

9. REFERENCES

- Aarstad K, Dale O, Aakervik O, et al. 1993. A rapid gas chromatographic method for determination of ethylene glycol in serum and urine. *J Anal Toxicol* 17(4):218-221.
- Abbondandolo A, Bonatti S, Corsi C, et al. 1980. The use of organic solvent in mutagenicity testing. *Mutat Res* 79(2):141-150.
- Aboul-Enein HY, Islam MR. 1989. High performance liquid chromatography determination of ethylene glycol in stamp pad ink. *Toxicol Environ Chem* 24(3):181-184.
- ACGIH. 2006. Ethylene glycol. Threshold limit values for chemical substances and physical agents and biological exposure indices. Cincinnati, OH: American Conference of Governmental Industrial Hygienists.
- Adams M, Collins M. 1988. Sensitive portable gas chromatograph with data retrieval and communications capability for remote surveillance of toxic gases and vapours in plant. *Anal Proc* 25(6):190-191.
- *Adams WH, Toal RL, Breider MA. 1991. Ultrasonographic findings in dogs and cats with oxalate nephrosis attributed to ethylene glycol intoxication: 15 cases (1984-1988). *J Am Vet Med Assoc* 199(4):492-496.
- Adinolfi M. 1985. The development of the human blood-CSF-brain barrier. *Dev Med Child Neurol* 27(4):532-537.
- Adlercreutz H. 1995. Phytoestrogens: Epidemiology and a possible role in cancer protection. *Environ Health Perspect Suppl* 103(7):103-112.
- Agency for Toxic Substances and Disease Registry. 1989. Decision guide for identifying substance-specific data needs related to toxicological profiles; Notice. Agency for Toxic Substances and Disease Registry, Division of Toxicology. *Fed Regist* 54(174):37618-37634.
- Agency for Toxic Substances and Disease Registry. 1990. Biomarkers of organ damage or dysfunction for the renal, hepatobiliary, and immune systems. Subcommittee on Biomarkers of Organ Damage and Dysfunction. Atlanta, GA: Agency for Toxic Substances and Disease Registry.
- AIChE. 1995. Ethylene glycol. C₂H₆O₂. Physical and thermodynamic properties of pure chemicals. American Institute of Chemical Engineers, Design Institute for Physical Property Data. Philadelphia, PA: Taylor and Francis.
- Altman PL, Dittmer DS. 1974. Biological handbooks: Biology data book. Vol. III. 2nd ed. Bethesda, MD: Federation of American Societies for Experimental Biology, 1987-2008, 2041.
- Amathieu R, Merouani M, Borron SW, et al. 2006. Prehospital diagnosis of massive ethylene glycol poisoning and use of an early antidote. *Resuscitation* 70:285-286.

* Not cited in text

9. REFERENCES

- Amoozegar A, Warrick AW, Fuller WH. 1986. Movements of selected organic liquids into dry soils. *Haz Waste Haz Mater* 3:29-41.
- Andersen ME, Krishnan K. 1994. Relating in vitro to in vivo exposures with physiologically based tissue dosimetry and tissue response models. In: Salem H, ed. *Animal test alternatives: Refinement, reduction, replacement*. New York, NY: Marcel Dekker, Inc., 9-25.
- Andersen ME, Clewell HJ III, Gargas ML, et al. 1987. Physiologically based pharmacokinetics and the risk assessment process for methylene chloride. *Toxicol Appl Pharmacol* 87(2):185-205.
- Andersson K, Levin J-O, Lindahl R, et al. 1982. Sampling of ethylene glycol and ethylene glycol derivatives in work-room air using Amberlite XAD resins. *Chemosphere* 11(11):1115-1119.
- Andersson K, Levin J-O, Lindahl R, et al. 1984. Influence of air humidity on sampling efficiency of some solid adsorbents used for sampling organics from work-room air. *Chemosphere* 13(3):437-444.
- AOAC. 1990. Method 971.02. Glycerol, propylene glycol, and triethylene glycol in cased cigarette cut filler and ground tobacco. In: Helrich K, ed. *Official methods of analysis-AOAC*. Vol 1. 15th ed. Arlington, VA: Association of Official Analytical Chemists, 65.
- Atkinson R. 1989. Kinetics and mechanisms of the gas-phase reactions of the hydroxyl radical with organic compounds. New York, NY: American Institute of Physics, American Chemical Society, 140.
- Ball NA. 1984. Determination of ethylene oxide, ethylene chlorohydrin and ethylene glycol in aqueous solutions and ethylene oxide residues in associated plastics. *J Pharm Sci* 73(9):1305-1307.
- Ballarin C. 1980. [Studies on the identification of medicinal glycals by thin-layer chromatography.] *Pharm Prax* 35:260-264. (German)
- Barceloux DB, Krenzelok EP, Olson K, et al. 1999. American Academy of Clinical Toxicology practice guidelines on the treatment of ethylene glycol poisoning. *Clin Toxicol* 37(5):537-560.
- Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessments. *Regul Toxicol Pharmacol* 8:471-486.
- Battersby NS, Wilson V. 1989. Survey of the anaerobic biodegradation potential of organic chemicals in digesting sludge. *Appl Environ Microbiol* 55(2):433-439.
- Baud FJ, Bismuth C, Garnier R, et al. 1987. 4-Methylpyrazole may be an alternative to ethanol therapy for ethylene glycol intoxication in man. *J Toxicol Clin Toxicol* 24(6):463-483.
- Baud FJ, Galliot M, Astier A, et al. 1988. Treatment of ethylene glycol poisoning with intravenous 4-methylpyrazole. *N Engl J Med* 319(2):97-100.
- Baum C, Langman C, Oker E, et al. 1999. Fomepizole treatment of ethylene glycol poisoning in an infant. *J Toxicol Clin Toxicol* 37(5):656.
- Baum CR, Langman CB, Oker EE, et al. 2000. Fomepizole treatment of ethylene glycol poisoning in an infant. *Pediatrics* 106:1489-1491.

