

TOPICS

Headings included in this spreadsheet:

Chemical Name

CAS number

What is / was the
chemical's major use?

- Solvent
- Dye manufacturing
- Plastics, rubber or vinyl manufacturing
- Chemical intermediate
- Flame retardant
- Food additive
- Pesticide
- Gas additive
- Microelectronics
- Mycotoxin
- Drug
- Sterilizing agent
- Research chemical
- Riot control / Tear gas

Cancer classification

Is chemical currently
produced / in use in
the US?

If not in use, when was
it taken off the market?

Was the chemical used
in manufacturing?

Which consumer
products is / was the
chemical found in?

Location of most
prominent exposure

- Occupational
- Household
- General population

Are there any OSHA
regulations or advisories?

Abbreviations &
Key References

EnviroChem & Cancer Database (ECCD)

BCERF's fact sheet number 45 addresses why there is concern about environmental chemicals and the risk of breast cancer. As a part of this fact sheet, a table listed the chemicals that are known to cause breast tumors in laboratory animals. This information was compiled from the National Toxicology Program's cancer animal bioassay results. The EnviroChem and Cancer Database (ECCD) provides additional information for these 42 chemicals including major uses, cancer classification, whether the chemical is currently produced or when it was taken off the market, use in manufacturing and consumer products, exposures of concern, and an overview of workplace regulations and advisories by the Occupational Safety and Health Administration (OSHA). Because this spreadsheet provides a "snapshot" of information on these chemicals, it should be considered to be a starting point for those seeking information on cancer risk. The user should refer to the Material Safety Data Sheets (MSDS) for information on the toxicology and precautions to be used when handling these chemicals or products that contain these chemicals <<http://msds.pdc.cornell.edu/msdssrch.asp>>.

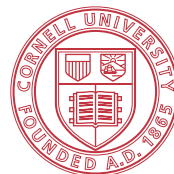
A searchable, interactive version of this spreadsheet is available on the BCERF web site at: <<http://envirocancer.cornell.edu/ECCD/chemsearch.cfm>>.

This spreadsheet was developed by Michael Goldman as a part of an undergraduate independent study project under the supervision of Suzanne Snedeker, Ph.D., BCERF Associate Director for Translational Research.

Program on Breast Cancer and Environmental Risk Factors (BCERF)

College of Veterinary Medicine
Vet Box 31
Cornell University
Ithaca, NY 14853-6401

Telephone: 607 254-2893
Fax: 607 254-4730
Email: breastcancer@cornell.edu
Web: <http://envirocancer.cornell.edu>



Cornell University

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Abbreviations

(Abbreviations are listed as they appear across the spreadsheet column headings from left to right)

MSDS (referred to in the abstract) stands for Material Safety Data Sheets.

CAS # stands for Chemical Abstract Service Registry Number, a unique number assigned to each chemical.

DHHS stands for the Department of Health and Human Services.

NTP stands for the National Toxicology Program.

RoC stands for the *Report on Carcinogens*. The DHHS and the NTP, together with the Public Health Service, are responsible for compiling a biennial report on substances that are known to be or that are reasonably anticipated to be human carcinogens.

NTP TR # stands for the National Toxicology Program Technical Report Number. Each set of studies (Technical Report) evaluating the cancer causing potential of a particular chemical is assigned a unique number.

IARC stands for the International Agency for Research on Cancer, Lyon France.

IARC works with international experts who critically review and evaluate the cancer risk of chemicals, other agents and mixtures and workplace exposures. Based on the strength of the scientific evidence from human, laboratory animal, and related studies, chemicals/agents are classified in one of the following categories:

- GROUP 1 Carcinogenic to humans
- GROUP 2A Probably carcinogenic to humans
- GROUP 2B Possibly carcinogenic to humans
- GROUP 3 Not classifiable as to its carcinogenicity to humans
- GROUP 4 Probably not carcinogenic to humans

A detailed explanation of the IARC cancer classification system is available in the Preamble section of published monographs or is available on-line at: <<http://monographs.iarc.fr/monoeval/eval.html>>.

OSHA stands for Occupational Safety and Health Administration.

Key References

Bennett, L.M. and Davis, B.J. (2002) Identification of mammary carcinogens in rodent bioassays, *Environmental and Molecular Mutagenesis*, 39:150-157.

Dunnick, J.K et al. (1995) Chemically induced mammary gland cancer in the National Toxicology Program's carcinogenesis bioassay, *Carcinogenesis*, 16:173-179.

DHHS, Report on Carcinogens, 10th ed. Carcinogen Profiles 2002, U.S. Department of Health and Human Services, National Toxicology Program. Online version available at <<http://ehp.niehs.nih.gov/roc/toc10.html>>. Website can be searched by entering either chemical name, CAS #, or synonym.

Household Products Database, <<http://householdproducts.nlm.nih.gov/ingredients.htm>>. National Library of Medicine. Search ingredients by chemical or CAS Registry Number.

IARC Monographs Program on the Evaluation of Carcinogenic Risks to Humans at: <<http://monographs.iarc.fr/htdig/search.html>>. Website can be searched by entering either chemical name, CAS # or synonym.

MSDS, Material Data Safety Sheets, a free searchable interface of 250,000 entries is maintained by Cornell University is available at: <<http://msds.pdc.cornell.edu/msdsrch.asp>>. A useful glossary of terms: <<http://www.umd.edu/research/files/environ/appendic.htm>>.

General OSHA website: <<http://www.osha.gov>>.

- Benzene OSHA reference: <<http://www.osha.gov/SLTC/benzene/index.html>>.
- Ethylene oxide OSHA reference: <<http://www.osha.gov/SLTC/ethyleneoxide/index.html>>.
- OSHA Information regarding EXPOSURE LIMITS, which are set by OSHA regarding a worker's permissible exposure limit to a hazardous chemical in the workplace can be found at: <http://www.osha.gov/dts/chemicalsampling/toc/toc_chemsamp.html>. Chemicals can be searched alphabetically or CAS #.
- OSHA Information on the HAZARD COMMUNICATION STANDARD can be found at: <<http://www.osha.gov/SLTC/hazardcommunications/standards.html>> and <<http://www.osha.gov/SLTC/hazardcommunications/index.html>>.

NTP Technical Report Abstracts of "Chemicals Associated with Site-Specific Tumor Induction in Mammary Gland" linked to a list of these chemicals at: <<http://ntp-server.niehs.nih.gov/htdocs/sites/mamm.html>>.

Snedeker, S.M. (2002) Environmental Chemicals and Breast Cancer Risk; Why is There Concern?, Fact Sheet no. 45, Cornell University Program on Breast Cancer and Environmental Risk Factors, Cornell University, Ithaca, NY, 8 pages.