

## 8. REFERENCES

- \*ACGIH. 1996. TLVs Threshold Limit values and biological exposure indices for 1995-1996. American Conference of Governmental Industrial Hygienists, Cincinnati, OH, 26.
- \*Adinolfi M. 1985. The development of the human blood-CSF-brain barrier. *Developmental Medicine & Child Neurology* 27:532-537.
- \*Ahman PK, Dittmer DS. 1974. In: *Biological handbooks: Biology data book, Volume III, second edition.* Bethesda, MD: Federation of American Societies for Experimental Biology, 1987-2008, 2041.
- Andersen ME, Gargas ML, Jones RA, et al. 1980. Determination of the kinetic constants for metabolism of inhaled toxicants *in vivo* using gas uptake measurements. *Toxicol Appl Pharmacol* 54:100-116.
- \*Andersen ME, Krishnan K. 1994. Relating *in vitro* to *in vivo* exposures with physiologically-based tissue dosimetry and tissue response models. In: H. Salem, ed. *Current concepts and approaches on animal test alternatives.* U.S. Army Chemical Research Development and Engineering Center, Aberdeen Proving Ground, Maryland.
- \*Andersen ME, MacNaughton MG, Clewell HJ, et al. 1987. Adjusting exposure limits for long and short exposure periods using a physiological pharmacokinetic model. *Am Ind Hyg Assoc J* 48(4):335-343.
- \*Andrews AW, Zawistowski ES, Valentine CR. 1976. A comparison of the mutagenic properties of vinyl chloride and methyl chloride. *Mutat Res* 40:273-276.
- Anger WK. 1985. Neurobehavioral tests used in NIOSH-supported worksite studies, 1973-1983. *Neurobehav Toxicol Teratol* 7:359-368.
- Anger WK, Johnson BL. 1985. Chemicals affecting behavior. In: O'Donoghue JL, ed. *Volume I: Neurotoxicity of industrial commercial chemicals.* Boca Raton, FL: CRC Press, Inc., 51-148.
- Anonymous. 1977. TSCA (Toxic Substances Control Act) interagency testing committee. Initial report to the Administrator, Environmental Protection Agency. *Federal Register* 42:55026-55080.
- \*Atkinson R. 1985. Kinetics and mechanisms of the gas-phase reactions of hydroxyl radical with organic compounds under atmospheric conditions. *Chem Rev* 85:69-201.
- Atkinson R, Darnall KR, Lloyd AC, et al. 1979. Kinetics and mechanisms of the reactions of the hydroxyl radical with organic compounds in the gas phase. *Adv Photochem* 11:375-488.
- \*ATSDR. 1989. Decision guide for identifying substance-specific data needs related to toxicological profiles. Agency for Toxic Substances and Disease Registry, Division of Toxicology, Atlanta, GA.
- \*ATSDR/CDC. 1990. Subcommittee report on biological indicators of organ damage. Agency for Toxic Substances and Disease Registry, Centers for Disease Control and Prevention, Atlanta, GA.

Axelsson O. 1985. Halogenated alkanes and alkenes and cancer: Epidemiological aspects. In: Fishbein L, O'Neill IK, eds. Volume 7: Environmental carcinogens selected methods of analysis. Lyon, France: IARC.

\*Baird TT. 1954. Methyl chloride poisoning. *Br Med J* 2:1353.

\*Baker HM. 1927. Intoxication with commercial methyl chloride. Report of a series of cases. *J Am Med Assoc* 88:1137-1138.

Barassin J, Combourieu J. 1974. Kinetic study of reactions between atomic oxygen and the chlorinated derivatives of methane. II. Reactions  $\text{CH}_3\text{Cl}+\text{O}$ ,  $\text{CHCl}_3+\text{O}$ ,  $\text{CCL}_4+\text{O}$  and  $\text{CH}_4+\text{O}$ . *Bull Sot Chim* 1974:1-5.

\*Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessments. U.S. Environmental Protection Agency. *Regul Toxicol Pharmacol* 8:471-486.

Barrie LA. 1986. Arctic air pollution: An overview of current knowledge. *Atmos Environ* 20:643-663.

\*Battigelli MC, Perini A. 1955. [Two cases of acute methyl chloride intoxication]. *Medicina del Lavoro* 46:646-652. (Italian).

\*Bauer S, Solyom d. 1994. Determination of volatile organic compounds at the parts per trillion level in complex aqueous matrices using membrane introduction mass spectrometry. *Analytical Chemistry* 66(24):4422-4431.

Belanger PL. 1980. Health hazard evaluation--determination report no. HE 79-31-699. University Corporation for Atmospheric Research, Mauna Loa Observatory, Hilo, Hawaii. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health.

Bentur Y, Koren G. 1991. The three most common occupational exposures reported by pregnant women: An update. *American Journal of Obstetrics and Gynecology* 165(2):429-437.

\*Bolt HM, Ganswendt B. 1993. Mechanisms of carcinogenicity of methyl halides. *Critical Reviews in Toxicology* 23(3):237-253.

Bolt HM, Laib RJ, Pater H, et al. 1986. DNA adducts of halogenated hydrocarbons. *J Cancer Res Clin Oncol* 112:92-96.

\*Borovska D, Jindrichova J, Klima M. 1976. [Methyl chloride intoxications in the East Bohemia district.] *Z Gesamte Hyg* 22:241-245. (German).

\*Brown KW, Donnelly KC. 1988. An estimation of the risk associated with the organic constituents of hazardous and municipal waste landfill leachates. *Haz Waste Haz Mater* 5:1-30.

Browning G. 1985. Notes of meeting (February 20) between G. Browning, General Electric Silicone Products Division, Waterford, NY 12188, and M. Price, Test Rules Development Branch, Office of Toxic Substances, U. S. Environmental Protection Agency, Washington, DC.

- \*Burek JD, Potts WJ, Gushow TS, et al. 1981. Methyl chloride:48 and 72 hour continuous inhalation exposure in rats followed by up to 12 days of recovery. Unpublished study. Toxicology Research Laboratory, Dow Chemical USA, Midland, MI. OTS Submission Document ID 40-8120723. Microfiche 511317.
- \*Burmaster DE. 1982. The new pollution-groundwater contamination. *Environ* 24:6-13, 33-36.
- \*Burse JT, Pellizzari D. 1982. Analysis of industrial wastewater for organic pollutants in consent decree survey. Env Research Lab Office Research Devel, U.S. Environmental Protection Agency, Athens GA. Printout of Database.
- Bus JS. 1982. Integrated studies of methyl chloride toxicity. *Chem Ind Inst Toxicol Activ* 2:3-4.
- \*Butler R, Solomon IJ, Snelson A. 1978. Rate constants for the reaction of OH with halocarbons in the presence of O<sub>2</sub> + N<sub>2</sub>. *J Air Pollut Cont Fed* 28:1131-1133.
- \*C&EN. 1992. Production by the U.S. chemistry industry. *Chemical & Engineering News* 23 (June 29):34-40
- \*C&EN. 1995. Production by the U.S. chemistry industry. *Chemical & Engineering News* 26 (June 26):36-44.
- \*Cammann K, Hubner K. 1995. Trihalomethane concentrations in swimmers' and bath attendants' blood and urine after swimming or working in indoor swimming pools. *Arch Environ Health* 50(1):61-65.
- \*CAS. 1988. Chemical Abstract Services. December 6, 1988.
- \*Chapin RE, White RD, Morgan KT, et al. 1984. Studies of lesions induced in the testis and epididymis of F-344 rats by inhaled methyl chloride. *Toxicol Appl Pharmacol* 76:328-343.
- \*Chellman GJ, Bus JS, Working PK. 1986c. Role of epididymal inflammation in the induction of dominant lethal mutations in Fischer 344 rat sperm by methyl chloride. *Proc Natl Acad Sci USA* 83:8087-8091.
- \*Chellman GJ, Hurtt ME, Bus JS, et al. 1987. Role of testicular versus epididymal toxicity in the induction of cytotoxic damage in Fischer-344 rat sperm by methyl chloride. *Repro Toxicol* 1:25-35.
- \*Chellman GJ, Morgan KT, Bus JS, et al. 1986a. Inhibition of methyl chloride toxicity in male F-344 rats by the anti-inflammatory agent BW755C. *Toxicol Appl Pharmacol* 85:367-379.
- \*Chellman GJ, White RD, Norton RM, et al. 1986b. Inhibition of the acute toxicity of methyl chloride in male B6C3F<sub>1</sub> mice by glutathione depletion. *Toxicol Appl Pharmacol* 86:93-104.
- Chenoweth MB, Hake CL. 1962. The smaller halogenated aliphatic hydrocarbons. *Ann Rev Pharmacol* 2:363-398.
- \*Chopra NM. 1972. Breakdown of chlorinated hydrocarbon pesticides in tobacco smokes: A short review. In: Tahori AS, ed. *Proceedings of the 2nd International IUPAC Congress of Pesticide Chemistry, Vol VI*. New York, NY: Gordon and Breach Science Publishers, 245-261.

- \*CIIT. 1981. Final report on a chronic inhalation toxicology study in rats and mice exposed to methyl chloride. Unpublished study prepared by Battelle-Columbus Laboratories, Columbus, OH. OTS Submission Document ID 40-8120717. Microfiche 511310.
- \*Clewell HJ III, Andersen M. 1985. Risk assessment extrapolations and physiological modeling. *Toxicol IndHealth* 1(4):111-131.
- \*CLPSDB. 1987. Contract Laboratory Program Statistical Data Base. April 13, 1987.
- \*CMR. 1986. Chemical profile: Chloromethane. *Chemical Marketing Reporter*, March 3, 1986.
- \*CMR. 1995. Chemical profile: Methyl chloride. *Chemical Marketing Reporter* (March 6):44-45.
- Cohen J. 1979. Methyl chloride survey final report, task III. Conoco Chemicals, Westlake, Louisiana. NTIS PB83-156299. (microfiche)
- Cohen JM. 1980. Extent-of-exposure survey of methyl chloride. Report. NTIS PB81-223547. (microfiche)
- Cohen N. 1986. Structure-reactivity relationships for predicting environmentally hazardous chemicals. Report. EPA 600/3-86-072. NTIS PB87-140497/GAR. (microfiche)
- \*Cole RH, Frederick RE, Healy RP, et al. 1984. Preliminary findings of the priority pollutant monitoring project of the nationwide urban runoff program. *J Water Pollut* 56:898-908.
- \*Coleman WE, Lingg RD, Melton RG, et al. 1976. The occurrence of volatile organics in five drinking water supplies using gas chromatography/mass spectrometry. In: Keith L, ed. *Analysis and identification of organic substances in water*. Ann Arbor, MI: Ann Arbor Science, 305-327.
- Cowie M, Watts H. 1971. Diffusion of methane and chloromethanes in air. *Can J Chem* 49:74-77.
- \*Cox RA, Derwent RG, Eggleton AEJ, et al. 1976. Photochemical oxidation of halocarbons in the troposphere. *Atmos Environ* 10:305-308.
- Crandall MS, McCammon CS, Fajen J, et al. 1980. Industrial hygiene report in-depth survey of monochlorobenzene and methyl chloride exposure at the Dow Chemical Company, Midland, Michigan. Report. NTIS PB80-192933. (microfiche)
- Cronn DR, Harsch DE. 1976. Rapid determination of methyl chloride in ambient air samples by GC-MS. *Anal Lett* 9:1015-1023.
- \*Cronn DR, Rasmussen RA, Robinson E, et al. 1977. Halogenated compound identification and measurement in the troposphere and lower stratosphere. *J Geophys Res* 82:5935-5944.
- \*Crosley DR. 1997. 1993 Tropospheric OH photochemistry experiment: A summary and perspective. *Journal of Geophysical Research Atmospheres* 102(5):6300-6700.

