- *ACGIH. 1997. TLVs® and BEIs®: Threshold limit values for chemical substances and physical agents biological exposure indices. American Conference of Governmental Industrial Hygienists. Cincinnati, OH.
- *ACGIH. 1994. Documentation of threshold limit values for substances in work environment. American Conference of Governmental Industrial Hygienists Cincinnati, OH.
- *ACGIH. 1991. Documentation of the threshold limit values and biological exposure indices. Sixth Edition. American Conference of Governmental Industrial Hygienists, Cincinnati, OH. 162-163.

Amoore JE, Hautala E. 1983. Odor as an aid to chemical safety: Odor thresholds compared with threshold limit values and volatilities for 214 industrial chemicals in air and water dilution. J Appl Toxicol 3(6):272-289.

- *Andersen ME, Krishnan K. 1994. Relating *in vitro* to kn viva exposures with physiologically-based tissue dosimetry and tissue response models. In: Salem H., ed. Animal Test Alternatives. U.S. Army Chemical Research Development and Engineering Center, Aberdeen Proving Ground, Maryland.
- *Andersen ME, Clewell HJ III, Gargas ML, et al. 1987. Physiologically based pharmacokinetics and the risk assessment process for methylene chloride. Toxicol Appl Pharmacol87: 185-205.
- *Andersson K, Levin JO, Lindahl R. 1982. Sampling of ethylene glycol and ethylene glycol derivatives in work-room air using amberlite XAD Resins. Chemosphere 1 l(11): 1115-1119.
- *Angerer J, Lichterbeck E, Begerow J, et al. 1990. Occupational chronic exposure to organic solvents: XIII. Glycol ether exposure during the production of varnishes. Int Arch Occup Environ Health 62(2):123-126.
- *Apol A, Cone J. 1983. Health hazard evaluation report. Bay Area Hospital, Coos Bay, OR. HETA 82-053-1263.
- *Apol AG. 1981. Health hazard evaluation report no. HETA-81-105-831. Labs West, Inc., Redmond, WA. Cincinnati, OH: Hazard Evaluations and Technical Assistance Branch, National Institute for Occupational Safety and Health, U. S. Department of Health and Human Services.
- *Apol AG. 1986. Health hazard evaluation report No. HETA-86-037-1749. Lamiglas, Woodland, WA. Cincinnati, OH: Hazard Evaluations and Technical Assistance Branch, National Institute for Occupational Safety and Health, U. S. Department of Health and Human Services.
- *Appelt W. 1990. Buty 1 g y 1 col: Efficacious solvent in aqueous coating systems. J Oil Colour Chem Assoc 73(5):200-201.

*Cited	in	text		

- *ASTER. 1995a. ASTER (Assessment Tools for the Evaluation of Risk) ecotoxicity profile: Ethanol, 2-butoxy. Duluth, MN: Environmental Research Laboratory, U.S. Environmental Protection Agency. February 17, 1995.
- *ASTER. 1995b. ASTER (Assessment Tools for the Evaluation of Risk) ecotoxicity profile: Ethanol, 2-butoxy-acetate. Duluth, MN: Environmental Research Laboratory, U.S. Environmental Protection Agency. February 17,1995.
- *Astrand I. 1983. Effect of physical exercise on uptake, distribution and elimination of vapors in man. In: Fiserova-Bergerova, V. ed. Modeling of inhalation exposure to vapor: Uptake, distribution, and elimination, Volume 2, Chapter 5. Boca Raton, FL: CRC Press, 107-130.
- Atkinson R. 1988. Estimation of gas-phase hydroxyl radical rate constants for organic chemicals. Environ Toxicol Chem 7:435-442.
- *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. 1992. Toxicological profile for 2-butanone. U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA.
- *ATSDR. 1993. Toxicological profile for ethylene glycol and propylene glycol, Draft for Public Comment. U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA.
- *ATSDR. 1995a. Toxicological profile for ethylene glycol and propylene glycol. U. S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA.
- *ATSDR. 1995b. Toxicological profile for naphthalene. U. S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, 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.
- *Bagley D, Booman KA, Bruner LH, et al. 1994. The SDA alternatives program phase III: Comparison of *in vitro* data with animal eye irritation data on solvents, surfactants, oxidizing agents, and prototype cleaning products. J Toxicol Cutan Ocular Toxicol 13(2):127-155.
- *Baker E, Smith T, Quinn M. 1985. Health hazard evaluation report. Screen printing shops Boston, Massachusetts and Denton, Maryland areas. HETA 82-212-1553.
- *Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessments. U.S. Environmental Protection Agency. Regul Toxicol Pharmacol8:471-486.
- *Bartnik FG, Reddy AK, Klecak G, et al. 1987. Percutaneous absorption, metabolism, and hemolytic activity of n-butoxyethanol. J Fund Appl Toxicol 8(1):59-70.
- *Bauer P, Weber M, Mur JM, et al. 1992. Transient non-cardiogenic pulmonary edema following massive ingestion of ethylene glycol butyl ether. Intensive Care Med 18(4):250-25 1.

- *Begerow J, Heinrich-Ramm R, Angerer J. 1988. Determination of butoxyacetic acid in urine by capillary gas chromatography. Fresenius' Z Anal Chem 33 1(8):818-820.
- *Beihoffer J, Ferguson C. 1994. Determination of selected carboxylic acids and alcohols in groundwater by GC-MS. J Chromatogr Sci 32(3):102-106.
- Bernard AM, De Russis R, Normand JC, et al. 1989. Evaluation of the subacute nephrotoxicity of cyclohexane and other industrial solvents in the female Sprague-Dawley rat. Toxicol Lett 45(2-3):271-280. (AMST)
- *Bidleman TF. 1988. Atmospheric processes. Environmental Science and Technology 22(4):361-367.
- Birnbaum LS. 1990. Age-related changes in sensitivity to environmental chemicals. Eisei Kagaku 36(6):461-479.
- *Boiano J. 1983. Health hazard evaluation report. Downing Displays Inc., Cincinnati, OH. HETA 82-330-1252.
- *Booman KA, Kong B, Cascieri TM, et al. 1988. *In vitro* methods for estimating eye irritancy of cleaning products. Phase I: Preliminary assessment. J Toxicol Cutan Ocul Toxicol 7(3):173-186.
- *Bormett GA, Bartels MJ, Markham DA. 1995. Determination of 2-butoxyethanol and butoxyacetic acid in rat and human blood by gas chromatobraphy-mass spectrometry. J Chromatogr B 665:3 15-325.
- *Bowden HC, Wilby OK, Botham CA, et al. 1995. Assessment of the toxic and potential teratogenic effects of four glycol ethers and two derivatives using the hydra regeneration assay and rat whole embryo culture. Toxic *in vitro* 9(5):773-781.
- *Brandorff NP, Flyvholm M-A, Beck ID, et al. 1995. National survey on the use of chemicals in the working environment: Estimated exposure events. Occup Environ Med 52:454-463.
- Bridie AL, Wolff CJM, Winter M. 1979. BOD and COD of some petrochemicals. Water Res 13:627-630.
- *Browning RG, Curry SC. 1992. Effect of glycol ethers on plasma osmolality. Human Exper Toxicol 11(6):488-490.
- *Browning RG, Curry SC. 1994. Clinical toxicology of ethylene glycol monoalkyl ethers. Human Exper Toxicol 13(5):325-335.
- *Buckley N, Whyte IM, Dawson AH. 1993. EGBE: Poison control data misleading. Clin Toxicol 3 1(3):499-500.
- *Carpenter CP, Condra NI. 196 1. Mellon Institute of Industrial Research special report: Four-hour rat skin penetration test. Intramural report 24-76.
- *Carpenter CP, Pozzani UC, Weil CS, et al. 1956. The toxicity of butyl cellosolve solvent. Arch Ind Health 14:114-131.
- *Chiewchanwit T, Au WW. 1995. Mutagenicity and cytotoxicity of 2-butoxyethanol and its metabolite, 2-butoxyacetaldehyde, in Chinese hamster ovary (CHO-AS52) cells. Mutat Res 334:341-346.