9. REFERENCES

- Beckett SD, Shields RP. 1971. Treatment of acute ethylene glycol (antifreeze) toxicosis in the dog. *J Am Vet Med Assoc* 158(4):472-476.
- Berger GS. 1994. Epidemiology of endometriosis. In: Berger GS, ed. *Endometriosis: Advanced management and surgical techniques*. New York, NY: Springer-Verlag, 3-7.
- Berger JR, Ayyar DR. 1981. Neurological complications of ethylene glycol intoxication. *Arch Neurol* 38(11):724-726.
- Bey TA, Walter FG, Gibly RL, et al. 2002. Survival after ethylene glycol poisoning in a patient with an arterial pH of 6.58. *Vet Hum Toxicol* 44(3):167-168.
- Bieszkiewicz E, Van Hoi D, Matusiak K. 1979. Effects of methyl alcohol and ethylene glycol on the work of activated sludge. *Acta Microbiol Pol* 28(3):255-260.
- Blakeley KR, Rinner SE, Knochel JP. 1993. Survival of ethylene glycol poisoning with profound acidemia. *New Engl J Med* 328(7):515-516.
- Blandford DE, Desjardins PR. 1994. A rapid method for measurement of ethylene glycol. *Clin Biochem* 27(1):25-30.
- Blomstrom DC, Beyer EM. 1980. Plants metabolise ethylene to ethylene glycol. *Nature* 283(5742):66-68.
- Blood FR. 1965. Chronic toxicity of ethylene glycol in the rat. *Food Cosmet Toxicol* 3:229-234.
- *Blood FR, Elliot GA, Wright MS. 1962. Chronic toxicity of ethylene glycol in the monkey. *Toxicol Appl Pharmacol* 4:489-491.
- Boethling RS, Mackay D, eds., 2000. *Handbook of property estimation methods for chemicals: Environmental and health sciences*. Boca Raton, FL: CRC Press LLC., 355-356.
- Bogusz M, Bialka J, Gierz J, et al. 1986. Rapid determination of ethylene glycol in biological material. *Z Rechtsmed* 96(1):23-26.
- Bolon B, Bucci TJ, Warbritton AR, et al. 1997. Differential follicle counts as a screen for chemically induced ovarian toxicity in mice: Results from continuous breeding bioassays. *Fundam Appl Toxicol* 39(1):1-10.
- Bond GG, Shellenberger RJ, Flores GH, et al. 1985. A case-control study of renal cancer mortality at a Texas chemical plant. *Am J Ind Med* 7(2):123-139.
- Booth ED, Dofferhoff O, Boogaard PJ, et al. 2004. Comparison of the metabolism of ethylene glycol and glycolic acid in vitro by precision-cut tissue slices from female rat, rabbit and human liver. *Xenobiotica* 34:31-48.
- Boyer EW, Mejia M, Woolf A, et al. 2001. Severe ethylene glycol ingestion treated without hemodialysis. *Pediatrics* 107(1):172-174.
- Brega A, Quadri A, Villa P, et al. 1992. Improved HPLC determination of plasma and urine oxalate in the clinical diagnostic laboratory. *J Liq Chromatogr* 15(3):501-511.