## 8. REFERENCES

- \*Crutzen PJ, Gidel LT. 1983. A two-dimensional photochemical model of the atmosphere. 2: The tropospheric budgets of the anthropogenic chlorocarbons, carbon monoxide, methane, chloromethane and the effect of various nitrogen oxides sources on the tropospheric ozone. *J Geophys Res* 88:6641-6661.
- \*Crutzen PJ, Heidt LE, Krasnec JP, et al. 1979. Biomass burning as a source of atmospheric gases carbon monoxide, hydrogen, nitrous oxide, nitric oxide, methyl chloride and carbonyl sulfide. *Nature (London)* 282:253-256.
- \*Crutzen PJ, Isaksen ISA, McAfee JR. 1978. The impact of the chlorocarbon industry on the ozone layer. *J Geophys Res* 83:345-363.
- Daubert TE, Danner RP. 1985. Data compilation tables of properties of pure compounds. *Am Inst Chem Eng* 450.
- Davis DD, Chameides WL, Kiang CS. 1982. Measuring atmospheric gases and aerosols. *Nature* 295:186.
- \*Davis DD, Machado G, Conaway B, et al. 1976. A temperature dependent kinetics study of the reaction of OH with CH<sub>3</sub>C1, CH<sub>2</sub>C1<sub>2</sub>, CHC1<sub>3</sub> and CH<sub>3</sub>Br. *J Chem Phys* 65:1268-1274.
- Davis DD, Watson R, McGee T, et al. 1976. Tropospheric residence times for several halocarbons based on chemical degradation via hydroxyl radicals. Paper presented at National Meeting: Division Environmental Chemistry, American Chemical Society, 16:189-191.
- DeCesar RT, Edgerton SA, Khalil MAK, et al. 1985. Sensitivity analysis of mass balance receptor modeling: Methyl chloride as an indicator of wood smoke. *Chemosphere* 14:1495-1501.
- DeGroot WF. 1989. Methyl chloride as a gaseous tracer for wood burning? *Environ Sci Technol* 23:252.
- \*Dekant W, Frischmann C, Speerschneider P. 1995. Sex, organ and species specific bioactivation of chloromethane by cytochrome P4502E1. *Xenobiotica*. 25(11):1259-1265.
- \*DeKok AC, Antheunius WS. 1981. S-Methylcysteine no human metabolite of methylchloride. Unpublished study. Dow Chemical USA, Midland MI. OTS 8D Submission. Document ID 878221209. Microfiche 215176.
- DeMeyer CL, Whitehead LW, Jacobson AP, et al. 1986. Potential exposure to metal fumes, particulates, and organic vapors during radiotherapy shielding block fabrication. *Med Phys* 13:748-750.
- Derwent RG, Eggleton AEJ. 1978. Halocarbon lifetimes and concentration distributions calculated using a two-dimensional tropospheric model. *Atmos Environ* 12:1261-1269.
- \*DHHS. 1995. Report to Congress on workers' home contamination study conducted under the workers' family protection act (29 U.S.C. 671a). U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (Cincinnati, OH). September 1995.
- Dilling WL. 1977. Interphase transfer processes. II. Evaporation rates of chloromethanes, ethanes, ethylenes, propanes, and propylenes from dilute aqueous solutions. Comparisons with theoretical predictions. *Environ Sci Technol* 11:405-409.

- \*Dilling WL. 1982. Atmospheric environment, Chapter 5. In: Conway RA. ed. Environmental risk analysis for chemicals. New York, NY: Van Nostrand Reinhold Co., 154-197.
- Dilling WL, Goersch HK. 1980. Organic photochemistry. XVI. Tropospheric photodecomposition of methylene chloride. In: Haque R, ed. Dynamics, exposure and hazard assessment of toxic chemicals. Ann Arbor, MI: Ann Arbor Science.
- Dilling WL, Tefertiller NB, Kallos GJ. 1975. Evaporation rates and reactivities of methylene chloride, chloroform, 1,1,1-trichloroethane, trichloroethylene, tetrachloroethylene and other chlorinated compounds in dilute aqueous solutions. *Environ Sci Technol* 9:833-838.
- \*Dodd DE, Bus JS, Barrow CS. 1982. Nonprotein sulfhydryl alterations in F-344 rats following acute methyl chloride inhalation. *Toxicol Appl Pharmacol* 62:228-236.
- \*Doronina N V, Sokolov A P, Trotsenko YA. 1996. Isolation and initial characterization of aerobic chloromethane-utilizing bacteria. *Ferns Microbiology Letters* 142(2-3):179-183.
- \*DOT. 1990a. Hazardous materials table special provisions, hazardous materials communications, emergency response information and training requirements. Department of Transportation. Code of Federal Regulations. 49 CFR 172.101.
- \*DOT. 1990b. List of hazardous substances and reportable quantities. Department of Transportation. Code of Federal Regulations. 49 CFR 172.101.
- \*Dunn RC, Smith WW. 1947. Acute and chronic toxicity of methyl chloride. *Arch Pathol* 43:296-300.
- \*DuPont. 1977. Mutagenic activity of methane chloro- in the Salmonella/microsome assay. Unpublished study. OTS 8D Submission. E.I. Du Pont de Nemours and Co., Inc., Wilmington, DE. Document 878220403. Microfiche 215036.
- Edgerton SA. 1985. Gaseous tracers in receptor modeling: Methyl chloride emission from wood combustion. *Diss Abstr Int B* 46(Part 1):4284.
- \*Edgerton SA, Khalil MAK, Rasmussen RA. 1984. Estimates of air pollution from backyard burning. *J Air Pollut Contr Fed* 34:661-664.
- Edgerton SA, Khalil MAK, Rasmussen RA. 1985. Methodology for collecting short-period integrated gas samples: Estimating acute exposure to woodburning pollution. *J Environ Sci Health Part A* A20:563-581.
- \*Edgerton SA, Khalil MAK, Rasmussen RA. 1986. Source emission characterization of residential wood-burning stoves and fireplaces: Fine particle/methyl chloride ratios for use in chemical mass balance modeling. *Environ Sci Technol* 20:803-807.
- Edgerton SA, Khalil MAK, Rasmussen RA. 1987. Diurnal variations in residential woodburning pollution in Portland, Oregon (USA). *Chemosphere* 16:155-160.
- \*Edwards PR, Campbell I, Milne GS. 1982a. The impact of chloromethanes on the environment. Part 1. The atmospheric chlorine cycle. *Chem Ind (London)* 16:574-578.

- \*Edwards PR, Campbell I, Milne GS. 1982b. The impact of chloromethanes on the environment. Part 2. Methyl chloride and methylene chloride. *Chem Ind (London)* 17:619-622.
- Egan E, Boeniger M, Meinhardt T. 1976. Industrial hygiene walk-through report No. IWS-60-11. Diamond Shamrock Chemical Company, Belle, West Virginia. NTIS PB88-237-276. (microfiche)
- \*Eichler DL, Mackey JH. 1986. The levels of certain volatile organic compounds in the ambient air of the United States. In: 79th annual meeting: Air Pollution Control Assoc, 6:1-17.
- \*Elliot S, Rowland FS. 1995. Methyl halide hydrolysis rates in natural waters. *Journal Of Atmospheric Chemistry* 20(3):229-236.
- \*EPA. 1973. Guidelines establishing test procedures for the analysis of pollutants. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 136, App A.
- EPA. 1975. U.S. Environmental Protection Agency. Preliminary assessment of suspected carcinogens in drinking water. Interim report to Congress, June, 1975. Washington, DC.
- \*EPA. 1980. U. S. Environmental Protection Agency. Ambient water quality criteria for halomethanes. Washington, DC: Office of Water Regulations and Standards. EPA 440/5-80-051.
- \*EPA. 1981a. Electroplating point source category. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 413.02.
- \*EPA. 1981b. General pretreatment regulations for existing and new sources of pollution. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 403, App B.
- \*EPA. 1981c. Identification and listing of hazardous waste. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 261.31.
- \*EPA. 1981d. Hazardous constituents for which listed. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 261 App VII.
- \*EPA. 1982a. U.S. Environmental Protection Agency. Methods for organic chemical analysis of municipal and industrial wastewater. Methods 601 and 624. EPA-600/4-82-057. Cincinnati, OH: Environmental Monitoring and Support Laboratory. (microfiche)
- \*EPA. 1982b. U.S. Environmental Protection Agency. Errata: Halomethanes. Ambient water quality criterion for the protection of human health. Prepared by Environmental Criteria and Assessment Office, Cincinnati, OH, for the Office of Water Regulations, Washington, DC.
- \*EPA. 1982c. Chemical information rules. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 712.30.
- \*EPA. 1982d. Steam electric power generating point source category. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 423.17.
- \*EPA. 1982e. Steam electric power generating point source category. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 423.17 App A.

- EPA. 1983a. U.S. Environmental Protection Agency. Reportable quantity document for methyl chloride. Prepared by Environmental Criteria and Assessment Office, Cincinnati, OH, for the Office of Solid Waste and Emergency Response, Washington, DC. ECAO-CIN-R 155.
- \*EPA. 1983b. Subpart W-Standards of performance for equipment leaks of VOC in the synthetic organic chemicals manufacturing industry. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 60.489.
- \*EPA. 1983c. Chemical analysis test methods. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 266, App III.
- \*EPA. 1983d. EPA administered permit programs: The national pollutant discharge elimination system. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 122, App D.
- \*EPA. 1983e. Applicability description of the metal finishing point source category. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 433.10.
- \*EPA. 1985. Designation, reportable quantities, and notification. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 302.4.
- \*EPA. 1986a. U.S. Environmental Protection Agency. Reference values for risk assessment. Prepared by The Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office, Cincinnati, OH, for the Office of Solid Waste, Washington, DC.
- \*EPA. 1986b. Method 8010b, Halogenated volatile organics by gas chromatography, test methods for evaluating solid waste, Volume 1B: Laboratory manual physical/chemical methods, SW-846.
- \*EPA. 1986c. Method 8021A, Halogenated volatiles by gas chromatography using photoionization and electrolytic conductivity detectors in series: capillary column technique, test methods for evaluating solid waste, Volume 1B: Laboratory Manual Physical/Chemical Methods, SW-846.
- \*EPA. 1987a. National primary drinking water regulations. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 141.40.
- \*EPA. 1987b. U.S. Environmental Protection Agency. Hazardous substances: Reportable quantity adjustments. Proposed rules. Federal Register 50:8140-8186.
- \*EPA. 1987c. Organic chemicals, plastics, and synthetic fibers. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 414.25.
- \*EPA. 1987d. U.S. Environmental Protection Agency. Health effects assessment for chloromethane. EPA 600/8-88-024. Cincinnati, OH: Office of Research and Development, Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office. NTIS PB88-279932.
- \*EPA. 1987e. Applicability description of the other fibers subcategory. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 414.35.
- \*EPA. 1987f. Thermosetting resins. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 414.55.