- *Clapp DE, Zaebst DD, Herrick RF. 1984. Measuring exposures to glycol ethers. Environ Health Perspect 57:91-95.
- *Clewell HJ III, Andersen ME. 1985. Risk assessment extrapolations and physiological modeling. Toxicol Ind Health 1: 1 1 1 113.
- *CMA. 1983. 90-Day subchronic dermal toxicity study in rabbits with ethylene glycol monobutyl ether with cover sheet dated 06/12/89. EPA/OTS Dot #86-890000726.
- *CMA. 1992. Repeated insult patch test to evaluate sensitization potential of ethylene glycol monobutyl ether with cover letter dated 05/26/93. EPA/OTS Dot #86-930000207.
- CMA. 1997a. Ethylene glycol ethers panel toxicology summary report. Chemical Manufacturers Association, Arlington, VA.
- CMA. 1997b. Ethylene glycol monobutyl ether (EGBE) IRIS Support Document. July 1997 Draft. Chemical Manufacturers Association, Arlington, VA.
- *Cocheo V, Bombi GG, Silvestri R. 1987. An apparatus for the thermal desorption of solvents sampled by activated charcoal. Am Ind Hyg Assoc J 48(3):189-197.
- *Collinot JP, Collinot JC, Deschamps F, et al. 1996. Evaluation of urinary D-glucaric acid excretion in workers exposed to butyl glycol. J Toxicol Environ Health 48:349-358.
- *Consumer Products Safety Commission. 1977. (As cited in Ghanayem et al. 1987b.).
- *Corley RA. 1996. Assessing the risk of hemo%ysis in bumans exposed to 2-butoxyethanol using a physiologically-based pharmacokinetic model. &cup Hyg 2:45-55.
- *Corley RA, Bormett GA, Ghanayem BI. 1994. Physiologically based pharmacokinetics of 2-butoxyethanol and its major metabolite, 2-butoxyacetic acid, in rats and humans. Toxicol Appl Pharmacol 129:61-79.
- *Corley RA, Markham DA, Banks C, et al. 1997. Physiologically based pharmacokinetics and the dermal absorption of 2-butoxyethanol vapor by humans. Fund Appl Toxicol 39(2): 120-130.
- *Corley RA, Mendrala, AL, Smite FA, et al. 1990. Development of a physiologically based pharmacokinetic model for chloroform. Toxicol Appl Pharmacol 103:512-527.
- *Cosmetic Ingredient Review Expert Panel. 1996. Final report on the safety assessment of butoxyethanol. Journal of the American College of Toxicology 15(6):462-526.
- *Dahl AR, Snipes MB, Gerde P. 1991. Sites for uptake of inhaled vapors in Beagle dogs. Toxicol Appl Pharmacol 109:263-275.
- *Dean BS, Krenzelok EP. 1992. Clinical evaluation of pediatric ethylene glycol monobutyl ether poisonings. J Toxicol Clin Toxicol 30(4):557-563.
- *DeBortoli M, Knoppel H, Pecchio E, et al. 1986. Concentrations of selected organic pollutants in indoor and outdoor air in Northern Italy. Environ Int 12:343-350.

- *Dieter MP, Jameson CW, Maronpot RR, et al. 1990. The chemotherapeutic potential of glycol alkyl ethers structure-activity studies of nine compounds in a Fischer-rat leukemia transplant model. Cancer Chemother Pharmacol26(3): 173-180.
- *Dodd DE, Snellings WM, Maronpot RR, et al. 1983. Ethylene glycol monobutyl ether: Acute, 9-day, and 90-day vapor inhalation studies in Fischer 344 rats. Toxicol Appl Pharmacol68(3):405-414.
- *Doe JE. 1984. Further studies on the toxicology of the glycol ethers with emphasis on rapid screening and hazard assessment. Environ Health Perspect 57: 199-206.
- *DOT. 1990. Hazardous materials and special provisions. Department of Transportation. Code of Federal Regulations. 49 CFR 172.101.
- *DOW. 1958. Results of range finding eye and skin irritation tests on Dowanol EB-crude (ethylene glycol, butyl ether). Dow Chemical Co., Biochemical Research Laboratory, Midland, MI. EPA/OTS No. 86-890001174.
- *DOW. 1959. Results of range finding toxicological tests on Dowanol EB (sanitized). Dow Chemical Co., Biochemical Research Laboratory, Midland, MI. EPA/OTS No. 86-89001175s.
- *DOW. 1972. Toxicity studies of n-butyl oxitol and Dowanol EB glycol ether. Dow Chemical Co., Chemistry and Biology Research, Midland, MI. EPA/OTS No. 86-890001223.
- *Dow. 1981. Dowanol EB crude: Acute toxicological properties and industrial handling hazards with attachment. Toxicology Research Laboratory, Midland, MI. EPA/OTS No. 86-890001225.
- *Dow. 1982. *In vitro* studies to evaluate glycol ethers as substrates for alcohol dehydrogenase. (sanitized). Toxicology Research Laboratory, Health & Environmental Sciences U. S. A., Dow Chemical, Midland, MI.
- *Dow. 1986. Inhalation toxicity studies on three samples of ethylene glycol monobutyl ether (Dowanol EB), n-butyl oxitol- Shell USA, n-butyl oxitol- Shell Europe. Dow Chemical Co., Midland, MI. EPA/OTS No. 86-890001224.
- *Dow. 1993. The glycol ethers handbook. Dow Chemical Co. Midland MI.
- *Dugard PH, Walker M, Mawdsley SJ. 1984. Absorption of some glycol ethers through human skin *in vitro*. Environ Health Perspect 57: 193-198.
- *Dunlap WJ, Shew DC, Robertson JM, et al. 1976a. Organic pollutants to groundwater by a landfill. 96-1 10.
- *Dunlap WJ, Shew DC, Scalf MR, et al. 1976b. Isolation and identification of organic contaminants in ground water. In: Keith LH, ed. Identification and analysis of organic pollutants in water. Ann Arbor, MI: Ann Arbor Science Publishers, Inc., 453-477.
- *Duprat P, Gradiski D. 1979. Percutaneous toxicity of butyl cellosolve ethylene glycol mono butyl ether. IRCS (Int Res Commun Syst) Med Sci Libr Compend 7(1):26.
- *Eastman Kodak. 1983. Subchronic oral toxicity of etbylene glycol monobutyl ether in male rats. Eastman Kodak Co., Toxicology Section, Rochester, NY. EPA/OTS No. 88-8300509.

*Eastman Kodak. 1988. Material safety data sheet, environmental safety data sheet, and acute oral ld50 for 2-butoxyethanol with cover letter dated 04/19/89. EPA/GTS Dot #86-890000198.

Eastman Kodak. 199 1< Letter from Eastman Kodak Company to USEPA submitting enclosed report concerning 2-butoxyethanol with attachments. EPA/OTS DOC #86-9 10000748.

ECETOC. 1994. The toxicology of glycol ethers and its relevance to man. ECETOC Technical Report #64.

*Eckel W, Foster G, Ross B. 1996. Glycol ethers as ground water contaminants. Occupational Hygiene 2:97-104

*Eisenreich SJ, Looney BB, Thornton JD. 198 1. Airborne organic contaminants in the Great Lakes ecosystem. Environmental Science and Technology 15:30-38.