9. REFERENCES

- Bridie A, Wolff CJM, Winter M. 1979. BOD and COD of some petrochemicals. *Water Res* 13:627-630.
- Brown ES, Hauser CF, Ream BC, et al. 1980. Glycols. In: Kirk-Othmer encyclopedia of chemical technology. Vol. 11. 3rd ed. New York, NY: John Wiley & Sons, Inc., 933-956.
- Browning E. 1965. Toxicity and metabolism of industrial solvents. New York, NY: American Elsevier, 594-600, 642-644.
- Buell JF, Sterling R, Mandava S, et al. 1998. Ethylene glycol intoxication presenting as a metabolic acidosis associated with a motor vehicle crash: Case report. *J Trauma* 45(4):811-813.
- Caparros-Lefebvre D, Policard J, Sengler C, et al. 2005. Bipallidal haemorrhage after ethylene glycol intoxication. *Neuroradiology* 47:105-107.
- Caravati EM, Heileson HL, Jones M. 2004. Treatment of severe pediatric ethylene glycol intoxication without hemodialysis. *J Toxicol Clin Toxicol* 42(3):255-259.
- Carney EW, Freshour NL, Dittenber DA, et al. 1999. Ethylene glycol development toxicity: Unraveling the roles of glycolic acid and metabolic acidosis. *Toxicol Sci* 50(1):117-126.
- Carney EW, Liberacki AB, Bartels MJ, et al. 1996. Identification of proximate toxicant for ethylene glycol developmental toxicity using whole embryo culture. *Teratology* 53(1):38-46.
- Carney EW, Liberacki AB, Tornesi B, et al. 2001. Dose-rate is a critical determinant of ethylene glycol developmental toxicity in rats. *Teratology* 63(6):264.
- Carney EW, Liberacki AB, Tornesi B, et al. 2002. Ethylene glycol kinetics in pregnant rats: Differences between slow and fast dose-rate exposures [Abstract]. *Toxicologist* 66(1-S):139.
- Carney EW, Tornesi B, Markham DA, et al. 2008. Species-specificity of ethylene glycol-induced development toxicity: toxicokinetic and whole embryo culture studies in the rabbit. *Birth Defects Res B Dev Reprod Toxicol* 83(6):573-581.
- Carstens J, Csanady GA, Faller TH, et al. 2003. Human inhalation exposure to ethylene glycol. *Arch Toxicol* 77(8):425-432.
- Caskey WH, Taber WA. 1981. Oxidation of ethylene glycol by a salt-requiring bacterium. *Appl Environ Microbiol* 42(1):180-183.
- Castle L, Cloke HR, Crews C, et al. 1988a. The migration of propylene glycol, mono-, di-, and triethylene glycols from regenerated cellulose film into food. *Z Lebensm Unters Forsch* 187(5):463-467.
- Castle L, Cloke HR, Startin JR, et al. 1988b. Gas chromatographic determination of monoethylene glycol and diethylene glycol in chocolate packaged in regenerated cellulose film. *J Assoc Off Anal Chem* 71(3):499-502.
- CDC. 1987. Epidemiologic notes and reports: Ethylene glycol intoxication due to contamination of water systems. Centers for Disease Control and Prevention. *MMWR* 36(36):611-614.
- CELDs. 1994. Computer-assisted Environmental Legislative Database. University of Illinois at Urbana.

9. REFERENCES

- Cheng JT, Beysolow TD, Kaul B, et al. 1987. Clearance of ethylene glycol by kidneys and hemodialysis. *J Toxicol Clin Toxicol* 25(1-2):95-108.
- Christian KL, Moorehead WP. 1985. Ethylene dichloride/ethylene glycol spill in a major water resource in British Columbia. *J Environ Health* 47:192-196.
- Chung PK, Tuso P. 1989. Cerebral computed tomography in a stage IV ethylene glycol intoxication. *Conn Med* 53(9):513-514.
- Clark CR, Marshall TC, Merickel BS, et al. 1979. Toxicological assessment of heat transfer fluids proposed for use in solar energy applications. *Toxicol Appl Pharmacol* 51:529-535.
- Clay KL, Murphy RC. 1977. On the metabolic acidosis of ethylene glycol intoxication. *Toxicol Appl Pharmacol* 39:39-49.
- Clewell HJ, Andersen ME. 1985. Risk assessment extrapolations and physiological modeling. *Toxicol Ind Health* 1(4):111-131.
- CMR. 1972. Chemical profile: Ethylene glycol. *Chem Market Rep* (September 25, 1972).
- CMR. 1981. Chemical profile: Ethylene glycol. *Chem Market Rep* (June 15, 1981).
- CMR. 1984. Chemical profile: Ethylene glycol. *Chem Market Rep* (February 13, 1984).
- CMR. 1987. Chemical profile: Ethylene glycol. *Chem Market Rep* (March 16, 1987).
- CMR. 1990. Chemical profile: Ethylene glycol. *Chem Market Rep* (January 22, 1990)
- CMR. 1993. Chemical profile: Ethylene glycol. *Chem Market Rep* (January 25, 1993).
- CMR. 1996. Chemical profile: Ethylene glycol. *Chem Market Rep* (March 11, 1996).
- CMR. 1998. Chemical profile: Ethylene glycol. *Chem Market Rep* (November 2, 1998).
- CMR. 2001. Chemical profile: Ethylene glycol. *Chem Market Rep* (September 3, 2001).
- CMR. 2004. Chemical profile: Ethylene glycol. *Chem Market Rep* (October 18, 2004).
- CMR. 2008. Chemical profile: Ethylene glycol. *Chem Market Rep* (July 28-August 3, 2008).
- Conway RA, Waggy GT, Spiegel MH, et al. 1983. Environmental fate and effects of ethylene oxide. *Environ Sci Technol* 17(2):107-112.
- Coon RA, Jones RA, Jenkins LJ, et al. 1970. Animal inhalation studies of ammonia, ethylene glycol, formaldehyde, dimethylamine, and ethanol. *Toxicol Appl Pharmacol* 16:646-655.
- Corley RA, McMartin KE. 2005. Incorporation of therapeutic interventions in physiologically based pharmacokinetic modeling of human clinical case reports of accidental or intentional overdosing with ethylene glycol. *Toxicol Sci* 85(1):491-501.