- \*EPA. 1987g. Thermoplastic resins. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 414.45.
- EPA. 1987h. Pretreatment standards for existing sources (PSES). U. S. Environmental Protection Agency. Code of Federal Regulations. CFR 414.65.
- \*EPA. 1987i. Applicability description of the bulk organic chemicals subcategory. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 414.70.
- \*EPA. 1987j. Pretreatment standards for existing sources. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 414.75.
- \*EPA. 1987k. Direct discharge point sources that use end-of-pipe biological treatment. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 414.90.
- \*EPA. 1987l. Direct discharge point sources that do not use end-of-pipe biological treatment. U. S. Environmental Protection Agency. Code of Federal Regulations 40 CFR 414.100.
- \*EPA. 1987m. Toxic pollutant effluent limitations and standards for direct discharge point sources that do not use end-of-pipe biological treatment. U. S. Environmental Protection Agency. Code of Federal Regulations 40 CFR 414.101.
- \*EPA. 1987n. Standards for owners and operators of hazardous waste treatment storage, and disposal facilities. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 264, App IX.
- \*EPA. 1988a. Contract Laboratory Program Statement of Work for Organics Analysis Multi-Media Multi-Component 2/88. U.S. Environmental Protection Agency.
- \*EPA. 1988b. Land disposal restrictions. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 268.30.
- \*EPA. 1988c. Specific Toxic Chemical Listings. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 372.65.
- \*EPA. 1988d. Health and safety data reporting. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 716.120.
- \*EPA. 1988e. U.S. Environmental Protection Agency. Analysis of clean water act effluent guidelines pollutants. 40 CFR Parts 400-475.
- \*EPA. 1988f. U.S. Environmental Protection Agency. Designation, reportable quantities and notifications. 40 CFR 302.4.
- \*EPA. 1988g. Method TO-14 Determination of Volatile Compounds (VOCs) in Ambient Air using SUMMA passivated canister sampling and Gas Chromatographic Analysis, Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air EPA 600/4-89/017.

- \*EPA. 1988h. Recommendations for and documentation of biological values for use in risk assessment. Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, Environmental Protection Agency. NTIS No. PB88-179874. (microfiche)
- \*EPA. 1989a. Method 502.1 Volatile halogenated organic compounds in water by purge and trap gas chromatography, methods for the determination of organic compounds in drinking water, EPA-600/4-88/039.
- \*EPA. 1989b. Method 524.2 Measurement of purgeable organic compounds in water by capillary column gas chromatography/mass spectrometry, methods for the determination of organic compounds in drinking water, EPA-600/4-88/039.
- \*EPA. 1989c. Direct discharge point sources that use end-of-pipe biological treatment. U. S. Environmental Protection Agency. Code of Federal Regulations. 40CFR 414.75.
- \*EPA. 1990. Standards of Performance for volatile organic compound (VOC) emissions from synthetic organic chemical manufacturing industry (SOCMI) distillation operations. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 60.667.
- \*EPA. 1991a. Criteria for municipal solid waste landfills. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 258.
- \*EPA. 1991b. Criteria for municipal solid waste landfills. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 258 App II.
- \*EPA. 1991c. Drinking water health advisory. Volatile organic chemicals., United States Environmental Protection Agency, Office of Drinking Water Health Advisories, Lewis Publishers, Inc., Michigan, 85-105.
- \*EPA. 1993a. Standards of performance for volatile organic compound emissions from synthetic organic chemical manufacturing industry (SOCMI) reactor processes. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 60.707.
- \*EPA. 1993b. Identification of test procedure. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 455.50.
- \*EPA. 1993c. Land disposal restrictions for newly identified and listed hazardous wastes and hazardous soil. U. S. Environmental Protection Agency. Federal Register 58 FR 48092.
- \*EPA. 1994a. National emission standards for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry. U. S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 63.106.
- \*EPA. 1994b. Methods for derivation of inhalation reference concentrations and applications of inhalation dosimetry. U.S. Environmental Protection Agency, Office of Research and Development. Washington D.C. EPA/600/8-90/066F.
- \*EPA. 1996a. Drinking water regulations and health advisories. Office of Water, U. S. Environmental Protection Agency.

- \*EPA. 1996b. Ozone science fact sheet. U.S. EPA Office of Air and Radiation, Stratospheric Protection Division. [http://www.epa.gov/docs/ozone/science/sc\\_fact.html](http://www.epa.gov/docs/ozone/science/sc_fact.html)
- \*EPA. 1997. Land disposal restrictions: Correction of tables; Treatment standards for hazardous wastes and universal treatment standards. Technical amendment of final rule. Federal Register. 62 FR 7502.
- \*Eriksson L, Jonsson J, Hellberg S, et al. 1991. A strategy for ranking environmentally occurring chemicals. Part V: The development of two genotoxicity QSARs for halogenated aliphatics. Environ Toxicol Chem 10(5):585-596.
- \*Eriksson LI, Jonsson J, Berglind R. 1993. External validation of a QSAR for the acute toxicity of halogenated aliphatic hydrocarbons. Environ Toxicol Chem 12(7):1185-1 191.
- \*Fabian P. 1986. Halogenated hydrocarbons in the atmosphere. In: Hutzinger O, ed. The handbook of environmental chemistry, Vol. 4, Part A. Berlin: Springer-Verlag, 23-51.
- \*Fazzalari FA. 1978. Odor threshold (ot): odor recognition in air:1.00x +lppm(chemically pure). compilation of odor and taste threshold values data. ASTM Data Series DS 48 A Committee E-18. Philadelphia, AP American Society for Testing and Materials.
- \*FEDRIP. 1998. FEDRIP literature search (references and abstracts) for chloromethane. Federal Research in Progress. Dialog Information Service.
- \*Finlayson-Pitts BJ, Pitts JN Jr. 1986. Atmospheric chemistry: fundamentals and experimental techniques. NY: John Wiley & Sons.
- Fishbein L. 1979. Potential halogenated industrial carcinogenic and mutagenic chemicals. 2. Halogenated saturated hydrocarbons. Sci Total Environ 11:163-195.
- \*Foman SJ. 1966. Body composition of the infant (Part I: The male reference infant). In: Falkner F, ed. Human development. Philadelphia, PA: WB Saunders, 239-246.
- \*Foman, SJ, Haschke F, Ziegler EE et al. 1982. Body composition of reference children from birth to age 10 years. American Journal of Clinical Nutrition 35:1169-1 175.
- \*Fostel J, Allen PF, Bermudez E, et al. 1985. Assessment of the genotoxic effects of methyl chloride in human lymphoblasts. Mutat Res 155:75-81.
- \*Fridovich I. 1978. The biology of oxygen radicals. Science 201:875-880.
- \*FSTRAC. 1990. Summary of state and federal drinking water standards and guidelines. Federal-State Toxicology and Regulatory Alliance Committee. U. S. Environmental Protection Agency.
- Gargas ML, Clewell III HJ, Andersen ME. 1990. Gas uptake inhalation techniques and the rates of metabolism of chloromethanes, chloroethanes, and chloroethylenes in the rat. Inhalation. Toxicology 2(3):295-319.

- \*Gidel LT, Crutzen PJ, Fishman J. 1983. A two-dimensional photochemical model of the atmosphere; 1: Chlorocarbon emissions and their effect on stratospheric ozone. *Journal of Geophysical Research* 88:6622-6640.
- \*Goldstein BD, Witz G, Amoroso M, et al. 1979. Protease inhibitors antagonize the activation of polymorphonuclear leucocyte oxygen consumption. *Biochem Biophys Res Commun* 88:854-860.
- \*Goldstein BD, Witz G, Amoroso M, et al. 1981. Stimulation of human polymorphonuclear leucocyte superoxide anion radical production by tumor promoters. *Cancer Letters* 11:257-262.
- Gorman RW, Froneburg B. 1981. Health hazard evaluation--report No. HHE-80-106-963. Union Carbide, Sistersville, West Virginia. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health.
- \*Gossett JM. 1987. Measurement of Henry's law constants for C1 and C2 and chlorinated hydrocarbons. *Environ Sci Tech* 21:202-208.
- \*Gould JP, Ramsey RE, Giabbai M, et al. 1983. Formation of volatile haloorganic compounds in the chlorination of municipal landfill leachates. In: *Water Chlorination Environ Impact Health Eff* 4:525-539.
- \*Granstrom ML, Ahlert RC, Wiesenfeld J. 1984. The relationships between the pollutants in the sediments and in the water of the Delaware and Raritan Canal. *Water Sci Tech* 16:375-380.
- Grasso P, Sharratt M, Davies DM, et al. 1984. Neurophysiological and psychological disorders and occupational exposure to organic solvents. *Food Chem Toxicol* 22:819-852.
- \*Great Lakes Water Quality Board. 1983. An inventory of chemical substances identified in the Great Lakes ecosystem. Volume I - Summary. Report to the Great Lakes Water Quality Board, Windsor, Ontario, Canada, 1-8, 11, 59, 90-91.
- \*Greenberg AE, Clesceri LS, Eaton AD. 1992a. Method 6210 Volatile Organics, Purge and Trap Gas Chromatographic/Mass Spectrometric Method, Standard Methods for the Examination of Waste and Wastewater, Eighteenth Edition, American Public Health Association, Washington, DC.
- \*Greenberg AE, Clesceri LS, Eaton AD. 1992b. Method 6230 Volatile Halocarbons, Purge and Trap Gas Chromatographic Method, Standard Methods for the Examination of Waste and Wastewater, Eighteenth Edition, American Public Health Association, Washington, DC.
- \*Greenberg M, Anderson R, Keene J, et al. 1982c. Empirical test of the association between gross contamination of wells with toxic substances and surrounding land use. *Environ Sci Technol* 16:14-19.
- Grimsrud EP, Miller DA. 1978. Oxygen doping of carrier gas in measurement of halogenated methanes by gas chromatography with electron capture detection. *Anal Chem* 50:1141-1145.
- \*Grimsrud EP, Rasmussen RA. 1975. Survey and analysis of halocarbons in the atmosphere by gas chromatography-mass spectrometry. *Atmos Environ* 9:1014-1017.
- \*Gudmundsson G. 1977. Methyl chloride poisoning 13 years later (letters to the editor). *Archives of Environmental Health* 32(5):236-237.