*Ellenhorn M, Barceloux. 1988. Medical toxicology diagnosis and treatment of human poisoning. New York, NY: Elsevier Science Publishing Co., Inc., 810-811.

*EPA. 197 1 D Tolerance range for agriculture products" Environmental Protection Agency. Code of Federal Regulations. 40 CFR 180.1001.

*EPA. 1977. List of chemicals produced by affected facilities. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 60.489.

*EPA. 1982. Preliminary Assessment Information Manufacturers Report. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 712.30.

*EPA. 1984. Health Effects Assessment for Glycol Ethers. U.S. Environmental Protection Agency, Cincinnati, OH. PB86-134632.

*EPA. 1986. Substance subject to all provisions of health and safety data reporting. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 716.120.

*EPA. 1987. Bulk Organic Chemical. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 414 Subpart G.

*EPA. 1988. 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, Cincinnati, OH. NTIS No. PB88-179874.

*EPA. 1989. Interim methods for development of inhalation reference concentrations. U.S. Environmental Protection Agency. EPA/600/8-88/066F.

*EPA. 1990a. Interim methods for development of inhalation reference doses. U.S. Environmental Protection Agency. EPA-600/8-90/066A.

*EPA. 1990b. Chemicals affected by subpart NNN. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 60.667.

- *EPA. 1992. Synthetic Organic Chemical manufacturing industry chemicals. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 63.106.
- *EPA. 1993a. Exemptions from the requirement of a tolerance. Chemicals affected by standards of performance for volatile organic compound emmisions from synthetic organic chemical manufacturing industry reactor process. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 60.707.
- *EPA. 1993b. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 180.1001.
- *EPA. 1994. Organic HAPS subject to the wastewater provisions for process units at new and existing sources and corresponding fraction removed values. Environmental protection agency. Code of federal regulations. 40 CFR 63, Subpart G.
- *EPA. 1995. Toxic chemical release inventory reporting form R and instructions. Environmental Protection Agency. EPA 745-K-95-05 1.
- *Exon JH, Mather GG, Bussiere JL, et al. 1991. Effects of subchronic exposure of rats to 2-methoxyethanol or 2-butoxyethanol: Thymic atrophy and immunotoxicity. Fundam Appl Toxicol 16(4):830-840.
- *FDA. 1993a. Adhesives. Food and Drug Administration. Code of Federal Regulations. 21 CFR 175.105.
- *FDA. 1993b. Polysulfide polymer-polyepoxy resins. Food and Drug Administration. Code of Federal Regulations. 21 CFR 177.1650.
- *FDA. 1993c. Chemicals used in washing or to assist in the lye peeling of fruits and vegetables. Food and Drug Administration. Code of federal regulations. 21 CFR 173.315.
- *FEDRIP. 1995. Federal Research In Progress. Online database. January 1995.
- *Fischbach FT. 1992. Manual of laboratory diagnostic tests. Philadelphia, PA: J.B. Lippincott Company, 41-69.
- *Fiserova-Bergerova V. 1983a. Physiological models for pulmonary administration and elimination of inert vapors and gases. In: Fiserova- Bergerova V, ed. Modeling of inhalation exposure to vapor: Uptake, distribution, and elimination, volume 1, Chapter 4. Boca Raton, FL: CRC Press, 73-100.
- *Fiserova-Bergerova V. 1983b. Modeling of metabolism and excretion *in vivo*. In: Fiserova-Bergerova V, ed. Modeling of inhalation exposure to vapor: Uptake, distribution, and elimination, volume 1, Chapter 5. Boca Raton, FL: CRC Press, 101-132.
- *Foster PMD, Lloyd SC, Blackburn DM. 1987. Comparison of the *in vivo* and *in vitro* testicular effects produced by methoxy-, ethoxy-, and n-butoxy acetic acids in the rat. Toxicology 43:17-30.
- *Foe SC, Lwin S, Chia SE, et al. 1994. Chronic neurobehavioral effects in paint formulators exposed to solvents and noise. Annals Academy of Medicine 23:650-654.

- *Fracchia M, Pierce L, Graul R, et al. 1977. Desorption of organic solvents from charcoal tubes. J Am Ind Hyg Assoc, 38(3): 144-146.
- *Ghanayem BI. 1996. An overview of the hematotoxicity of ethylene glycol ethers. Occup Hyg 2:253-268.
- *Ghanayem BI. 1989. Metabolic and cellular basis of 2-butoxyethanol-induced hemolytic anemia in rats and assessment of human risk *in vitro*. Biochem Pharmacol38(10):1679-1684.
- *Ghanayem BI, Sullivan CA. 1993. Assessment of the hemolytic activity of 2-butoxyethanol and its major metabolite, butoxyacetic acid, in various mammals including humans. Hum Exp Toxicol 12(4):305-311.
- *Ghanayem BI, Blair PC, Thompson MB, et al. 1987a. Effect of age on the toxicity and metabolism of ethylene glycol monobutyl ether (2-butoxyethanol) in rats. Toxicol Appl Pharmacol91(2):222-234.
- *Ghanayem BI, Burka LT, Matthews HB. 1987b. Metabolic basis of ethylene glycol monobutyl ether (2-butoxyethanol) toxicity: role of alcohol and aldehyde dehydrogenases. J Pharmacol Exp Ther 242(1):222-231.
- *Ghanayem BI, Burka LT, Matthews HB. 1989. Structure-activity relationships for the *in vitro* hematotoxicity of n-alkoxyacetic acids, the toxic metabolites of glycol ethers. Chem-Biol Interact 70:339-352.
- *Ghanayem BI, Burka LT, Sanders JM, et al. 1987c. Metabolism and disposition of ethylene glycol monobutyl ether (2-butoxyethanol) in rats. Drug Metab Dispos Biol Fate Chem 15(4):478-484.
- *Ghanayem BI, Sanders JM, Clark AM, et al. 1990a. Effects of dose, age, inhibition of metabolism and elimination on the toxicokinetics of 2-butoxyethanol and its metabolites. J Pharmacol Exp Ther 253(1):136-143.
- *Ghanayem BI, Ward SM, Blair PC, et al. 1990b. Comparison of the hematologic effects of 2-butoxyethanol using two types of hematology analyzers. Toxicol Appl Pharmacol 106(2):341-345.
- *Ghanayem BI, Sanchez IM, Matthews HB. 1992. Development of tolerance to 2-butoxyethanol-induced hemolytic anemia and studies to elucidate the underlying mechanisms. Toxicol Appl Pharmacol 112(2): 198-206.
- *Giavini E, Broccia ML, Menegola E, et al. 1993. Comparative *in vitro* study of the embryotoxic effects of three glycol ethers and their metabolites, the alkoxyacids. Toxicol *In vitro* 7(6):777-784.
- *Gibson T. 1984. A market analysis of 2-butoxyetbanol and 2-butoxyethyl acetate. U. S. Environmental Protection Agency, Regulatory Impacts Branch, under subcontract EPA 36-5 of ICF Inc., contract 68-02-4055. March 23, 1984. (as cited in Ghanayem et al 1987b.)
- *Gijsenbergh FP, Jenco M, Veulemans H, et al. 1989. Acute butylglycol intoxication a case report. Hum Toxicol 8(3):243-245.
- *Gollapudi BB, Barber ED, Lawlor TE, et al. 1996. Reexamination of the mutagenicity of ethylene glycol monobutyl ether to Salmonella tester strain TA97a. Mutat Res 370:61-64.