9. REFERENCES

- Corley RA, Soelberg JJ. 2005. Appendix B. Metabolism report. Concentrations of ethylene glycol, glycolic acid and oxalic acid in the blood, urine and kidneys of male Wistar Han rats following dietary administration of ethylene glycol for up to twelve months (Dow study ID 031079). In: Ethylene glycol: 12-month dietary toxicity study in Wistar Han rats. Arlington, VA: Ethylene Glycol Toxicology Research Task Group. American Chemistry Council. [unpublished study]
- Corley RA, Bartels MJ, Carney EW, et al. 2005. Development of a physiologically based pharmacokinetic model for ethylene glycol and its metabolite, glycolic acid, in rats and humans. *Toxicol Sci* 85(1):476-490.
- Corley RA, Weitz KK, Luders TM, et al. 2002. Pharmacokinetics of ethylene glycol in pregnant SD rats following bolus oral gavage or continuous subcutaneous infusion. Arlington, VA: American Chemistry Council. Battelle Project No. 29812. Amendment No. 4. [unpublished study]
- Corley RA, Wilson DM, Hard GC, et al. 2008. Dosimetry considerations in the enhanced sensitivity of male Wistar rats to chronic ethylene glycol-induced nephrotoxicity. *Toxicol Appl Pharmacol* 228:165-178.
- Corsi SR, Booth NL, Hall DW. 2001. Aircraft and runway deicers at General Mitchell International Airport, Milwaukee, Wisconsin, USA. 1. Biochemical oxygen demand and dissolved oxygen in receiving streams. *Environ Toxicol Chem* 20(7):1474-1482.
- CPSC. 2007. Hazardous substances and articles. Consumer Product Safety Commission. Code of Federal Regulations. 16 CFR 1500.14. <http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=200716>. May 10, 2007.
- Cruzan G, Corley RA, Hard GC, et al. 2004. Subchronic toxicity of ethylene glycol in Wistar and F-344 rats related to metabolism and clearance of metabolites. *Toxicol Sci* 81(2):502-511.
- Cunningham KM, Goldberg MC, Weiner ER. 1985. The aqueous photolysis of ethylene glycol adsorbed on goethite. *Photochem Photobiol* 41(4):409-416.
- Curtin L, Kraner J, Wine H, et al. 1992. Complete recovery after massive ethylene glycol ingestion. (Comment in Arch Intern Med 153(13):1614). *Arch Intern Med* 152(6):1311-1313.
- Danielson JW, Snell RP, Oxborrow GS. 1990. Detection and quantitation of ethylene oxide, 2-chloroethanol, and ethylene glycol with capillary gas chromatography. *J Chromatogr Sci* 28:97-101.
- Davis DP, Bramwell KJ, Hamilton RS, et al. 1997. Ethylene glycol poisoning: Case report of a record-high level and a review. *J Emerg Med* 15(5):653-667.
- *DePass LR, Frank FR, Weaver EV, et al. 1984. Ethylene glycol: Twenty-four month oncogenicity feeding study in mice. Bushy Run Research Center. Report 46-89.
- DePass LR, Garman RH, Woodside MD, et al. 1986a. Chronic toxicity and oncogenicity studies of ethylene glycol in rats and mice. *Fundam Appl Toxicol* 7(4):547-565.
- DePass LR, Woodside MD, Maronpot RR, et al. 1986b. Three-generation reproduction and dominant lethal mutagenesis studies of ethylene glycol in the rat. *Fundam Appl Toxicol* 7(4):566-572.

9. REFERENCES

De Rudder D, De Graeve E, Van Severen R, et al. 1986. Quantification of ethylene chlorohydrin and ethylene glycol as potential reaction products in gas-sterilized medical-grade plastics. *J Clin Hosp Pharm* 11(2):125-130.

*Dial SM, Thrall MA, Harmar DW. 1989. 4-methylpyrazole as treatment for naturally acquired ethylene glycol intoxication in dogs. *J Am Vet Med Assoc* 195(1):73-76.

Dial SM, Thrall MAH, Harmar DW. 1994. Efficacy of 4-methylpyrazole or treatment of ethylene glycol intoxication in dogs. *Am J Vet Res* 55(12):1762-1770.

Diamandis EP, Efstathiou CE, Hadjioannou TP. 1980. Automatic determination of ethylene glycol in anti-freeze solutions with a periodate-sensitive flow-through electrode. *Analyst* 105(1257):1203-1207.

DOE. 1993a. Destruction of representative Navy wastes using supercritical water oxidation. Washington, DC: U.S. Department of Energy. DE94003139.

DOE. 1993b. Incineration alternatives for combustible waste ultraviolet/hydrogen peroxide process. Final report to Rocky Flats Plant FY92 tasks under TTP SR 221207. Washington, DC: U.S. Department of Energy. UCRL-ID-112284. DE93018905.

Drajun J. 1991. Geochemistry and soil chemistry reactions occurring during in situ vitrification. *J Hazard Mater* 26:343-364.