- \*Guengerich FP, Shimada T. 1991. Oxidation of toxic and carcinogenic chemicals by human cytochrome P-450 enzymes. *Chemical Research in Toxicology* 4(4):391-407.
- Guenther FR, Chesler SN. 1986. Post column solvent trapping technique for the analysis of very volatile halocarbons. *Govt Rep Announce Ind*, Issue 16.
- \*Gummert M. 1961. [The Wilson Block after methyl chloride intoxication.] *Zeitschrift fuer die Gesamte Innere Medizin und ihre Grenzgebiete* 16:677-680. (German).
- Gunther FA, Westlake WE, Jaglan PS. 1968. Reported solubilities of 738 pesticide chemicals in water. *Res Rev* 20:1-148.
- \*Gusten H, Klasinc L, Marie D. 1984. Prediction of the abiotic degradability of organic compounds in the troposphere. *J Atmos Chem* 2:83-94.
- \*Guzelian PS, Henry CJ, Olin SS. 1992. Similarities and differences between children and adults: Implications for risk assessment. International Life Sciences Institute Press, Washington, D.C.
- \*Hallier E, Deutschmann S, Reichel C, et al. 1990. A comparative investigation of the metabolism of methyl bromide and methyl iodide in human erythrocytes. *Int Arch Occup Environ Health* 62(3):221-225.
- Hallier E, Peter H. 1988. Methyl chloride metabolism by human erythrocyte glutathione transferases. In: 29th spring meeting: German Society for Pharmacology and Toxicology, Mainz, West Germany, March 8-11, 1988. *Naunyn-Schmiedeberg's Arch Pharmacol* 337(Suppl):R20.
- \*Hamm TE Jr., Raynor TH, Phelps MC, et al. 1985. Reproduction in Fischer-344 rats exposed to methyl chloride by inhalation for two generations. *Fund Appl Toxicol* 5:568-577.
- Hampson RF. 1980. Chemical kinetic and photochemical data sheets for atmospheric reactions. Washington, DC: U.S. Department of Transportation. FAA-EE-80-17.
- Hansch C, Leo AJ. 1985. Medchem project. Claremont, CA: Pomona College. Issue No. 26.
- \*Hansen H, Weaver NK, Venable FS. 1953. Methyl chloride intoxication. *Am Med Assoc Arch Ind Hyg Occ Med* 8:328-334.
- Hao WM. 1986. Industrial sources of atmospheric nitrous oxide, chloromethane, and bromomethane. *Diss Abstr Int B* 47:2424.
- \*Harper DB. 1985. Halomethane from halide ion a highly efficient fungal conversion of environmental significance. *Nature (London)* 315:55-57.
- \*Harper DB, Buswell JA, Kennedy JT, et al. 1990. Chloromethane, methyl donor in veratryl alcohol biosynthesis in *Phanerochaete chrysosporium* and other lignin-degrading fungi. *Appl Environ Microbiol* 56(11):3450-3457.
- \*Harper DB, Hamilton JTG. 1988. Biosynthesis of chloromethane in *Phellinus pomaceus*. *J Gen Microbiol* 134:2831-2839.

- \*Harper DB, Kennedy JT, Hamilton JTG. 1988. Chloromethane biosynthesis in poroid fungi. *Phytochemistry* 27:3147-3153.
- Harsch DE, Cronn DR, Slater WR. 1979. Expanded list of halogenated hydrocarbons measurable in ambient air. *J Air Pollut Contr Assoc* 29:975-976.
- \*Hartman TL, Wacker W, Roll RM. 1955. Methyl chloride intoxication. *New Eng J Med* 253:552-554.
- \*Hartmans S, Schmuckle A, Cook AM, et al. 1986. Methyl chloride: Naturally occurring toxicant and C-1 growth substrate. *J Gen Microbiol* 132:1139-1142.
- \*Hasanen E, Soininen V, Pyysalo H, et al. 1979. On the occurrence of aliphatic chlorine and bromine compounds in automobile exhaust. *Atmos Environ* 13:1217-1219.
- \*Hatch GG, Mamay PD, Ayer ML, et al. 1982. Methods for detecting gaseous and volatile carcinogens using cell transformation assays. *Environ Sci Res* 25:75-90.
- \*Hatch GG, Mamay PD, Ayer ML, et al. 1983. Chemical enhancement of viral transformation in Syrian hamster embryo cells by gaseous and volatile chlorinated methanes and ethanes. *Cancer Res* 43:1945-1950.
- \*HazDat. 1998. Database. Agency for Toxic Substances and Disease Registry (ATSDR), Atlanta, GA.
- \*Heck HD, White EL, Casanova-Schmitz M. 1982. Determination of formaldehyde in biological tissues by gas chromatography/mass spectrometry. *Biomed Mass Spectrom* 9:347-353.
- Heicklen JP, Sanhueza E, Hisatsune IC, et al. 1975. Oxidation of halocarbons. Washington, DC: U.S. Environmental Protection Agency. EPA 650/3-75-008.
- \*Heppolette RL, Robertson RE. 1959. The neutral hydrolysis of methyl halides. *Proc Royal Soc London, Ser A.* 252:273-285.
- Heppolette RL, Robertson RE. 1966. Effect of alpha-methylation on the parameters characterizing hydrolysis in water for a series of halides and sulfonates. *Can J Chem* 44:677-684.
- Herron JT, Huie RE. 1973. Rate constant for the reactions of atomic oxygen (O<sup>3</sup>P) with organic compounds in the gas phase. *J Phys Chem Ref Data* 2:467-518.
- \*Holbrook MT. 1992. Chlorocarbons, hydrocarbons (CHC13). In: Kroschwitz JI and Howe-Grant M eds. *Kirk-Othmers encyclopedia of chemical technology*, Fourth Edition. New York, NY: John Wiley & Sons, Inc.. 5:1028-1040.
- \*Holmes TM, Buffler PA, Holguin AH, et al. 1986. A mortality study of employees at a synthetic rubber manufacturing plant. *Am J Ind Med* 9:355-362.
- \*Horvath AL. 1982. Halogenated hydrocarbons. Solubility - miscibility with water. New York: Marcel Dekker, Inc., 483.
- \*Howard CJ, Evenson KM. 1976. Rate constants for the reactions of hydroxyl with methane and fluorine, chlorine and bromine substituted methanes at 296 deg. K. *J Chem Phys* 64:197-202.

- \*Howard PH. 1990. Methyl chloride: Handbook of environmental fate and exposure data for organic chemicals: Volume 1: Large production and priority pollutants. Chelsea, MI: Lewis Publishers, Inc. 394-400.
- \*HSDB. 1998. Hazardous substance data bank (Chloromethane). National Library of Medicine. National Toxicology Program. Bethesda, MD.
- \*Huel G, Mergler D, Bowler R. 1990. Evidence for adverse reproductive outcomes among women microelectronic assembly workers. *British Journal of Industrial Medicine* 47(6):400-404.
- IARC. 1986. IARC monographs on the evaluation of carcinogenic risk of chemicals to humans. Vol. 41: Some halogenated hydrogenated and pesticide exposures: Methyl chloride. Lyon, France, WHO, 161-186.
- \*IARC. 1987. IARC monographs on the evaluation of carcinogenic risks to humans. International Agency for the Research on Cancer. World Health Organization.
- Infante PF, Tsongas TA. 1982. Mutagenic and oncogenic effects of chloromethanes, chloroethanes and halogenated analogs of vinyl chloride, In: Genotoxic effects of airborne agents. *Environ Sci Res* 25:301-327.
- \*IPCC. 1995. Climate change 1995: The science of climate change. Cambridge: Cambridge Univ. Press for the Intergovernmental Panel on Climate Change.
- \*Isidorov VA, Zenkevich IG, Ioffe BV. 1985. Volatile organic compounds in the atmosphere of forests. *Atmos Environ* 19:1-8.
- IT Corporation. 1985a. Preliminary site assessment, Broadview, Illinois Plant, Amphenol Products Division, Industrial and Technology Sector. 8D submission 878216382. TSCA Health and Safety Studies.
- IT Corporation. 1985b. Phase II Site Assessment, Broadview, Illinois Plant. 8D submission 878216377. TSCA Health and Safety Studies.
- Jager R. 1988. Differences in metabolic activities of methyl chloride metabolizing enzymes glutathione-S-transferases and cytochrome P-450 in various strains of mice. In: 29th Spring Meeting: German Society for Pharmacology and Toxicology, Mainz, West Germany, March 8-11, 1988. *Naunyn-Schmiedeberg's Arch Pharmacol* 337(Suppl.):R-20.
- \*Jager R, Peter H, Sterzel W, et al. 1988. Biochemical effects of methyl chloride in relation to its tumorigenicity. *J Cancer Res Clin Oncol* 114:64-70.
- Janssen DB, Scheper A, Kijkhuizen L, et al. 1985. Degradation of halogenated aliphatic compounds by *Xanthobacter autotrophicus* GJ10. *Appl Environ Microb* 49:673-677.
- \*Jeong K-M, Kaufman F. 1980. Manuscript in preparation, as cited in NASA 1981. Apparently published as Joeng and Kaufman 1982.
- \*Jeong K-M, Kaufman F. 1982. Kinetics of the reaction of hydroxyl radical with methane and with nine Cl- and F-substituted methanes. 1. Experimental results, comparisons, and applications. *J Phys Chem* 86:1808-1815.

- \*Jeong KM, Hsu KJ, Jeffries JB, et al. 1984. Kinetics of the reactions of OH with C<sub>2</sub>H<sub>6</sub>, CH<sub>3</sub>CCl<sub>3</sub>, CH<sub>2</sub>ClCClF<sub>2</sub>, and CH<sub>2</sub>FCF<sub>3</sub>. *J Phys Chem* 88:1222-1226.
- \*Jiang XZ, White R, Morgan KT. 1985. An ultrastructural study of lesions induced in the cerebellum of mice by inhalation exposure to methyl chloride. *Neurotoxicology* 6:93-104.
- \*Johanson CE. 1980. Permeability and vascularity of the developing brain: Cerebellum vs cerebral cortex. *Brain Research* 190:3-16.
- \*John-Greene JA, Welsch F, Bus JS. 1985. Comments on heart malformations in B6C3F<sub>1</sub> mouse fetuses induced by methyl chloride: Continuing efforts to understand the etiology and interpretation of an unusual lesion. *Teratology* 32:483-487.
- \*Jones MA. 1942. Methyl chloride poisoning. *Quart J Med* 41:29-43.
- Junk GA, Ford CS. 1980. A review of organic emissions from selected combustion processes. *Chemosphere* 9:187-230.
- \*Jury WA, Winer AM, Spencer WF, et al. 1987. Transport and transformation of organic chemicals in the soil-air-water ecosystem. *Rev Environ Contam Toxicol* 99:119-164.
- \*Kadaba PK, Bhagat PK, Goldberger GN. 1978. Application of microwave spectroscopy for simultaneous detection of toxic constituents in tobacco smoke. *Bull Environ Cont Toxicol* 19:104-112.
- \*Kegel AH, McNally WD, Pope AS. 1929. Methyl chloride poisoning from domestic refrigerators. *J Am Med Assoc* 93:353-358.
- \*Kelly TJ, Holdren MW. 1995. Applicability of canisters for sample storage in the determination of hazardous air pollutants. *Atmos Environ* 29(19):2595-2608.
- \*Kelly TJ, Spicer CW, Pollack AJ. 1994. Concentrations and transformations of hazardous air pollutants. *Environ Sci Technol*. 28(8):380A-387A.
- \*Kempkes M, Wiebel FA, Golka K et al. 1996. Comparative genotyping and phenotyping of glutathione s-transferase gsttl. *Arch Toxicol* 70:306-309.
- \*Key JA, Stuewe CW, Standifer RL, et al. 1980. Organic chemical manufacturing. Vol. 8: Selected processes. EPA-450/3-80-028a. Research Triangle Park, NC: Office of Air, Noise, and Radiation, U.S. Environmental Protection Agency. (microfiche)
- Khalil MAK, Edgerton SA, Rasmussen RA. 1983. A gaseous tracer model for air pollution from residential wood burning. *Environ Sci Technol* 17:555-559.
- \*Khalil MAK, Rasmussen RA. 1981. Atmospheric methylchloride (CH<sub>3</sub>Cl). *Chemosphere* 10:1019-1023.
- Khalil MAK, Rasmussen RA. 1983. Gaseous tracers of arctic haze. *Environ Sci Technol* 17:157-164.
- \*Khalil MAK, Rasmussen RA, Edgerton SA. 1985. Gaseous tracers for sources of regional scale pollution. *J Air Pollut Cont Assoc* 35:838-840.