- *Grant D, Sulsh S, Jones HB, et al. 1985. Acute toxicity and recovery in the hemopoietic system of rats after treatment with ethylene glycol monomethyl ether and ethylene monobutyl ether glycol. Toxicol Appl Pharmacol77(2): 187-200.
- *Green CE, Gordon GR, Cohen PM, et al. 1996. Pn *vitro* metabolism of glycol ethers by human and rat hepatocytes. &cup Hyg 2:67-75.
- *Greenspan AH, Reardon RC, Gingell R. 1995. Human repeated insult patch test of 2-butoxyethanol. Contact Dermatitis 3359-60.
- *Groeseneken D, Veulemans H, Masschelein R, et al. 1989. An improved method for the determination in urine of alkoxyacetic acids. Int Arch Occup Environ Health 61:249-254.
- *Grosjean D. 1990. Atmospheric chemistry of toxic contaminants: Reaction rates and atmospheric persistence. J Air Waste Manage Assoc 40(10): 1397-1402.
- *Gualtieri J, Harris C, Roy R, et al. 1995. Multiple 2-butoxyethanol intoxications in the same patient: clinical findings, pharmacokinetics, and therapy. J Toxicol Clin Toxicol 33(5):550-55 1.
- *Guest D, Deisinger PH, Winter BS, et al. 1985. Estimation of the atmospheric concentration and the *in vitro* hydrolysis of diethylene glycol monobutyl ether acetate. OTS#0512469.
- *Hahn WJ, Werschulz PO. 1986. Evaluation of alternatives to toxic organic paint strippers. Cincinnati, OH: Water Engineering Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency. EPA report no. 600/2-861063.
- *Hardin BD, Goad PT, Burg JR. 1984. Developmental toxicity of four glycol ethers applied cutaneously to rats. Environ Health Perspect 57:69-74.
- *Hardin BD, Schuler RL, Burg JR, et al. 1987. Evaluation of 60 chemicals in a preliminary developmental toxicity test. Teratog Carcinog Mutagen 7:29-48.
- *Harris, JC. 1990. Rate of hydrolysis. In: Lyman WJ, Rheehl WF, Rosenblatt DH, eds. Handbook of Chemical Property Estimation Methods. Washington, DC: American Chemical Society, 7-4.
- *Haufroid V, Thirion F, Mertens P, et al. 1997. Biological monitoring of workers exposed to low levels of 2-butoxyethanol. Int Arch Occup Environ Health 70:232-236.
- *HazDat. 1996. Database. Agency for Toxic Substances and Disease Registry (ATSDR), Atlanta, GA.
- *Heindel JJ, Gulati DK, Russell VS, et al. 1990. Assessment of ethylene glycol monobutyl and monophenyl ether reproductive toxicity using a continuous breeding protocol in Swiss mice, Fundam Appl Toxicol 15(4):683-696.
- Hine J, Mookerjee PK. 1975. The intrinsic hydrophilic character of organic compounds. Correlations in terms of structual contributions. J Org Chem 40:292-298.
- *Hoflack JC, Lambloez L, Elias Z, et al. 1995. Mutagenicity of ethylene glycol ethers and of their metabolites in *Salmonella typhimurium* his-. Mutat Res 341:281-287.

- *Howard PH, ed. 1993. Handbook of environmental fate and exposure data for organic chemicals. Volume IV, Solvents 2. Chelsea, MI: Lewis Publishers, Inc., 4%52,280-287.
- *Howard PH, Boethling RS, Jarvis WM, et al. 1991. Handbook of environmental degradation rates. Chelsea, MI: Lewis Publishers, Inc., 430-431.
- *HSDB. 1997. Hazardous Substances Data Bank. National Library of Medicine, National Toxicology Program (via TOXNET), Bethesda, MD. October 1997.
- *ICI. 1989. Ethylene glycol butyl ether and butoxyacetic acid: Their effects on erythrocyte fragility in four species with attachments and cover sheet dated 06/12/89. EPA/OTS Dot #86-890000727.
- *IRIS. 1995. Integrated risk information system (IRIS): Risk estimate for ethylene glycol monobutyl ether. Online (Verification Date 3/8/95). Cincinnati, OH: Environmental Criteria and Assessment Office, Offfice of Health and Environmental Assessment, U.S. Environmental Protection Agency.
- *IRPTC. 1985. Treatment and disposal methods for waste chemicals. International Register of potentially toxic chemicals" IRPTC Data Profile Series No. 5. United Nations Environment Programme, Geneva, Switzerland.
- *Jackh R, Gelbke H-P, Helmstadter G. 1985. %az vitro cytotoxicity of glycol ethers and oxidation products in CHO Cells. Toxicology Lett 26(1):73-77.
- *Jacobs GA, Castellazzi A, Dierickx PJ. 1989. Evaluation of a non-invasive human and an *in vitro* cytotoxicity method as alternatives to the skin irritation test on rabbits. Contact Derm 21(4):239-244.
- Jay AWL, Rowlands S. 1975. The stages of osmotic haemolysis. J Physiol25:817-832.
- *Jepson GW, Hoover DK, Black RK, et al. 1994. A partition coefficient determination method for nonvolatile chemicals in biological tissues. Toxicol Appl Pharmacol22:519-524.
- *Johanson G. 1986. Physiologically based pharmacokinetic modeling of inhaled 2-butoxyethanol in man. Toxicol Lett 34(1):23-3 1.
- *Johanson G. 1988. Aspects of biological monitoring of exposure to glycol ethers. Toxicol Lett 43(1-3):5-21.
- *Johanson G. 1989. Analysis of ethylene glycol ether metabolites in urine by extractive alkylation and electron-capture gas chromatography. Arch Toxicol 63: 107-1 11.
- *Johanson G. 1991a. Modelling of respiratory exchange of polar solvents. Ann Occup Hyg 35(3):323-340.
- Johanson G. 1991b. Gas chromatographic determination of butoxyacetic acid in human blood after exposure to 2-butoxyethanol. Arch Toxicol 65<433-435.
- *Johanson G. 1994. Inhalation toxicokinetics of butoxyethanol and its metabolite butoxyacetic acid in the male Sprague-Dawley rat. Arch Toxicol 68:588-594.

- *Johanson G, Boman A. 1991. Percutaneous absorption of 2-butoxyethanol vapour in human subjects. Br J Ind Med 48(11):788-792.
- *Johanson G, Dynesius B. 1988. Liquid-air partition coefficients of six commonly used glycol ethers. Br J Ind Med 45(8):561-564.
- *Johanson G, Fernstrom P. 1986. Percutaneous uptake rate of 2-butoxyethanol in the guinea pig. Stand J Work Environ Health 12(5):499-503.
- *Johanson G, Fernstrom P. 1988. Influence of water on the percutaneous absorption of 2-butoxyethanol in guinea pigs. Stand J Work Environ Health 14(2):95-100.
- *Johanson G, Johnsson S. 1991. Gas chromatographic determination of butoxyacetic acid in human blood after exposure to 2-butoxyethanol. Arch Toxicol 65(5):433-435.
- *Johanson G, Naslund PH. 1988. Spreadsheet programming--a new approach in physiologically based modeling of solvent toxicokinetics. Toxicol Lett 41(2): 115-127.
- *Johanson G, Boman A, Dynesius B. 1988. Percutaneous absorption of 2-butoxyethanol in man. Stand J Work Environ Health 14(2):101-109.
- *Johanson G, Kronborg H, Naslund PH, et al. 1986a. Toxicokinetics of inhaled 2-butoxyyethanol (ethylene glycol monobutyl ether) in man. Stand J Work Environ Health 12:594-602.
- *Johanson G, Michel I, Norback D, et al. 1989. Biological monitoring of exposure to ethylene glycol ethers. Arch Toxicol (Suppl 13): 108-l 11.
- *Johanson G, Wallen M, Byfalt Nordqvist M. 1986b. Elimination kinetics of 2-butoxyethanol in the perfused rat liver--dose dependence and effect of ethanol. Toxicol Appl Pharmacol83(2):315-320.
- *Johnson EM, Gabel BEG, Larson J. 1984. Developmental toxicity and structure-activity correlates of glycols and glycol ethers. Symposium on toxic effects of glycol ethers, Cincinnati, OH, 19-21. Environ Health Perspect 57:135-140.
- *Jones CT, Hunt RD. 1983. Hemoglobinemia and hemoglobinuria. In: Veterinary Pathology, 5th ed., Philadelphia, PA: Lea and Feiger, 1337, 1493-1494.
- *Jonsson AK, Steen G. 1978. n-Butoxyacetic acid, a urinary metabolite from inhaled n-butoxyethanol (butylcellosolve). Acta Pharmacol Toxicol 42(5):354-356.
- *Jungclaus GA, Games LM, Hites RA. 1976. Identification of trace organic compounds in tire manufacturing plant waste waters. Anal Chem 48(13): 1894-1896.
- *Kaiser EA. 1990. Health hazard evaluation report. Graphic Creations, Inc., Warren RI. HETA 88-346-2030.
- *Kane LE, Dombroske R, Alarie Y. 1980. Evaluation of sensory irritation from some common industrial solvents. J Am Ind Hyg Assoc 41(6):451-454.