Driver J, Tardiff RG, Sedik L, et al. 1993. In vitro percutaneous absorption of [¹⁴C] ethylene glycol. *J Expo Anal Environ Epidemiol* 3(3):277-284.

Dwyer DF, Tiedje JM. 1983. Degradation of ethylene glycol and polyethylene glycols by methanogenic consortia. *Appl Environ Microbiol* 46(1):185-190.

Ebisuno S, Morimoto S, Yoshida T, et al. 1987. Effect of dietary calcium, and magnesium, on experimental renal tubular deposition of calcium oxalate crystal induced by ethylene glycol administration and its prevention with phytin and citrate. *Urol Int* 42:330-337.

Eder AF, McGrath CM, Dowdy YG, et al. 1998. Ethylene glycol poisoning: Toxicological and analytical factors affecting laboratory diagnosis. *Clin Chem* 44:168-177.

Edinboro LE, Nanco CR, Soghoian DM, et al. 1993. Determination of ethylene glycol in serum utilizing direct injection on a wide-bore capillary column. *Ther Drug Monit* 15:220-223.

Egbert PA, Abraham K. 1999. Ethylene glycol intoxication: Pathophysiology, diagnosis, and emergency management. *ANNA J* 26(3):295-300.

Eisenreich SJ, Looney BB, Thornton JD. 1981. Airborne organic contaminants in the Great Lakes ecosystem. *Environ Sci Technol* 15(1):30-38.

Ellenhorn MJ, Schonwald S, Ordog G, et al, eds. 1997. Ellenhorn's medical toxicology. Diagnosis and treatment of human poisoning. Baltimore, MD: Williams & Wilkins, 1152-1156.

Environment Canada. 2000. Canadian Environmental Protection Act, 1999. Priority substances list state of the science report for ethylene glycol. Ottawa, Ontario: Environment Canada Health Canada. MIC10300696.

9. REFERENCES

- EPA. 1976. Frequency of organic compounds identified in water. Athens, GA: U.S. Environmental Protection Agency, Office of Research and Development, Environmental Research Laboratory.
- EPA. 1979. Investigation of selected potential environmental contaminants: Ethylene glycol, propylene glycols and butylene glycols. Washington, DC: U.S. Environmental Protection Agency, Office of Toxic Substances. EPA560117900. PB80109119.
- EPA. 1987. Health and environmental effects document for propylene glycol. Washington, DC: U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.
- EPA. 1990. Interim methods for development of inhalation reference concentrations. Washington, DC: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment, Office of Research and Development, Environmental Criteria and Assessment Office. EPA600890066A.
- EPA. 1993d. Evaluation of filtration and distillation methods for recycling automotive coolant. Columbus, OH: U.S. Environmental Protection Agency. EPA600J93435. PB94101912.
- EPA. 1993e. Determination of rates of reaction in the gas-phase in the troposphere. Theory and practice. 5. Rate of indirect photoreaction: Evaluation of the Atmospheric Oxidation computer program of Syracuse Research Corporation for estimating the second-order rate constant for the reaction of an organic chemical with hydroxyl radicals. Washington, DC: U.S. Environmental Protection Agency. EPA744R93001.
- EPA. 1995a. Method 8015B: Nonhalogenated organics using GC/FID. Test methods for evaluating solid waste: Vol. 1A: Laboratory manual physical/chemical methods. Washington, DC: U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. SW-846. PB95234480.
- EPA. 1995b. Method 8430: Analysis of bis(2-chloroethyl) ether and hydrolysis products by direct aqueous injection GC/FT-IR. Test methods for evaluating solid waste: Vol. 1A: Laboratory manual physical/chemical methods. Washington, DC: U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. SW-846. PB95234480.
- EPA. 1996. Method 8430. Analysis of bis(2-chloroethyl) ether and hydrolysis products by direct aqueous injection GC/FT-IR. U.S. Environmental Protection Agency. <http://www.epa.gov/sw-846/pdfs/8430.pdf>. June 28, 2007.
- EPA. 1997. Special report on environmental endocrine disruption: An effects assessment and analysis. Washington, DC: U.S. Environmental Protection Agency, Risk Assessment Forum. EPA630R96012.
- EPA. 2000. Method 8015C. Nonhalogenated organics using GC/FID. U.S. Environmental Protection Agency. <http://www.epa.gov/epaoswer/hazwaste/test/up4b.htm>. June 28, 2007.
- EPA. 2003. National primary drinking water regulations. Washington, DC: U.S. Environmental Protection Agency, Office of Ground Water and Drinking Water. EPA816F03016. <http://www.epa.gov/safewater/mcl.html>. March 07, 2006.
- EPA. 2004b. Ethylene glycol; notice of filing a pesticide petition to establish a tolerance for a certain pesticide chemical in or on food. U.S. Environmental Protection Agency. Fed Regist 69(149):47149-47152