- \*Khindaria A, Grover TA, Aust SD. 1995. Reductive dehalogenation of aliphatic halocarbons by lignin peroxidase of *Phanerochaete chrysosporium*. *Environ Sci Technol* 29(3):719-725.
- \*Kleindienst TE, Shepson PB, Edney EO, et al. 1986. Wood smoke: Measurement of the mutagenic activities of its gas and particulate-phase photooxidation products. *Environ Sci Technol* 20:493-501.
- Knackmuss HJ. 1980. Degradation of halogenated and sulfonated hydrocarbons. In: *Microbial degradation of xenobiotics and recalcitrant compounds*, Sept. 15-17, 1980, 189-212.
- Kobaysahi H, Rittmann BE. 1982. Microbial removal of hazardous organic compounds. *Environ Sci Technol* 16:170A-182A.
- \*Koketsu M. 1979. Methyl chloride survey report. E.I DuPont Corporation, Deepwater, New Jersey. NTIS PB83-136440. (microfiche)
- \*Kolkman FW, Volk B. 1975. [Necroses in the granular cell layer of cerebellum due to methylchloride intoxication in guinea pigs.] *Exp Pathol* 10:298-308. (German).
- \*Komori M, Nishio K, Kitada M et al. 1990. Fetus-specific expression of a form of cytochrome P-450 in human liver. *Biochemistry* 29:4430-4433.
- \*Kopfler FC, Melton RG, Mullaney JL, et al. 1977. Human exposure to water pollutants. *Adv Environ Sci Technol* 8:419-433.
- \*Kornbrust DJ, Bus JS. 1982. Metabolism of methyl chloride to formate in rats. *Toxicol Appl Pharmacol* 65:135-143.
- \*Kornbrust DJ, Bus JS. 1983. The role of glutathione and cytochrome P-450 in the metabolism of methyl chloride. *Toxicol Appl Pharmacol* 67:246-256.
- \*Kornbrust DJ, Bus JS. 1984. Glutathione depletion by methyl chloride and association with lipid peroxidation in mice and rats. *Toxicol Appl Pharmacol* 72:388-399.
- \*Kornbrust DJ, Bus JS, Doerjger G, et al. 1982. Association of inhaled [<sup>14</sup>C]methyl chloride with macromolecules from various rat tissues. *Toxicol Appl Pharmacol* 65:122-134.
- \*Kosson DS, Dienemann EA, Ahlert RC. 1985. Characterization and treatability studies of an industrial landfill leachate (KIN-BUC I). *Proc Ing Waste Conf* 39:329-341.
- \*Krishnan K, Andersen ME. 1994. Physiologically-based pharmacokinetic modeling in toxicology. In: Wallace Hayes, ed. *Principles and methods of toxicology*. 3rd edition. New York, NY: Raven Press, Ltd.
- \*Krishnan K, Andersen ME, Clewell HJ III, et al. 1994. Physiologically-based pharmacokinetic modeling of chemical mixtures. In: R.S.A. Yang, ed. *Toxicology of chemical mixtures*. New York, NY: Academic Press.
- Krishnan K, Haddad S, Pelekis M. 1995. A simple index for representing the discrepancy between simulations of physiological pharmacokinetic models and experimental data. *Toxicology and Industrial Health* 11(4):413-421.

- \*Krotoszynski BK, O'Neill HJ. 1982. Involuntary bioaccumulation of environmental pollutants in nonsmoking heterogeneous human population. *J Environ Sci Health Part A-Environ Sci Eng* 17:855-883.
- \*Landry TD, Gushow TS, Langvardt PW, et al. 1983a. Pharmacokinetics and metabolism of inhaled methyl chloride in the rat and dog. *Toxicol Appl Pharmacol* 68:473-486.
- \*Landry TD, Quast JF, Gushow TS. 1985. Neurotoxicity of methyl chloride in continuously versus intermittently exposed female C57BL/6 mice. *Fund Appl Toxicol* 5:87-98.
- \*Landry TD, Ramsey JC, McKenna MJ. 1983b. Pulmonary physiology and inhalation dosimetry in rats: Development of a method and two examples. *Toxicol Appl Pharmacol* 71:72-83.
- \*Lanham JM. 1982. Methyl chloride: An unusual incident of intoxication [letter]. *Can Med Assoc J* 126:593.
- \*Laughton PM, Robertson RE. 1956. Solvolysis in deuterium and hydrogen oxide. *Can J Chem* 34:1714-1718.
- \*Leeder JS, Kearns GL. 1997. Pharmacogenetics in pediatrics: Implications for practice. *Pediatric Clinics of North America* 44:55-77.
- \*Leisinger T. 1996. Biodegradation of chlorinated aliphatic compounds. *Current Opinion in Biotechnology* 7(3):295-300.
- \*Leung H. 1993. Physiologically-based pharmacokinetic modeling. In: Ballantine B, Marro T, Turner T, eds. *General and applied toxicology*, Vol. 1. New York, NY: Stockton Press, 153-164.
- Li JCM, Rossini FD. 1953. Vapor pressures and boiling points of the 1- fluoroalkanes, 1-chloroalkanes, 1-bromoalkanes and 1-iodoalkanes, C1 to C20. *J Chem Eng Data* 6:268-270.
- Lillian D, Singh HB, Appleby A, et al. 1975. Atmospheric fates of halogenated compounds. *Environ Sci Technol* 9:1042-1048.
- Lingaard-Joergensen P, Jacobsen BN. 1986. A data base on behavior and effects of organic pollutants in waste water treatment processes. In: *Comm Eur Communities, Eur 10388. Org Micropollut Aquat Environ* 429-439.
- \*Lovelock JE. 1975. Natural halocarbons in the air and in the sea. *Nature* 256:193-194.
- Lovelock JE. 1977. Halogenated hydrocarbons in the atmosphere. *Ecotoxicol Environ Safety* 1:399-406.
- \*Lurker PA, Clark CS, Elia VJ. 1983. Worker exposure to chlorinated organic compounds from the activated-sludge wastewater treatment process. *Am Ind Hyg Assoc J* 44:109-112.
- \*Lyman WJ. 1982. *Handbook of chemical property estimation methods*. New York, NY: McGraw-Hill, 960, 4.1-4.33.
- \*Mabey W, Mill T. 1978. Critical review of hydrolysis of organic compounds in water under environmental conditions. *J Phys Chem Ref Data* 7:383-415.

- \*MacDonald JDC. 1964. Methyl chloride intoxication report of 8 cases. *J Occ Med* 6:81-84.
- Mackay D, Shiu WY. 1981. A critical review of Henry's law constants for chemicals of environmental interest. *J Phys Chem Ref Data* 19:1175-1 199.
- \*Mackie IJ. 1961. Methyl chloride intoxication. *Med J Australia* 1:203-205.
- MacPhail RC, Berman E, Elder JA, et al. 1995. A multidisciplinary approach to toxicological screening: IV. Comparison of results. *Journal of Toxicology and Environmental Health* 45(2):211-220.
- Markel HL, Froneberg B. 1983. Health hazard evaluation--report no. HETA 80-010-1 199. Cities Service Company, Butyl Rubber Plant, Lake Charles Louisiana. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health.
- Mayo D, Collins J, Riordan B. 1980. Economic impact analysis of proposed testing regulations for chloromethane and chlorobenzenes. *Govt Rep Announce Ind, Issue* 25.
- McClenny WA, Fortune CR. 1995. Superfund contract laboratory program method evaluation--ambient air volatile organic compounds from canisters. *J Environ Sci Health A* 30(4):901-919.
- McConnell G, Ferguson DM, Pearson CR. 1975. Chlorinated hydrocarbons and the environment. *Endeavour* 34:13-38.
- \*McKenna MJ, Burek JD, Henck JW, et al. 1981b. Methyl chloride: A 90-day inhalation toxicity study in rats, mice and beagle dogs. Toxicology Research Laboratory, Dow Chemical USA, Midland MI. OTS submission document 40-8120723. Microfiche 511317.
- \*McKenna MJ, Gushow TS, Bell TJ, et al. 1981a. Methyl chloride: A 72-hour continuous (-23-1/2 hr/day) inhalation toxicity study in dogs and cats. Unpublished study. Toxicology Research Laboratory, Dow Chemical USA, Midland MI. OTS submission document 40-8120723. Microfiche 511317.
- \*McNally WD. 1946. Eight cases of methyl chloride poisoning with three deaths. *J Ind Hyg Toxicol* 28:94-97.
- \*McNeal TP, Hollifield HC, Diachenko GW. 1995. Survey of trihalomethanes and other volatile chemical contaminants in processed foods by purge-and-trap capillary gas chromatography with mass selective detection. *J Aoac Int* 78(2):391-397.
- \*Merck. 1989. The Merck index, an encyclopedia of chemicals, drugs, and biologicals, Eleventh Edition. Rahway, NJ: Merck and Co., Inc.
- \*Messmer M, Wohlfarth G, Dickert G. 1993. Methyl chloride metabolism of the strictly anaerobic, methyl chloride-utilizing homoacetogen strain MC. *Arch Microbiol* 160:383-387.
- Mill T. 1982. Hydrolysis and oxidation processes in the environment. *Environ Toxicol Chem* 1:135-141.
- Mill T, Winterle JS, Davenport JE. 1982. Validation of estimation techniques for predicting environmental transformation of chemicals. Prepared for U.S. Environmental Protection Agency, Washington, DC.

