollutants? Use Scorecard (from Environmental Defense). Start by clicking on Air/HazardousAir Pollutants. [www.scorecard.org]
10. Use the BIOLOG file (one of Syracuse Research Corporation's Environmental Fate Data Bases – EFDB) to find references on DDT in sewage. [www.syrres.com/esc/efdb.htm]
11. Find some expert peer-reviewed monographs on arsenic. [www.inchem.org]
12. What are some common side effects of the drug Vioxx? Consult MedlinePlus' Drugs and Supplements page (data from the USP). [medlineplus.gov]
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]





Course Title _____
 Date _____
 City & State _____

1. On a scale of 1 to 4 (with 4 being the highest, best, or most, and 1 being the least or worst), rate the Presenter(s) individually or as a whole by circling the number that applies.

Presenter(s) Name:	Knowledgeable				Well prepared/ Organized				Effective presenter				Responsive to Questions			
	High		Low		High		Low		High		Low		High		Low	
1.	4	3	2	1	4	3	2	1	4	3	2	1	4	3	2	1
2.	4	3	2	1	4	3	2	1	4	3	2	1	4	3	2	1
3.	4	3	2	1	4	3	2	1	4	3	2	1	4	3	2	1
4. As a whole	4	3	2	1	4	3	2	1	4	3	2	1	4	3	2	1

2. Please check the appropriate rating for each of the following aspects of this class.

	Agree	Somewhat Agree	Disagree
Instructional Materials			
Were used effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were relevant/useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hands-on sessions were useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Course Objectives			
Were met	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Course Content			
Was well organized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Length was appropriate for course content	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I Acquired			
Knowledge & skills I can use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facility was			
Conducive to learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. What part of this course was most helpful to you?

4. What part of this course was least helpful to you?

5. Overall, I would give this session a grade of: A B C D F

6. NLM database comments (if any)