- Kaphalia BS, Ghanayem BI, Ansari GAS. 1996. Nonoxidative metabolism of 2-butoxyethanol via fatty acid conjugation in Fischer 344 rats. J Toxicol Environ Health 49:463-479.
- *Kelly JE. 1993. Health hazard evaluation report no. HETA-92-314-2308. Ohio University, Athens, OH. Cincinnati, OH: Hazard Evaluations and Technical Assistance Branch, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services.
- *Kennah HE II, Hignet S, Laux PE, et al. 1989a. An objective procedure for quantitating eye irritation based upon changes of corneal thickness. Fund Appl Toxicol 12(2):258-268.
- *Kennnah HE II, Albulescu D, Hignet S. 1989b. A critical evaluation of predicting ocular irritancy potential from an l'n vitro cytotoxicity assay. Fund Appl Toxicol 12(2):281-290.
- *Kennedy GL Jr., Graepal GJ. 199 1. Acute toxicity in the rat following either oral or inhalation exposure. Toxicol Lett 561317-326.
- *Klimisch HJ, Pauluhn J, Hollander HW. 1988. Inhalation hazard test. Interlaboratory trial with OECD method 403. Arch Toxicol 61(4):318-320.
- *Krasavage WJ. 1983. Subchronic oral toxicity of ethylene glycol monobutyl ether in male rats, with cover letter. EPA/OTS Dot #88-8300509.
- *Krasavage WJ. 1986. Subchronic oral toxicity of ethylene glycol monobutyl ether in male rats. Fundam Appl Toxicol 6(2):349-355.
- *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: Yang RSA, ed. Toxicology of chemical mixtures, New York, NY. Academic Press.
- *Kullman GJ. 1988. Health hazard evaluation report No. MHETA-87-273-1866, Dalb, Inc., Ranson, WV. Mining Hazard Evaluation and Technical Assistance Program, Division of Respiratory Disease Studies.
- *Kurantsin-Mills J, Hodge KL, Entsuah R, et al. 1992. Ethylene glycol monobutyl ether alters the flow properties of red blood cells in the rat. Fed Am Sot Exp Biol J 6(5):A1912.
- *Kvelland I. 1988. The mutagenic effect of five oil dispersants and of ethylene glycol monobutyl-ether in bacteriophage t4d. Hereditas 109(1): 149-150.
- *Leaf DA. 1985. Glycol ethers: an overview. Washington D.C: Office of Pesticides andToxic Substances, U.S. Environmental Protection Agency. (as cited in NIOSH 1990)
- Lee SA. 1987. Health hazard evaluation report no. HETA-85-195-1768, Dale Electronics, Incorporated, Norfolk, Nebraska. Hazard Evaluations and Technical Assistance Branch, NIOSH, U.S. Department of Health and Human Services.

- *Lee SA. 1988. Health hazard evaluation report no. HETA-87-309-1906, Louisiana-Pacific Corporation, Cincinnati, OH. Hazard Evaluations and Technical Assistance Branch, NIOSH, U.S. Department of Health and Human Services.
- *Lehmann E, Gmehling J, Weidlich U. 1986. Survey on organic solvents in various products and methods for estimating workplace exposures. In: Riihimaki V, Ulfvarsn U, eds. Safety and health aspects of organic solvents. New York, NY: Alan R. Liss Inc., 31-411.
- *Leung H. 1993. Physiologically-based pharmacokinetic modeling. General and applied toxicology. Vol. I. Ballantine B, Marro T, Turner T, eds. New York, NY: Stockton Press, 153-164.
- *Lewis FA, Thoburn T. 198 1. Health hazard evaluation report. Graphic Color Plate, Inc. Stamford, CT. HETA 79-020-839.
- *Lewis RJ. 1993. Hawley's condensed chemical dictionary. New York. NY: Van Nostrand Reinhold Company. 489.
- *Litovitz TL, Bailey KM, Schmitz BF. 1991. 1990 Annual report of the American Association of poison control centers national data collection system. Am J Emerg Med 9(5):461-509.
- *Loch-Caruso R, Trosko JE, Corcos IA. 1984. Interruption of cell-cell communication in Chinese hamster V79 cells by various alkyl glycol ethers: implications for teratogenicity. Environ Health Perspect 57:119-123.
- *Lucas SV. 1984. GC/MS (gas chromatography/mass spectrophotometry) Analysis of organics in drinking water concentrates and advanced waste treatment concentrates, Vol. 2: Computer-printed tabulations of compound identification results for large-volume concentrations. Battelle Laboratories, Columbus, OH for U.S. Environmental Protection Agency, Office of Research and Development, Health Effects Research Laboratories, RTP, NC. Report No. EPA -600/l-84-0208. 397.
- *Lyman WJ, ed. 1990. Atmospheric residence time. In: Handbook of chemical property estimation methods. Environmental behavior of organic compounds. Washington, DC: American Chemical Society. Chapter 10.
- *Lyman WJ, Reehl WF, Rosenblatt DH. 1982. Handbook of chemical property estimation methods: Environmental behavior of organic compounds. New York9 NY: McGraw-Hill Book Company.
- *Marsden C, Mann S, eds. 1963. Solvents guide. New York, NY: Interscience Publishers, 111-112.
- *Marshall TC. 1982. Dose-dependent disposition of ethylene glycol in the rat after intravenous administration. J Toxicol Environ Health 1&397-409.
- *Mayahara T, Kamimura T, Tanaka M, et al. 1982. Modification of calcium fluxes by dimethyl sulfoxide and 2-butoxyethanol in sarcoplasmic reticulum vesicles: A possible mechanism for skeletal muscle relaxation induced by dimethyl sulfoxide. PhysioI Bohemoslov 31(4):297-303.
- *McDougal JN, Jepson Gw, Clewell IIJ III, et al. 1990. Dermal absorption of organic chemical vapors in rats and humans. Fundam Appl Toxicol 14:299-308.