## 8. REFERENCES

- Miller DL, Senser DW, Cundy VA, et al. 1984. Chemical considerations in the incineration of chlorinated methanes: 1-methyl chloride. *Hazard Waste* 1:1-18.
- \*Minami M, Inagaki H, Katsumata M, et al. 1993. Inhibitory action of chloramine on formate-metabolizing system. Studies suggested by an unusual case record. *Biochem Pharmacol* 45(5):1059-1064
- \*Minami M, Katsumata M, Miyake K, et al. 1992. Dangerous mixture of household detergents in an old-style toilet: A case report with simulation experiments of the working environment and warning of potential hazard relevant to the general environment. *Humans Experimental Toxicology* 11:27-34.
- \*Mitchell RI, Pavkov K, Everett RM, Holzworth DA. 1979. A 90-day inhalation toxicology study in F-344 rats and B6C3F<sub>1</sub> mice exposed to atmospheric methyl chloride gas. Unpublished study. Battelle Columbus Laboratory, Columbus, OH, for Chemical Industry Institute of Toxicology, Research Triangle Park, NC. Microfiche 205952.
- Molton PM, Hallen RT, Payne JW. 1987. Study of vinyl chloride formation at landfill sites in California: Report. NTIS PB87-161279/GAR.
- Morgan A, Black A, Belcher DR. 1972. Studies on the absorption of halogenated hydrocarbons and their excretion in breath using <sup>38</sup>Cl tracer techniques. *Ann Occ Hyg* 15:273-282.
- \*Morgan A, Black A, Bercher DR. 1970. The excretion in breath of some aliphatic halogenated hydrocarbons following administration by inhalation. *Ann Occ Hyg* 13:219-233.
- \*Morgan KT, Swenberg JA, Hamm TE Jr., et al. 1982. Histopathology of acute toxic response in rats and mice exposed to methyl chloride by inhalation. *Fund Appl Toxicol* 2:293-299.
- \*Morselli PL, France-Morselli R, Bossi L. 1980. Clinical Pharmacokinetics in Newborns and Infants. *Clinical Pharmacokinetics* 5:485-527.
- Murray AJ, Riley JP. 1973. The determination of chlorinated aliphatic hydrocarbons in air, natural waters, marine organisms, and sediments. *Anal Chim Acta* 65:261-270.
- Narotsky MG, Kavlock RJ. 1995. A multidisciplinary approach to toxicological screening: II. Developmental toxicity. *Journal of Toxicology and Environmental Health* 45(2):145-171.
- \*NAS/NRC. 1989. Biological markers in reproductive toxicology. National Research Council. Board of Environmental Studies and Toxicology. Committee on Biological Markers, 15-35.
- \*NASA. 1981. Chemical kinetic and photochemical data for use in stratospheric modeling evaluation number 4: NASA panel for data evaluation. NASA-CR-163973. JPL-BUP-81-3. Pasadena, CA: National Aeronautics and Space Administration, Jet Propulsion Lab, 131.
- NATICH. 1988. National Air Toxics Information Clearinghouse. Database report of state, local and EPA air toxics activities. Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC.
- \*NATICH. 1992. Database. National Air Toxics Information Clearinghouse.

- Neely WB. 1976. Predicting the flux of organics across the air/water interface. In: 3rd National Conference: Control of Hazardous Material Spills, 197-200.
- Nelson E. 1992. Determination of mercapturic acid excretions in exposure control of toxicants. *Critical Reviews in Toxicology* 22(5-6):371-389.
- NFPA. 1994. Fire protection guide to hazardous materials, Eleventh Edition. Quincy, MA: National Fire Protection Association.
- NIOSH. 1984. Monohalomethanes: Methyl chloride CH<sub>3</sub>CL, methyl bromide CH<sub>3</sub>BR, methyl iodide CH<sub>3</sub>I. In: Current intelligence bulletin 43. Cincinnati, OH: Cincinnati, OH: U. S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, 22.
- NIOSH. 1985. NIOSH pocket guide to chemical hazards. Washington, DC: National Institute for Occupational Safety and Health.
- NIOSH. 1988. National occupational exposure survey as of May 10, 1988. Washington, DC: U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health, 11.
- NIOSH. 1991. National occupational exposure survey 1981 -1983. U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health, Cincinnati, OH.
- \*NIOSH. 1992. NIOSH recommendations for occupational safety and health. Compendium of policy documents and statements. Division of Standards Developmental and Technology Transfer, National Institute for Occupational Safety and Health, Centers for Disease Control, Public Health Service, U. S. Department of Health and Human Services.
- \*NIOSH. 1994. Method 1011, methyl chloride. NIOSH manual of analytical methods (NMAM), Fourth Edition. National Institute for Occupational Safety and Health, Centers for Disease Control, Public Health Service, U. S. Department of Health and Human Services.
- Nisbet ICT, Siegel DM, Paxton MB, et al. 1984. Carcinogenic risk assessment for occupational exposure to monohalomethanes. Final report. U.S. Department of Health and Human Services, Division of Standards Development and Technology Transfer, National Institute for Occupational Safety and Health, Cincinnati, OH.
- \*Nolan RJ, Rick DL, Landry TD, et al. 1985. Pharmacokinetics of inhaled methyl chloride (CH<sub>3</sub>Cl) in male volunteers. *Fund Appl Toxicol* 5:361-369.
- \*NPLTDB. 1989. National Priority List Technical Data Base. BASE IV format, 2/89 version.
- \*NRC. 1993. Pesticides in the Diets of Infants and Children. National Research Council. Washington DC: National Academy Press.
- O'Donoghue JL. 1985. Aliphatic halogenated hydrocarbons, alcohols, and acids and thioacids. In: O'Donoghue, ed. Volume 2: Neurotoxicity of industrial and commercial chemicals. Boca Raton, FL: CRC Press, Inc., 99-126.

- \*OHM-TADS. 1988. Oil and Hazardous Materials - Technical Assistance Data System. U.S. Environmental Protection Agency, National Institute of Health. Computer database on-line: December 5, 1988.
- \*Oliver KD, Adams JR, Daughtrey EH, JR. 1996. Technique for monitoring toxic vocs in air: Sorbent preconcentration, closed-cycle cooler cryofocusing, and GC/MS analysis. *Environ Sci Technol* 30(6):1939-1945.
- Oomens AC, Noten LG. 1984. Picomole amounts of methyl chloride (chloromethane) by reaction gas chromatography. *J High Resolut Chromatogr* 7:280-281.
- Osborne JS, Adamek S, Hobbs ME. 1956. Some components of gas phase of cigarette smoke. *Anal Chem* 28:211-215.
- \*OSHA. 1974. Occupational Safety and Health Standards. 29 CFR 1910.1000.
- \*OTA. 1990. Neurotoxicology: Identifying and controlling poisons of the nervous system. Office of Technology Assessment, Washington, DC. OTA-BA-438.
- \*Otson R. 1987. Purgeable organics in Great Lakes raw and treated water. *Int J Environ Anal Chem* 31:41-53.
- \*Otson R, Polley GL, Robertson JL. 1986. Chlorinated organics from chlorine used in water treatment. *Water Res* 20:775-779.
- \*Owen GM, Brozek J. 1966. Influence of age, sex, and nutrition on body composition during childhood and adolescence. In: Falkner F, ed. *Human development*. Philadelphia, PA: Saunders, 222-238.
- \*Page GW. 1981. Comparison of groundwater and surface water for patterns and levels of contamination by toxic substances. *Environ Sci Technol* 15:1475-1481.
- \*Palmer TY. 1976. Combustion sources of atmospheric chlorine. *Nature (London)* 263:44-46.
- Pankow JF, Rosen ME. 1988. Determination of volatile compounds in water by purging directly to a capillary column with whole column cryotrapping. *Environ Sci Technol* 22:398-405.
- \*Paraskevopoulos G, Singleton DL, Irwin RS. 1981. Rates of OH radical reactions. 8. Reactions with CH<sub>2</sub>FC<sub>1</sub>, CHF<sub>2</sub>C<sub>1</sub>, CHF<sub>2</sub>C<sub>12</sub>, CH<sub>3</sub>CF<sub>2</sub>C<sub>1</sub>, CH<sub>3</sub>C<sub>1</sub>, and C<sub>2</sub>H<sub>5</sub>C<sub>1</sub> at 297 K. *J Phys Chem* 85:561-564.
- Peers AM. 1985. The determination of methyl chloride in air. *IARC Sci Pub* 168:219-225.
- \*Pellizzari ED, Hartwell TD, Harris BSH, et al. 1982. Purgeable organic compounds in mother's milk. *Bull Environ Cont Toxicol* 28:322-328.
- Penkett SA, Derwent RG, Fabian P. 1980. Methyl chloride in the stratosphere. *Nature* 283:58-60.
- \*Perry RA, Atkinson R, Pitts JN Jr. 1976. Rate constants for the reaction of OH radicals with CHFC<sub>12</sub> and CH<sub>3</sub>C<sub>1</sub> over the temperature range 298-423 K and with CH<sub>2</sub>C<sub>12</sub> at 298 K. *J Chem Phys* 64:1618-1620.

- \*Peter H, Deutschman S, Muelle A, et al. 1989b. Different affinity of erythrocyte glutathione-S-transferase to methyl chloride in humans. *Arch Toxicol Suppl* 13:128-132.
- \*Peter H, Deutschmann S, Reichel C, et al. 1989a. Metabolism of methyl chloride by human erythrocytes. *Arch Toxicol* 63(5):351-355.
- \*Peter H, Laib RJ, Ottenwalder H, et al. 1985. DNA-binding assay of methyl chloride. *Arch Toxicol* 57:84-87.
- Petros JK, Alsop GM, Conway RA. 1984. Rapid extraction methods for organics in soil. *ASTM Spec Tech Publ* 851:92-99.
- \*Philbrick CA, Aggarwal SK, Puri IK. 1993. The extinction of methan/methyl chloride nonpremixed flames. *Hazardous Waste & Hazardous Materials* 10(1):71-79.
- Phillips D. 1978. Gas-phase photoprocesses. *Photochemistry* 9:140-192.
- \*Pincince AB. 1988. Estimating volatile organic emissions from publicly owned treatment works. *J Water Pollut Cont Fed* 59:119-121.
- Pleil JD, Oliver KD, McClenny WA. 1988. Ambient air analyses using nonspecific flame ionization and electron capture detection compared to specific detection by mass spec. *J Air Poll Cont Assoc* 38:1006-1010.
- \*Plumb RH, Jr. 1991. The occurrence of Appendix IX organic constituents in disposal site ground water. *Ground Water Monitoring Review* 12:157-64.
- Politis MJ, Schaumburg HH, Spencer PS. 1980. Neurotoxicity of selected chemicals. In: Spencer PS, Schaumburg HH, eds. *Experimental and clinical neurotoxicology*. London, UK: Williams and Wilkins, 613-630.
- \*Poulin P, Krishnan K. 1996. A tissue composition-based algorithm for predicting tissue: Air partition coefficients of organic chemicals. *Toxicol Appl Pharmacol* 136(1):126-130.
- \*Putz-Anderson V, Setzer JV, Croxton JS. 1981b. Effects of alcohol, caffeine and methyl chloride on man. *Psychol Rep* 48:715-725.
- \*Putz-Anderson V, Setzer JV, Croxton JS, et al. 1981a. Methyl chloride and diazepam effects on performance. *Stand J Work Environ Health* 7:8-13.
- \*Raalte HGS, van Velzen HGECT. 1945. Methyl chloride intoxication. *Ind Med* 14:707-709.
- \*Rafnsson V, Gudmundsson G. 1997. Long-term follow-up after methyl chloride intoxication. *Archives of Environmental Health* 52(5):355-359.
- Rao PSC, Hornsby AG, Jessup RE. 1985. Indices for ranking the potential for pesticide contamination of groundwater. *Soil Crop Sci Soc FL Proc* 44:1-8.