9. REFERENCES

- EPA. 2004a. Inert pesticide ingredients in pesticide products. Washington, DC: U.S. Environmental Protection Agency. <http://www.epa.gov/opprd001/inerts/lists.html>. April 11, 2007.
- EPA. 2005. Toxic chemical release inventory reporting forms and instructions: Revised 2004 version. Section 313 of the Emergency Planning and Community Right-to-Know Act (Title III of the Superfund Amendments and Reauthorization Act of 1986). U.S. Environmental Protection Agency. Office of Environmental Information. EPA260B05001.
- EPA. 2006a. Approaches for the application of physiologically based pharmacokinetic (PBPK) models and supporting data in risk assessment. Washington, DC: U.S. Environmental Protection Agency. EPA600R05043F.
- EPA. 2006b. Drinking water standards and health advisories. Washington, DC: U.S. Environmental Protection Agency, Office of Water. EPA822R04005. <http://epa.gov/waterscience/criteria/drinking/>. April 11, 2007.
- EPA. 2007a. Acute exposure guideline levels (AEGLs). Second AEGL Chemical Priority List. Washington, DC: U.S. Environmental Protection Agency, Office of Pollution Prevention and Toxics. http://www.epa.gov/oppt/aegl/pubs/priority_2.htm. May 10, 2007.
- EPA. 2007b. Hazardous air pollutants. Clean Air Act. U.S. Environmental Protection Agency. United States Code. 42 USC 7412. <http://www.epa.gov/ttn/atw/orig189.html>. April 11, 2007.
- EPA. 2007c. Master testing list. Washington, DC: U.S. Environmental Protection Agency, Office of Pollution Prevention and Toxics. <http://www.epa.gov/opptintr/chemtest/pubs/mtl.htm>. May 10, 2007.
- EPA. 2007d. Superfund, emergency planning, and community right-to-know programs. Designation, reportable quantities, and notifications. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 302.4. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. April 11, 2007.
- EPA. 2007e. Superfund, emergency planning, and community right-to-know programs. Toxic chemical release reporting. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 372.65. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. April 11, 2007.
- EPA. 2007f. Tolerances and exemptions from tolerances for pesticide chemicals in food. Code of Federal Regulations. 40 CFR 180.1040. U.S. Environmental Protection Agency. <http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm>. May 10, 2007.
- Ettinger MB. 1956. Biochemical oxidation characteristics of stream pollutant organics. Ind Eng Chem 48:256-259.
- Evans WH, David EJ. 1974. Biodegradation of mono-, di-, and triethylene glycols in river waters under controlled laboratory conditions. Water Res 8(2):97-100.
- Evans WH, Dennis A. 1973. Spectrophotometric determination of low levels in mono-, di-, and triethylene glycols in surface waters. Analyst 98(1172):782-791.
- Factor SA, Lava NS. 1987. Ethylene glycol intoxication: A new stage in the clinical syndrome. NY State J Med 87(3):179-180.

9. REFERENCES

- FDA. 2006. Indirect food additives: adhesives and components of coatings. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 175.
<http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm>. May 10, 2007.
- FEDRIP. 2007. Ethylene glycol. Federal Research in Progress database. Springfield, VA: National Technical Information Service.
- Fligner CL, Jack R, Twiggs GA, et al. 1985. Hyperosmolality induced by propylene glycol: A complication of silver sulfadiazine therapy. *J Am Med Assoc* 253(11):1606-1609.
- Foit FF, Cowell RL, Brobst DF, et al. 1985. X-ray powder diffraction and microscopic analysis of crystalluria in dogs with ethylene glycol poisoning. *Am J Vet Res* 46(11):2404-2408.
- Fomon 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.
- Fomon SJ, Haschke F, Ziegler EE, et al. 1982. Body composition of reference children from birth to age 10 years. *Am J Clin Nutr* 35(Suppl 5):1169-1175.
- Forkner MW, Robson JH, Snellings WM, et al. 2004. Glycols. In: Kirk-Othmer encyclopedia of chemical technology. Vol. 12. John Wiley & Sons, Inc., 644-682.
<http://www.mrw.interscience.wiley.com/emrw/9780471238966/kirk/article/ethyfork.a01/current/pdf>. May 16, 2007.
- Frantz SW, Beskitt JL, Grosse CM, et al. 1989. Ethylene glycol: Comparison of pharmacokinetics and material balance following single intravenous, oral and cutaneous administration to male and female Sprague-Dawley rats. Bushy Run Research Center, Union Carbide Corp., Report No. 51-543.
- Frantz SW, Beskitt JL, Grosse CM, et al. 1996a. Pharmacokinetics of ethylene glycol. I. Plasma disposition after single intravenous, peroral, or percutaneous doses in female Sprague-Dawley rats and CD-1 mice. *Drug Metab Dispos* 24(8):911-921.
- Frantz SW, Beskitt JL, Grosse CM, et al. 1996b. Pharmacokinetics of ethylene glycol II. Tissue distribution, dose-dependent elimination, and identification of urinary metabolites following single intravenous, peroral or percutaneous doses in female Sprague-Dawley rats and CD-1® mice. *Xenobiotica* 26(11):1195-1220.
- Frantz SW, Beskitt JL, Tallant MJ, et al. 1996c. Pharmacokinetics of ethylene glycol. III. Plasma disposition and metabolic fate after single increasing intravenous, peroral, or percutaneous doses in the male Sprague-Dawley rat. *Xenobiotica* 26(5):515-539.
- Frantz SW, Tallant MJ, Beskitt JL. 1991. Ethylene glycol: Comparisons of pharmacokinetic and material balance studies following single intravenous, peroral, and percutaneous administrations to female CD-1 mice. Bushy Run Research Center, Union Carbide Corp., Report No. 53-550.
- Fraser AD. 2002. Clinical toxicologic implications of ethylene glycol and glycolic acid. *Ther Drug Monit* 24(2):232-238.
- Fraser AD, MacNeil W. 1993. Colorimetric and gas chromatographic procedures for glycolic acid in serum: The major toxic metabolite of ethylene glycol. *Clin Toxicol* 31(3):397-405.