- *McGrath JP. 1993. Assessment of hemolytic and hemorrhagic anemias in preclinical safety assessment studies. Toxicologic Pathology 21(2):158-163.
- *McGregor DB. 1984. Genotoxicity of glycol ethers. Environ Health Perspect 57:97-103.
- *Medinsky MA, Kimbell JS, Morris JB, et al. 1993. Advances in biologically based models for respiratory tract uptake of inhaled volatiles. Fundam Appl Toxicol 20(3):265-272.
- *Medinsky MA, Singh G, Bechtold WE, et al. 1990. Disposition of three glycol ethers administered in drinking water to male F344/N rats. Toxicol Appl Pharmacol 102(3):443-455.
- *Merck. 1989. The Merck Index: an encyclopedia of chemicals, drugs, and biologicals. 1 lth ed. Rahway, NJ: Merck & Co., Inc. 1566.
- *Michael LC, Pelizzari ED, Norwood DL. 1991. Application of the master analytical scheme to the determination of volatile organics in wastewater influents and effluents. Environ Sci Technol 25(1):150-155.
- *Miller RR. 1987. Metabolism and disposition of glycol ethers. Drug Metab Rev 18(1): 1-22.
- *Minero C, Maurino V, Campanella L, et al. 1989. Photodegradation of 2-ethoxy- and 2-butoxyethanol in the presence of semiconductor particles or organic conducting polymer. Environ Technol Lett 10(3):301-310.
- *Morrissey RE, Lamb JC IV, Morris RW. 1989. Results and evaluations of 48 continuous breeding reproduction studies conducted in mice. Fund Appl Toxicol 13:747-777.
- *Morrissey RE, Lamb JC IV, Schwetz BA, et al. 1988. Association of sperm, vaginal cytology and reproductive organ weight data with results of continuous breeding reproduction studies in Swiss mice. Fundam Appl Toxicol 11(2):359-371.
- Moslen MT, Kaphalia L, Balasubramanian H, et al. 1995. Species differences in testicular and hepatic biotransformation of 2-methoxyethanol. Toxicology 96:217-224.
- *Mueller FX, Miller JA. 1979. Determination of airborne organic vapor mixtures using charcoal tubes. Am Ind Hyg Assoc J 40(5):380-386.
- *Nachreiner DJ. 1994. Ethylene glycol butyl ether: Acute vapor inhalation toxicity study in guinea pigs. Bushy Run Research Center, Union Carbide Corporation. Sponsored by Chemical Manufacturers Association, Washington, D.C., 94N1392.
- *Nagano K, Nakayama E, Kayno M, et al. 1979. Mouse testicular atrophy induced by ethyTene glycol monoalkyl ethers. Jap J Ind Health 21:29-35.
- *Nagano K, Nakayama E, Oobayashi H, et al. 1984. Experimental studies on toxicity of ethylene glycol alkyl ethers in Japan. Environ Health Perspect 57:75-84.
- *NAS/NRC. 1989. Biologic markers in reproductive toxicology. National Academy of Sciences/National Research Council. Washington, DC: National Academy Press, 15-35.

- *NATICH. 1992. National Air Toxics Inventory Clearinghouse Data Base Report of Federal, State and Local Air Toxics Activities. EPA 4-104,4-1 1 l-1 12.
- *Nelson BK, Setzer JV, Brightwell WS, et al. 1984. Comparative inhalation teratogenicity of four glycol ether solvents and an amino derivative in rats. Environ Health Perspect 57:261-271.
- *Newman M, Klein M. 1990. Health hazard evaluation report No. HETA-88-068-2077. Schmidt Cabinet Company, New Salisbury, IN. Cincinnati, OH: Hazard Evaluations and Technical Assistance Branch, National Institute for Occupational Safety and Health, US. Department of Health and Human Services.
- *Nguyen D-K, Bruchet A, Arpino P. 1994. High resolution capillary GC-MS analysis of low molecular weight organic compounds in municipal wastewater. J High Resolut Chromatogr 173:153-159.
- NIOSH. 1989a. NIOSH recommendations for safety and health. Compendium of policy documents and statements. Cincinnati, OH: U. S. Department of Health and Human Services, Centers for Disease Control, National Institute for Occupational Safety and Health. 46-47, 80-83.
- *NIOSH. 1989b. National Occupational Exposure Survey. Cinicnnati, OH: U. S. Department of Health and Human Services, Centers for Disease Control, National Institute for Occupational Safety and Health. March 29, 1989.
- *NIOSH. 1990. Criteria for a recommended standard: Occupational exposure to ethylene glycol monobutyl ether and ethylene glycol monobutyl ether acetate. Cincinnati, OH: National Institute for Occupational Safety and Health, Public Health Service, U.S. Department of Health, Education and Welfare. NTIS No. PB91-173369.
- *NIOSH. 1992. NIOSH recommendations for occupational safety and health. Compendium of Policy Documents and statements. Cincinnati, OH: National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services. 82-83.
- *NIOSH. 1994a. Method 1403, issue 2. NIOSH manual of analytical methods, 4th edition. Cincinnati, OH: National Institute for Occupational Safety and Health, Public Health Service, U.S. Department of Health, Education and Welfare.
- *NIOSH. 1994b. NIOSH pocket guide to chemical hazards. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institutes for Occupational Safety and Health. DHHS(NIOSH) Publication No.90-117.
- *NTDB . Monobutyl ethers of mono or di-ethylene glycols . National Trade Data Bank: The Export Connection.
- *NTP. 1989. Teratologic evaluation of ethylene glycol monobutyl ether (CAS no. 11 l-76-2) administered to Fischer-344 Rats on either gestational days 9 through 11 or days 11 through 13. Govt Reports Announcements & Index (GRA&I).
- *NTP. 1993. Ethylene glycol ethers, 2-ethoxyethanol, 2-butoxyethanol administered in drinking water to F344/N rats and B6C3Fl mice. NTP toxicity report series no. 26. National Toxicology Program, National Institutes of Health, Public Health Services, U.S. Department of Health and Human Services. NIH publication 93-3349.

- *OECD. 1997. SIDS Initial assessment report for 6th SAIM: 2-Butoxyethanol. Organization for Economic Cooperation and Development, Screening Information Data Set prepared for the SIDS Initial Assessment Meeting.
- *Olin. 1976. Report on acute dermal toxicity in rabbits. EPA/OTS Dot #86-890000171.
- *OSHA. 1974. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.100.
- *OSHA. 1990. 2-Butoxyethanol (butyl cellosolve), 2-butoxyethyl acetate (butyl cellosolve acetate), method 83. Salt Lake City, Utah: Organic methods evaluation branch. OSHA analytical laboratory, Occupational Safety and Health Administration.
- OSHA. 1997. Limits for air contaminants. U.S. Department of Labor. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 19 10.1000.
- OTA. 1990. Neurotoxicology: Identifying and controlling poisons of the nervous system. Office of Technology Assessment, Washington, DC. OTA-BA-438.
- *Posner JC, Okenfuss JR. 198 1. Desorption of organic analytes from activated carbon I: Factors affecting the process. II: Dealing with the problems. Am Ind Hyg Assoc J 42(9):643-652.
- *Price KS, Waggy GT, Conway RA. 1974. Brine shrimp bioassay and seawater BOD of petrochemicals. J Water Control Fed 46(1):63-77.
- *Rambourg-Schepens MO, Buffet M, Bertault R, et al. 1988. Severe ethylene glycol butyl ether poisoning. Kinetics and metabolic pattern. Hum Toxicsl7(2):187-189.
- *Ramsey JC, Andersen ME. 1984. A physiologically based description of the inhalation pharmacokinetics of styrene monomer in rats and humans. Toxicol Appl Pharmacol73:159-175.
- *Rawlings SJ, Shuker DEG, Webb M, et al. 1985. The teratogenic potential of alkoxy acids in post-implantation rat embryo culture: Structure-activity relationships. Toxicol Let 28:49-58.
- *Raymond LW, Williford LS, Burke WA. 1994. Acute exposure to 2-butoxyethanol immediate and late effects. Clinical Res 42(2):341A.
- *Rempel D, Jones J, Atterbury M, et al. 1991. Respiratory effects of exposure of shipyard workers to epoxy paints. Br J Ind Med 48(11):783-787.
- *Rettenmeier AW, Hennigs R, Wodarz R. 1993. Determination of butoxyacetic acid and N-butoxyacetylglutamine in urine of lacquerers exposed to 2-butoxyethanol. Int Arch Occtip Environ Health 65(1):S151-S153.
- *Riddick JA, Bunger WB, ed. 1970. Organic solvents. New York, NY: Wiley-Interscience, 471, 862-863.
- *Rohm and Haas. 1983. Acute skin and eye irritation toxicity reports (final report) with cover sheets and letter dated 08/10/89 (sanitized). EPA/OTS Dot #86-890001526s.