- \*Rasmussen RA, Khalil MAK. 1983. Natural and anthropogenic trace gases in the lower troposphere of the arctic. *Chemosphere* 12:371-375.
- \*Rasmussen RA, Rasmussen LE, Khalil MAK. 1980. Concentration distribution of methyl chloride in the atmosphere. *J Geophys Res* 85:7350-7356.
- Reddy SR, Anandakumar R, Satyanarayan A. 1973. Vapor pressure of low boiling organic compounds. *Chem Ind Dev* 7:21-25.
- \*Redford-Ellis M, Gowenlock AH. 1971a. Studies on the reaction of chloromethane with preparations of liver, brain and kidney. *Acta Pharmacol Toxicol* 30:49-58.
- \*Redford-Ellis M, Gowenlock AH. 1971b. Reaction of chloromethane with human blood. *Acta Pharmacol Toxicol* 30:36-48.
- Reinhard TE, Ward DE. 1995. Factors affecting methyl chloride emissions from forest biomass combustion. *Env Sci Technol* 29:825-832.
- Repko JD. 1981. Neurotoxicity of methyl chloride. *Neurobehav Toxicol Teratol* 3:425-429.
- \*Repko JD, Jones PD, Garcia LS Jr., et al. 1977. Behavioral and neurological effects of methyl chloride. Behavioral and neurological evaluation of workers exposed to industrial solvents: Methyl chloride. Cincinnati, OH: National Institute for Occupational Safety and Health, Centers for Disease Control, Public Health Service, Department of Health and Human Services. NIOSH publication 77-125.
- Repko JD, Lasley SM. 1979. Behavioral, neurological, and toxic effects of methyl chloride: A review of the literature. *CRC Crit Rev Toxicol* 6:283-302.
- \*Reynolds ES, Yee AG. 1967. Liver parenchymal cell injury. V. Relationships between patterns of chloromethane-<sup>14</sup>C incorporation into constituents of liver *in vivo* and cellular injury. *Lab Invest* 16:591-603.
- \*Riddick JA, Bunger WB, Sakano TK. 1986. Organic solvents: Physical properties and methods of purification. *Techniques of chemistry*. 4th ed. New York, NY: Wiley-Interscience, 1325.
- \*Ristau C, Bolt HM, Vangala RR. 1989. Detection of DNA-protein crosslinks in the kidney of male B6C3F<sub>1</sub> mice after exposure to methyl chloride. *Arch Toxicol Supp* 13 243:244-245.
- \*Ristau C, Bolt HM, Vangala RR. 1990. Formation and repair of DNA lesions in kidneys of male mice after acute exposure to methyl chloride. *Arch Toxicol*. 64:254-256.
- \*Robbins DE. 1976. Photodissociation of methyl chloride and methyl bromide in the atmosphere. *Geophys Res Lett* 3:213-216.
- \*Robertson RE, Heppolette RL, Scott JMW. 1959. A survey of thermodynamic parameters for solvolysis in water. *Can J Chem* 37:803-824.
- Robinson E, Rasmussen RA, Krasnec J, et al. 1977. Halocarbon measurements in the Alaskan troposphere and lower stratosphere. *Atmos Environ* 11:215-223.



- \*RTECS. 1988. Registry of Toxic Effects of Chemical Substances. December 5, 1988.
- \*Rudolph J, Khedim A, Koppmann R, et al. 1995. Field study of the emissions of methyl chloride and other halocarbons from biomass burning in western Africa. *J Atmos Chem* 22:67-80.
- Ruhe RL. 1976. Health hazard evaluation--toxicity determination report no. 75180-311. The Foxboro Company, Highland Plant, Bridgewater, Massachusetts. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health.
- \*Rushbrook CJ. 1984. Evaluation of toxicological test methods used in estimating potential human health hazards. Dominant lethal study of chloromethane in rats. Unpublished study. Prepared by SRI International, Menlo Park, CA, for HERD, U.S. Environmental Protection Agency. OTS submission document 40-8420732. Microfiche 511320.
- \*Sahel GV, Clark TP. 1984. Volatile organic compounds as indicators of municipal solid waste leachate contamination. *Waste Manag Res* 2:119-130.
- Sanhuesa E. 1977. The chlorine atom sensitized oxidation of  $\text{HCCL}_3$ ,  $\text{HCF}_2\text{CL} + \text{HCF}_3$ . *J Photochem* 7:325-334.
- Sanhuesa E, Heicklen J. 1975. Chlorine-atom sensitized oxidation of dichloromethane and chloromethane. *J Phys Chem* 79:7-11.
- \*SANSS. 1988. Structure and Nomenclature Search System. Chemical Information Systems, Inc.
- Sayers RR, Yant WP, Thomas BGH, et al. 1929. Physiological response attending exposure to vapors of methyl bromide, methyl chloride, ethyl bromide and ethyl chloride. Public Health Bulletin 185. Washington, DC: Treasury Department, United States Public Health Service.
- \*Scharnweber HC, Spears GN, Cowles SR. 1974. Chronic methyl chloride intoxication in six industrial workers. *J Occ Med* 16:112-113.
- Schroder KR, Hallier E, Meyer DJ, et al. 1996. Purification and characterization of a new glutathione S-transferase, class O, from erythrocytes. *Arch Toxicol* 70(9):559-566.
- Schwartz BS, Ford P, Bolla KI, et al. 1990. Solvent-association decrements in olfactory function in paint manufacturing workers. *American Journal of Industrial Medicine* 18(6):697-706.
- Schwetz BA. 1995. Use of mechanistic and pharmacokinetic data for risk assessment at the National Institute of Environmental Health Sciences (NIEHS). *Toxicology Letters* 79(1-3):29-32.
- \*Setchell BP, Waites GMH. 1975. The blood testis barrier. In: Creep RO, Astwood EB, eds., Geiger SR, executive ed. *Handbook of physiology: Endocrinology V* (Chapter 6). Washington DC: American Physiological Society.
- \*Shah JJ, Singh HB. 1988. Distribution of volatile organic chemicals in outdoor and indoor air. *Environ Sci Tech* 22:1381-1388.

- \*Shirey RE. 1995. Rapid analysis of environmental samples using solid-phase microextraction SPME and narrow bore capillary columns. *Hrc Journal of High Resolution Chromatography* 18(8):495-499.
- Shold DM, Rebbert RE. 1978. The photochemistry of methyl chloride. *J Photochem* 9:499-517.
- \*Shuckrow AJ, Pajah AP, Touhill CJ. 1982. Hazardous waste leachate management manual, Appendix A. Noyes Data Corporation, Park Ridge, NJ, 126-149.
- \*Sieber WK Jr., Sundin DS, Frazier TM, et al. 1991. Development, use, and availability of a job exposure matrix based on National Occupational Hazard Survey data. *Am J Ind Med* 20:163-174.
- Simmon VF. 1978. Structural correlations of carcinogenic and mutagenic alkyl halides. Department of Health, Education and Welfare, Washington, DC, 163-171.
- Simmon VF. 1981. Applications of the Salmonella/microsome assay. *Short-term Tests Chem Carcinogen* 120-126.
- Simmon VF, Kauhanen K, Tardiff RG. 1977. Mutagenic activity of chemicals identified in drinking water. *Dev Toxicol Environ Sci* 2:249-258.
- Simmon VF, Tardiff RG. 1978. Mutagenic activity of halogenated compounds found in chlorinated drinking water. In: Conference: Water Chlorination: Environ Impact Health Effects 2:417-431.
- Singh HB. 1977. Atmospheric halocarbons: Evidence in favor of reduced average hydroxyl radical concentration in the troposphere. *Geophys Res Lett* 5:101-104.
- \*Singh HB, Salas JL, Shigeishi H, et al. 1979. Atmospheric halocarbons, hydrocarbons and sulfur hexafluoride: Global distributions, sources and sinks. *Science* 203:899-903.
- \*Singh HB, Salas JL, Stiles RE. 1982a. Distribution of selected gaseous organic mutagens and suspect carcinogens in ambient air. *Environ Sci Technol* 16:872-880.
- \*Singh HB, Salas L, Shigeishi H, et al. 1977a. Urban-nonurban relationships of halocarbons, sulfur hexafluoride, nitrous oxide, and other atmospheric trace constituents. *Atmos Environ* 11:819-828.
- Singh HB, Salas LJ, Cavanagh LA. 1977b. Distribution sources and sinks of atmospheric halogenated compounds. *J Air Pollut Cont Assoc* 27:332-336.
- \*Singh HB, Salas LJ, Smith AJ, et al. 1981a. Measurements of some potentially hazardous organic chemicals in urban environments. *Atmos Environ* 15:601-612.
- \*Singh HB, Salas LJ, Stiles R. 1981b. Trace chemical in the clean troposphere. Environmental Sciences Research Laboratory, U.S. EPA, Research Triangle Park, NC. EPA 600/3-81-055. NTIS PB82-249202. (microfiche)
- \*Singh HB, Salas LJ, Stiles RE. 1983. Methyl halides in and over the eastern Pacific (40 deg N -32 deg S). *J Geophys Res* 88:3684-3690.

- Sizemore OJ, Amler RW. 1996. Characteristics of ATSDR's adult and pediatric environmental neurobehavioral test batteries. *NeuroToxicology* 17(1):229-236.
- \*Smith WW. 1947. The acute and chronic toxicity of methyl chloride. III. Hematology and biochemical studies. *J Ind Hyg Toxicol* 29:185-188.
- \*Smith WW, von Oettingen. 1947b. The acute and chronic toxicity of methyl chloride. II. Symptomatology of animals poisoned by methyl chloride. *J Ind Hyg Toxicol* 29:123-128.
- \*Smith WW, von Oettingen WF. 1947a. The acute and chronic toxicity of methyl chloride. I. Mortality resulting from exposures to methyl chloride in concentrations of 4,000 to 300 parts per million. *J Ind Hyg Toxicol* 29:47-52.
- \*Snider EH, Manning FS. 1982. A survey of pollutant emission levels in waste waters and residuals from the petroleum refining industry. *Environ Int* 7:237-258.
- Spence JW, Hanst PL, Gay BW, Jr. 1976. Atmospheric oxidation of methyl chloride, methylene chloride and chloroform. *J Air Pollut Cont Assoc* 76:994-996.
- Sperling F, Macri FJ, Von Oettingen WF. 1950. Distribution and excretion of intravenously administered methyl chloride. *Am Med Assoc Arch Ind Hyg Occ Med*. 215-224.
- \*Spevak L, Nadj V, Felle D. 1976. Methyl chloride poisoning in four members of a family. *Br J Ind Med* 33:272-274.
- \*SRC. 1994. Henry's Law Constant Program (HENRYWIN, version 2.50, serial H0142). Syracuse Research Center, Chemical Assessment Division, Environmental Chemistry Center, Syracuse, NY.
- \*SRC. 1995. Octanol-Water Partition Coefficient Program (KOWWIN, version 1.37, serial LO148). Syracuse Research Center, Chemical Hazard Assessment Division, Environmental Chemistry Center, Syracuse, NY.
- Staples CA, Werner A, Hoogheem T. 1985. Assessment of priority pollutant concentrations in the United States using STORET database. *Environ Toxicol Chem* 4:131-142.
- \*State of Kentucky. 1986. New or modified sources emitting toxic air pollutants. Department for Environmental Protection. 401 KAR 63:022.
- \*Stewart RD, Hake CL, Zvu A, et al. 1980. Methyl chloride: Development of a biologic standard for the industrial worker by breath analysis. Prepared for National Institute for Occupational Safety and Health, Cincinnati, OH. NTIS PB81-167686. (microfiche)
- \*Stirling DI, Dalton H. 1979. The fortuitous oxidation and cometabolism of various carbon compounds by whole-cell suspensions of *Methylococcus capsulatus* (Bath). *Ferns Microbial Lett* 5:315-318.
- Sujbert L. 1967. [Studies on the degradation of methyl chloride in mice.] *Arch Toxicol (Germany, West)* 22:233-235. (German).