9. REFERENCES

- Freitag D, Ballhorn L, Geyer H, et al. 1985. Environmental hazard profile of organic chemicals: An experimental method for the assessment of the behaviour of organic chemicals in the ecosphere by means of simple laboratory tests with ¹⁴C labeled chemicals. *Chemosphere* 14(10):1589-1616.
- Freyberger A, Schmuck G. 2005. Screening for estrogenicity and anti-estrogenicity: A critical evaluation of an MVLN cell-based transactivation assay. *Toxicol Lett* 155:1-13.
- Friedman EA, Greenberg JB, Merrill JP, et al. 1962. Consequences of ethylene glycol poisoning. Report of four cases and review of the literature. *Am J Med* 32:891-902.
- Froberg K, Dorion RP, McMullan KE. 2006. The role of calcium oxalate crystal deposition in cerebral vessels during ethylene glycol poisoning. *Clin Toxicol* 44:315-318.
- Gabow PA, Clay K, Sullivan JB, et al. 1986. Organic acids in ethylene glycol intoxication. *Ann Intern Med* 105(1):16-20.
- Gardner TB, Manning HL, Beelen A, et al. 2003. Ethylene glycol toxicity associated with ischemia, perforation, and colonic oxalate crystal deposition. *Am J Gastroenterol* 98(9):S171.
- Gardner TB, Manning HL, Beelen AP, et al. 2004. Ethylene glycol toxicity associated with ischemia, perforation, and colonic oxalate crystal deposition. *J Clin Gastroenterol* 38:435-439.
- Gaunt IF, Hardy J, Gangolli SD, et al. 1974. Short-term toxicity of monoethylene glycol in the rat. (Research Report 4/1974). Carshalton, Surrey: BIBRA International.
- Gérin M, Begin D, Goldberg MS, et al. 1997. A study of ethylene glycol exposure and kidney function of aircraft de-icing workers. *Int Arch Occup Environ Health* 69(4):255-265.
- Gershoff SN, Andrus SB. 1962. Effect of vitamin B6 and magnesium on renal disposition of calcium oxalate induced by ethylene glycol administration. *Proc Soc Exp Biol Med* 109:99-102.
- Giachetti C, Zanol G, Assandri A, et al. 1989. Determination of cyclic butylboronate esters of some 1,2- and 2,3-diols in plasma by high-resolution gas chromatography/mass spectrometry. *Biomed Environ Mass Spectrom* 18(8):592-597.
- Giwercman A, Carlsen E, Keiding N, et al. 1993. Evidence for increasing incidence of abnormalities of the human testis: A review. *Environ Health Perspect Suppl* 101(2):65-71.
- *Glasgow AM, Boeckx RL, Miller MK, et al. 1983. Hyperosmolality in small Infants due to propylene glycol. *Pediatrics* 72(3):353-355.
- Godolphin W, Meagher EP, Sanders HD, et al. 1980. Unusual calcium oxalate crystals in ethylene glycol poisoning. *Clin Toxicol* 16(4):479-486.
- Goldfrank LR, Flomenbaum NE, Lewin NA, et al. eds. 2002. Goldfrank's toxicologic emergencies. 7th ed. New York, NY: McGraw-Hill Companies, Inc., 980-1003.
- Gordon HL, Hunter JM. 1982. Ethylene glycol poisoning: A case report. *Anaesthesia* 37(3):332-338.
- Grauer GF, Thrall MA, Henre BA, et al. 1984. Early clinicopathologic findings in dogs ingesting ethylene glycol. *Am J Vet Res* 45(11):2299-2303.