- *Romer KG, Balge F, Freundt KJ. 1985. Ethanol-induced accumulation of ethylene glycol monoalkyl ethers in rats. Drug Chem Toxicol 8(4):255-264.
- *Rosenstock L, Cullen MR. 1994. Behavioral* genetic, and lifestyle factors, In: Textbook of clinical occupational and environmental medicne. Philadelphia, PA: W.B. Saunders Company. 105, 331, 334-335, 406-407.
- *Rowe VK, Wolf MA. 1982. Derivatives of gylcols. In: Patty's industrial hygiene and toxicolgy. 3rd ed. New York, NY: John Wiley and Sons. 2C: 3909-3911,3931-3939.
- Ruchaud S, Boiron 0, Cicolella A, et al. 1992. Ethylene glycol ethers as hemopoietic toxins-& vitro studies of acute exposure. Leukemia 6(4):328-334.
- *Russel FGM, Wouterse AC, van Ginneken CAM 1987. Physiologically-based pharmacokinetic model for the renal clearance of phenolsulfonphthalein and the interaction with probenecid and salicyluric acid in the dog. J Pharmacol Biopharm 15:349-368.
- *Sabourin PJ, Medinsky MA, Birnbaum LS, et al. 1992a. Effect of exposure concentration on the disposition of inhaled butoxyethanol by F344 rats. Toxicol Appl Pharmacol 114(2):232-238.
- *Sabourin PJ, Medinsky MA, Thurmond F, et al. 1992b. Effect of dose on the disposition of methoxyethanol, ethoxyethanol, and butoxyethanol administered dermally to male F344/N rats [published erratum appears in Fundam Appl Toxicol 20(4):508-5101. Fundam Appl Toxicol 19(1):124-132.
- *Sabourin PJ, Medinsky MA, Thurmond F, et al 1993. Published erratum. Fund Appl Toxicol 20(4):508-510.
- *Sakai T, Araki T, Morita Y, et al. 1994. Gas chromatographic determination of butoxyacetic acid after hydrolysis of conjugated metabolites in urine from workers exposed to 2-butoxyethanol. Int Arch Occup Environ Health 66(4):249-254.
- *Salisbury S, Bennett D, Aw TC. 1987. Health hazard evaluation report. Tropicana products. Bradenton, FL, HETA 83-458-1800.
- *Sax NI, ed. 1984. 2-Butoxyethyl Acetate. In: Dangerous properties of industrial materials. Sixth Edition. New York, NY: Van Nostrand Reinhold Company, 558.
- *Schuler RL, Hardin BD, Niemeier RW, et al. 1984. Results of testing 15 glycol ethers in a short-term *in vivo* reproductive toxicity assay. Environ Health Perspect 57: 141-146.
- *Sexton K, Westberg H. 1980. Ambient hydrocarbon and ozone measurements downwind of a large automotive painting plant. Environmental Science and Technology 14:329-332.
- *Shah JJ, Heyerdahl EK. 1988. National ambient volatile organic compounds (VOCs) database update. Nero and Associates, Portland, OR, for U.S. Environmental Protection Agency, Office of Research and Development, Atmospheric Sciences Research Laboratories, RTP, NC. Report No. EPA 600/3-88/010.
- *Shah JJ, Singh HB. 1988. Distribution of volatile organic chemicals in outdoor and indoor air. Environmental Science and Technology 22(13):81-88.

- *Shepard KP. 1994a. Ethylene glycol monobutyl ether acute dermal toxicity study in the guinea pig. Eastman Kodak Company, Rochester, NY. Sponsored by Ethylene Glycol Ether Panel, Chemical Manufacturers Association, Washington, D.C., EGE-X0-GPIG-EASTMAN. HAEL no. 94-0300, KAN:902270. 1-25.
- *Shepard KP. 1994b. Ethylene glycol monobutyl ether acute oral toxicity study in the guinea pig. Eastman Kodak Company, Rochester, NY. Sponsored by Ethylene Glycol Ether Panel, Chemical Manufacturers Association, Washington, D.C., EGE-58.0-@PIG-EASTMAN. HAEL no. 94-0300, KAN:902270.
- *Shyr LJ, Sabourin PJ, Medinsky MA, et al. 1993. Physiologically based modeling of 2-butoxyethanol disposition in rats following different routes of exposure. Environ Res 63(2):202-218.
- *Sivarao DV, Mehendale HM. 1995. 2-Butoxyethanol autoprotection is due to resiliance of newly formed erythrocytes to hemolysis. Arch Toxicol 69:526-532.
- *Silverstein RM, Bassler GC. 1963. Spectrometric identification of organic compounds. New York, NY: John Wiley & Sons, Inc. 148-169. (as cited in Howard 1993).
- *Smallwood AW, DeBord KE, Lowry LK. 1984. Analyses of ethylene glycol monoalkyl ethers and their proposed metabolites in blood and urine. Environ Health Perspect 57:249-253.
- *Smialowicz RJ, Williams WC, Riddle MM. 1992. Comparative immunosuppression of various glycol ethers orally administered to Fischer 344 rats. Fundam Appl Toxicol 18(4):621-627.
- *Smyth HF, Seaton J, Fischer L. 1941. The single dose toxicity of some glycols and derivatives. J Indust Hyg Toxicol 23:259-268.
- *Sohnlein B, Letzel S, Weltle D, et al. 1993. Occupational chronic exposure to organic solvents. XIV. Examinations concerning the evaluation of a limit value for 2-ethoxyethanol and 2-ethoxethyl acetate and the genotoxic effects of these glycol ethers. Intl Arch Occup Environ Health 64(7):479-484.
- *SRC. 1994. Syracuse Research Corporation. Henry's Law Constant Program. Environmental Science Center. Syracuse, NY.
- *SRC. 1995. Syracuse Research Corporation. Atmospheric Oxidation Program. Environmental Science Center. Syracuse, NY.
- *SRI. 1997. Stanford Research Institute. Directory of chemical producers. United States of America. Menlo Park, CA: SRI International, 49 1-492.
- *Staples CA. 1997. Ethylene glycol mono-butyl ether (EGBE): An environmental risk assessment. Chemosphere (in press).
- *Stonebreaker RD, Smith AJ Jr. 1980. Containment and treatment of a mixed chemical discharge from the "Valley of the Drums" near Louisville, Kentucky. Contr Haz l-10.
- *Swami R, Laskowski DA, McCall PJ, et al. 1983. A rapid method for the estimation of the environmental parameters octanol/water partition coefficient, soil sorption constant, water to air ratio, and water solubility. Res Rev 85:17-28.