## 8. REFERENCES

- \*Tait VK, Moore RM. 1995. Methyl chloride (CH<sub>3</sub>Cl) production in phytoplankton cultures. *Limnology and Oceanography* 40(1):189-195.
- \*Tassios S, Packham DR. 1985. The release of methyl chloride from biomass burning in Australia. *J Air Pollut Contr Assoc* 35:41-42.
- \*Taylor PH, Dellinger B. 1988. Thermal degradation characteristics of chloromethane mixtures. *Environ Sci Technol* 22:438-447.
- \*Thordarson O, Gudmundsson G, Bjarnason O, et al. 1965. Metylkloridforgiftning. *Nord Med* 18:150-154. (Norwegian, English abstract).
- \*Traunecker J, Preuss A, Diekert G. 1991. Isolation and characterization of a methyl chloride utilizing, strictly anaerobic bacterium. *Arch. Microbiol.* 156:416-421.
- \*TRI96. 1998. Toxic Chemical Release Inventory. National Library of Medicine, National Toxicology Information Program, Bethesda, MD.
- \*U. S. Congress. 1986. Superfund admendment and reauthorization act of 1986. Title III-emergency planning in community right to know. Ninty-ninth congress of the United States of America.
- \*U.S. Congress 1990. Clean Air Act Amendments. Title III, Hazardous Air Pollutants, Section 112, Harzardous Air Pollutents as amended, October 26, 1990. 101 Congress of the United States of America, Second session report 101-952.
- Umbreit GR, Grob RL. 1980. Experimental application of gas chromatographic headspace. *J Environ Sci Health Part A Environ Sci Eng* 15:429-466.
- \*USDOC. 1996. U.S. Merchandise Import and Export Trade. Retrieved from National Trade Data bank. United States Department of Commerce, Bureau of Census, June 29, 1996.
- USITC. 1985. U.S. International Trade Commission. Synthetic organic chemicals, United States production and sales, 1984. Publication no. 1745. Washington, DC: U.S. Government Printing Office, 258, 259.
- USITC. 1987. U.S. International Trade Commission. Synthetic organic chemicals, United States production and sales, 1987. Publication no. 2118. Washington, DC: U.S. Government Printing Office, 15-7, 15-29, 15-36, 15-37, 15-38.
- \*van Doorn R, Borm PJA, Leijdekkers Ch-M, et al. 1980. Detection and identification of s-methylcysteine in urine of workers exposed to methyl chloride. *Int Arch Occup Environ Health* 46:99-109.
- \*Vannelli T, Studer A, Kertesz M, et al. 1998. Chloromethane metabolism by *Methylobacterium* sp. strain cm4. *Applied and Environmental Microbiology* 64(5):1933-1936.
- Vaughn P, Lindahl T, Sedgwick B. 1993. Induction of the adaptive response of *Escherichia coli* to alkylation damage by the environmental mutagen, methyl chloride. *Mutation Research, DNA Repair* 293(3):249-257.

- \*Venkataramani ES, Ahlert RC, Corbo P. 1984. Biological treatment of landfill leachates. *CRC Crit Rev Environ Cont* 14:333-376.
- \*Verrihe MP, Vachez M. 1949. [Severe acute nephritis after methyl chloride poisoning.] *Lyon Med* 1:296-297. (French).
- Vidal-Madjar C, Gonnord MF, Benchah F, et al. 1978. Performances of various adsorbents for the trapping and analysis of organohalogenated air pollutants by gas chromatography. *J Chromatogr Sci* 16:190-196.
- \*Vieira I, Sonnier M, Cresteil T. 1996. Developmental expression of CYP2E1 in the human liver: hypermethylation control of gene expression during the neonatal period. *European Journal of Biochemistry* 238:476-483.
- \*Vogel TM, Criddle CS, McCarty PL. 1987. Transformations of halogenated aliphatic compounds. *Environ Sci Technol* 21:722-736.
- von Oettingen WF. 1964. Halogenated hydrocarbons of industrial and toxicological importance. New York, NY: Elsevier Publishing Co.
- \*van Oettingen WF, Powell CC, Sharpless NE, et al. 1949. Relation between the toxic action of chlorinated methanes and their chemical and physicochemical properties. *Health Bulletin* 191. Washington, DC: Public Health Service, National Institutes of Health.
- \*van Oettingen WF, Powell CC, Sharpless NE, et al. 1950. Comparative studies of the toxicity and pharmacodynamic action of chlorinated methanes with special reference to their physical and chemical characteristics. *Arch Int Pharmacodyn Ther* 81:17-34.
- \*Wang Z, Minarni M. 1996. Effects of chloramine on neuronal cholinergic factors. *Biogenic Amines* 12(3):213-223.
- \*Warhlom M, Rane A, Alexandrie AK, et al. 1995. Genotypic and phenotypic determination of polymorphic glutathione transferase T1 in a Swedish population. *Pharmacogenetics* 5:252-254.
- \*Warholm M, Alexandrie AK, Hogberg J, et al. 1994. Polymorphic distribution of glutathione transferase activity with methyl chloride in human blood. *Pharmacogenetics* 4:307-311.
- Waters MD, Stack HF, Jackson MA, et al. 1994. The performance of short-term tests in identifying potential germ cell mutagens: A qualitative and quantitative analysis. *Mutation Research* 341(2):109-131.
- Watts H. 1971. Temperature dependence of the diffusion of carbon tetrachloride, chloroform, and methylene chloride vapors in air by a rate of evaporation method. *Can J Chem* 49:67-73.
- \*Weast RC. 1988. *CRC handbook of chemistry and physics*, 69th Edition. Boca Raton, FL: CRC Press.
- \*Weinstein A. 1937. Methyl chloride (refrigerator) gas poisoning. *J Am Assoc* 108:1603-1605.
- \*Weitzman SA, Stossel TP. 1981. Mutation caused by human phagocytes. *Science* 212:546-547.

\*West JR, Smith HW, Chasis H. 1948. Glomerular filtration rate, effective renal blood flow, and maximal tubular excretory capacity in infancy. *J of Pediatrics* 32a:10-18.

White JL, Somers PP. 1931. The toxicity of methyl chloride for laboratory animals. *J Ind Hyg* 13:213-275.

\*WHO 1984. Guidelines for drinking-water quality. Volume 1: Recommendations. World Health Organization.

\*Widdowson EM, Dickerson JWT. 1964. Chapter 17: Chemical composition of the body. In: Comar CL and Bronner F, eds. *Mineral metabolism: An advanced treatise, Volume II - The elements part A*. New York: Academic Press.

Wilkes BE, Priestley LJ Jr., Scholl LK. 1982. An improved thermal desorption gas chromatography-mass spectrometry method for the determination of low parts-per-billion concentrations of chloromethane in ambient air. *Microchem J* 27:420-424.

Willson KS, Walker WO. 1944. Methyl chloride and mixtures of methyl chloride with dichloro-difluoromethane. *Ind Eng Chem* 36:466-468.

Willson KS, Walker WO, Rinelli WR, et al. 1943. Liquid methyl chloride. *Chem Eng News* 21:1254-1261.

\*Wolkowski-Tyl R. 1985. Response to comments on heart malformations in B6C3F<sub>1</sub> mouse fetuses induced by methyl chloride: Continuing efforts to understand the etiology and interpretation of an unusual lesion. *Teratology* 32:489-492.

\*Wolkowski-Tyl R, Lawton AD, Phelps M, et al. 1983b. Evaluation of heart malformations in B6C3F<sub>1</sub> mouse fetuses induced by *in utero* exposure to methyl chloride. *Teratology* 27:197-206.

\*Wolkowski-Tyl R, Phelps M, Davis JK. 1983a. Structural teratogenicity evaluation of methyl chloride in rats and mice after inhalation exposure. *Teratology* 27:181-195.

\*Wood MWW. 1951. Cirrhosis of the liver in a refrigeration engineer, attributed to methyl chloride. *Lancet* 1:508-509.

\*Working PK, Bus JS. 1986. Failure of fertilization as a cause of preimplantation loss induced by methyl chloride in Fischer 344 rats. *Toxicol Appl Pharmacol* 86:124-130.

\*Working PK, Bus JS, Hamm TE Jr. 1985a. Reproductive effects of inhaled methyl chloride in the male Fischer 344 rat. I. Mating performance and dominant lethal assay. *Toxicol Appl Pharmacol* 77:133-143.

\*Working PK, Bus JS, Hamm TE Jr. 1985b. Reproductive effects of inhaled methyl chloride in the male Fischer 344 rat. II. Spermatogonial toxicity and sperm quality. *Toxicol Appl Pharmacol* 77:144-157.

\*Working PK, Chellman GJ. 1989. The use of multiple endpoints to define the mechanism of action of reproductive toxicants and germ cell mutagens. *Progress in Clinical and Biological Research*. 302:211-224.

- \*Working PK, Doolittle DJ, Smith-Oliver T, et al. 1986. Unscheduled DNA synthesis in rat tracheal epithelial cells, hepatocytes and spermatocytes following exposure to methyl chloride *in vitro* and *in vivo*. *Mutat Res* 162:219-224.
- \*Xu D, Peter H, Hallier E, et al. 1990. Hemoglobin adducts of monohalomethanes. *Industrial Health* 28:121-123.
- Yoshida K, Shigeoka A, Yamauchi F. 1983. Relationship between molar refraction and N-octanol/water partition coefficient. *Ecotox Environ Saf* 7:558-565.
- \*Yung YL, McElroy MB, Worfy SC. 1975. Atmospheric halocarbons: A discussion with emphasis on chloroform. *Geophys Res Lett* 2:397-399.
- Yurteri C, Ryan DF, Callow JJ, et al. 1987. The effect of chemical composition of water on Henry's law constant. *Water Poll Cont Fed J* 59:950-956.
- \*Zafiriou OC. 1975. Reaction of methyl halides with seawater and marine aerosols. *J Mar Res* 33:75-81.
- \*Zaidman OA, Sadogurskii MN, Krishstal NF, et al. 1991. Treatment of vinyl chloride to remove methyl chloride by esterification with alcohol solutions of sodium hydroxide. *Kimimicheskaya Promyshlennost (English Edition)* 23(11):643-648.
- \*Ziegler EE, Edwards BB, Jensen RL et al. 1978. Absorption and retention of lead by infants. *Pediatr Res* 12:29-34.
- \*Zitomer DH, Speece R. 1995. Methanethiol in nonacclimated sewage sludge after addition of chloroform and other toxicants. *Environ Sci Technol* 29:762-768.