- *Thomas RG. 1990. Volatilization from water. In: Lyman WJ, Rheehl WF, Rosenblatt DH, eds. Handbook of chemical property estimation methods. Washington, DC: American Chemical Society, 7-4.
- *Tichenor BA, Mason MA. 1988. Organic emissions from consumer products and building materials to the indoor environment. J Air Pollut Control Assoc 38:264-268.
- TRI92. 1994. Toxic Chemical Release Inventory. National Library of Medicine, National Toxicology Information Program, Bethesda, MD.
- *Truhaut R, Dutertre-Catella H, Phu-lich N, et al. 1979. Comparative toxicological study of ethylglycol acetate and butylglycol acetate. Toxicol Appl Pharmacol 5 l(1): 117-128.
- *Tyl RW, Millicovsky G, Dodd DE, et al. 1984. Teratologic evaluation of ethylene glycol monobutyl ether in Fischer 344 rats and New Zealand white rabbits following inhalation exposure. Environ Health Perspect 57:47-68.
- *Tyler TR. 1982. Review of ethylene glycol monobutylether toxicity testing. Union Carbide corporation report. In: The toxicology of ethylene glycol monoalkyl ethers and its relevance to man. (ECETOC Technical Report No. 4), ECETOC, Brussels
- *Tyler TR. 1984. Acute and subchronic toxicity of ethylene glycol monobutyl ether. Environ Health Perspect 57:185-191.
- *Udden MM. 1996. Effects of butoxyacetic acid on buman red blood cells. Occup Hyg 2:283-290.
- *Udden MM. 1994. Hemolysis and deformability of erythrocytes exposed to butoxyacetic acid, a metabolite of 2-butoxyethanol: II. Resistance in red blood cells from humans with potential susceptibility. J Appl Toxicol 14(2):97-102.
- *Udden MM, Patton CS. 1994. Hemolysis and deformability of erythrocytes exposed to butoxyacetic acid, a metabolite of 2-butoxyethanol: Sensitivity in rats and resistance in normal humans. J Appl Toxicol 14(2):91-96.
- *Union Carbide. 1980a. Butyl cellulosolve 9-day repeated dermal application to rabbits with attachments, cover sheets and letter dated 06/06/89. Union Carbide Corp., Carnegie Mellon University, Bushy Run Research Center, Pittsburgh, PA. EPA/OTS No. 86-890000947.
- *Union Carbide. 1980b. Butyl cellulosolve range finding toxicity studies with attachments, cover sheets and letter dated 06/06/89. Union Carbide Corp., Carnegie Mellon University, Bushy Run Research Center, Pittsburgh, PA. EPA/OTS No. 86-890000938.
- *USITC. 1992. Synthetic organic chemicals, United States production and sales, 1992. United States International Trade Commission. USITC Publication 2720. Table 3-48.
- *Verschueren K, ed. 1983. Butylcellosolve. In: Handbook of environmental data on organic chemicals, Second Edition. New York, NY: Van Nostrand Reinhold Company. 314-315.
- *Veulemans H, Groesceneken D, Maschelein R, et al. 1987a. Survey of ethylene glycol ether exposures in Belgian industries and workshops. Am Ind Hyg Assoc J 48(8):671-676.

- *Veulemans H, Groesceneken D, Maschelein R, et al. 1987. Field study of the urinary excretion of ethoxyacetic acid during repeated daily exposure to the ethyl ether of ethylene glycol and the ethyl ether of ethylene glycol acetate. Stand J Work Environ Health 131239-242.
- *Vincent R, Rieger B, Subra I, et al. 1996. Exposure assessment to glycol ethers by atmosphere and biological monitoring. Occup Hyg 2:79-90.
- *Vincent RA, Cicolella IS, Subra B, et al. 1993. Occupational Exposure to 2-butoxyethanol for workers using window cleaning agents. Appl Occup Environ Hyg 8(6):580-586.
- *Waggy GT, Conway RA, Hansen JL, et al. 1994. Comparison of 20-d BOD and OECD closed-bottle biodegration test. Environ Toxicol Chem 13(8):1277-1280.
- *Wahlberg JE, Boman A. 1979. Comparative percutaneous toxicity of ten industrial solvents in the guinea pig. Stand J Work Environ Health 5(4):345-35 1.
- *Wearne SJ, de M. Gem MG, Harrison N. 1996. Contaminants of food: Prioritisation scheme to identify manufactured organic chemicals as potential contaminants of food. Environ Sci & Pollut Res 3(2):83-88.
- *Weast RC, Astle MJ, eds. 1985. CRC handbook of data on organic compounds, vol. l.Boca Raton, FL: CRC Press, Inc., 624.
- *Weast RC, ed. 1975. Handbook of chemistry and physics, 55th edition. Cleveland, OH: CRC Press, Inc., C-290.
- *Weast RC, ed. 1989. The CRC handbook of chemistry and physics, 70th edition. Boca Raton, FL: CRC Press, Inc. C-266.
- *Weber RC, Parker PA, Bowser M. 1981. Vapor pressure distribution of selected organic chemicals. Industrial Environmental Research Laboratory, Industrial Pollution Control Division, U.S. Environmental Protection Agency, Cincinnati, OH. EPA report no. EPA-600/2-8 1-021.
- *Weil CS, Carpenter CD. 1963. Mellon Institute of Industrial Research Special Report: Results of three months of inclusion of butyl cellosolve in the diet of rats. Report 26-5, replaces 23-69.
- *Welch DI, Watts CD. 1990. Collection and identification of trace organic compounds in atmospheric deposition from a semi-rural site in the U.K. Int J Environ Anal Chem 38(2):185-198.
- *Werner HW, Mitchell JL, Miller JW. 1943a. The acute toxicity of vapors of several monoalkyl ethers of ethylene glycol. J Indust Hygiene Toxicol 25:157-163.
- *Werner HW, Mitchell JL, Miller JW. 1943b. Effects of repeated exposure of dogs to monoalkyl ethylene glycol ether vapors. J Indust Hygiene Toxicol 25:409-414.
- *WHO. 1984. Guidelines for drinking water quality, Volume 1. Recommendations. Geneva, Switzerland: World Health Organization.
- *Wier PJ, Lewis SC, Traul KA. 1987. A comparison of developmental toxicity evident at term to postnatal growth and survival using ethylene glycol monoethyl ether, ethylene glycol monobutyl ether and ethanol. Teratogen Carcinog Mutagen 7(1):55-64.

- *Yamano Y, Tokutake T, Kagawa J, et al. 1991. Subjective symptoms and blood findings in painters exposed to organic solvents. Jpn J Ind Health 33(6):527-532.
- *Yasuhara A, Shiraisi H, Tsuji M, et al. 1981. Analysis of organic substances in highly polluted river water by mass spectrometry. Environmental Science and Technology 15(5):570-573.
- *Yasuhara A, Yamanaka Y, Ogawa T. 1986. Volatile compounds in machine cutting-fluid emulsion. Agri Biol Chem 50(7):1765-1770.
- *Zaebst DD. 1984. In-depth industrial hygiene survey report of Henredon Furniture Industries, Inc., Morganton, North Carolina. National Institute for Occupational Safety and Health Division of Surveillance, Hazard Evaluations and Field Studies Industry Wide Studies Branch. Cincinnati, OH.
- *Zahn R, Wellens H. 1980. Examination of biological degradability through the batch method-further experience and new possibilities of usage. Z Wasser Abwasser Forsch 13: l-7. (German)
- *Zissu D. 1995. Experimental study of cutaneous tolerance to glycol ethers. Contact Dermatitis 32:74-77.

Zitko V. 1991. Prediction of biodegradability of organic chemicals by and artificial neural network. Chemosphere 23(3):305-312.