9. REFERENCES

- Grauer GF, Thrall MA, Henre BA, et al. 1987. Comparison of the effects of ethanol and 4-methylpyrazole on the pharmacokinetics and toxicity of ethylene glycol in the dog. *Toxicol Lett* 35(2-3):307-314.
- Green ML, Hatch M, Freel RW. 2005. Ethylene glycol induces hyperoxaluria without metabolic acidosis in rats. *Am J Physiol* 289:F536-F543.
- Griffiths AJF. 1979. Neurospora prototroph selection system for studying aneuploid production. *Environ Health Perspect* 31:75-80.
- Griffiths AJF. 1981. Neurospora and environmentally induced aneuploidy. In: Stich HF, San RHC, eds. *Short-term tests for chemical carcinogens*. New York, NY: Springer-Verlag, 187-199.
- Guo C, McMartin KE. 2005. The cytotoxicity oxalate, metabolite of ethylene glycol, is due to calcium oxalate monohydrate formation. *Toxicology* 208:347-355.
- Guo C, McMartin KE. 2007. Aluminum citrate inhibits cytotoxicity and aggregation of oxalate crystals. *Toxicology* 230:117-125.
- Guo C, Cenac TA, Li Y, et al. 2007. Calcium oxalate, and not other metabolites, is responsible for the renal toxicity of ethylene glycol. *Toxicol Lett* 173:8-16.
- Guzelian PS, Henry CJ, Olin SS, eds. 1992. *Similarities and differences between children and adults: Implications for risk assessment*. Washington, DC: International Life Sciences Institute Press.
- Hadjzadeh M-A-R, Mohammadian N, Rahmani Z, et al. 2008. Effect of thymoquinone on ethylene glycol-induced kidney calculi in rats. *Urol J* 5:149-155.
- Hansch C, Leo A, Hoekman D. 1995. *Exploring QSAR: Hydrophobic, electronic, and steric constants*. Washington, DC: American Chemical Society, 5.
- Hantson P, Vanbinst R, Mathieu P. 2002. Determination of ethylene glycol tissue content after fatal oral poisoning and pathologic findings. *Am J Forensic Med Pathol* 23(2):159-161.
- Harris JC. 1990. Rate of hydrolysis. In: Lyman WH, Rheebl WF, Rosenblatt DH, eds. *Handbook of chemical property estimation methods*. Washington, DC: American Chemical Society, 7-1 to 7-48.
- Harris MW, Chapin RE, Lockhart AC, et al. 1992. Assessment of a short-term reproductive and developmental toxicity screen. *Fundam Appl Toxicol* 19(2):186-196.
- Harry P, Jobard E, Briand M, et al. 1998. Ethylene glycol poisoning in a child treated with 4-methylpyrazole. *Pediatrics* 102(3):1-3.
- Hartman PA, Bowman PB. 1977. Simple GLC determination of ethylene oxide and its reaction products in drugs and formulations. *J Pharm Sci* 66(6):789-792.
- Hastwell PW, Chai LL, Roberts KJ, et al. 2006. High-specificity and high-sensitivity genotoxicity assessment in a human cell line: Validation of the GreenScreen HC *GADD45a-GFP* genotoxicity assay. *Mutat Res* 607:160-175.

9. REFERENCES

- HazDat. 2007. Ethylene glycol. HazDat Database: ATSDR's Hazardous Substance Release and Health Effects Database. Atlanta, GA: Agency for Toxic Substances and Disease Registry.
<http://www.atsdr.cdc.gov/hazdat.html>. April 5, 2007.
- Heckerling PS. 1987. Ethylene glycol poisoning with a normal anion gap due to occult bromide intoxication. *Ann Emerg Med* 16(12):1384-1386.
- Hess R, Bartels MJ, Pottenger LH. 2004. Ethylene glycol: An estimate of tolerable levels of exposure based on a review of animal and human data. *Arch Toxicol* 78(12):671-680.
- Heukelekian H, Rand MC. 1955. Biochemical oxygen demand of pure organic compounds. *J Water Pollut Control Fed* 27:1040-1053.
- Hewlett TP, Jacobsen D, Collins TD, et al. 1989. Ethylene glycol and glycolate kinetics in rats and dogs. *Vet Hum Toxicol* 31(2):116-120.
- Hewlett TP, McMardin KE, Lauro AJ, et al. 1986. Ethylene glycol poisoning: The value of glycolic acid determinations for diagnosis and treatment. *J Toxicol Clin Toxicol* 24(5):389-402.
- Hewlett TP, Ray AC, Reagor JC. 1983. Diagnosis of ethylene glycol (antifreeze) intoxication in dogs by determination of glycolic acid in serum and urine with high pressure liquid chromatography and gas chromatography-mass spectrometry. *J Assoc Off Anal Chem* 66(2):276-283.
- Hine J, Mookerjee PK. 1975. The intrinsic hydrophilic character of organic compounds: Correlations in terms of structural contributions. *J Org Chem* 40(3):292-298.
- Hodgson AT, Rudd AF, Beal D, et al. 2000. Volatile organic compound concentrations and emission rates in new manufactures and site-built houses. *Indoor Air* 10:178-192.
- Hoel DG, Davis DL, Miller AB, et al. 1992. Trends in cancer mortality in 15 industrialized countries, 1969-1986. *J Natl Cancer Inst* 84(5):313-320.
- Hoffman RS, Smilkstein MJ, Howland MA, et al. 1993. Osmol gaps revisited: Normal values and limitations. *Clin Toxicol* 31(1):81-93.
- Hogue C. 2006. Safer antifreeze bill is moving fast: Congress is on the verge of mandating a bitter additive, but chemical may not deter pets. *Chem Eng News* 84(31):39-41.
<http://pubs.acs.org/cen/government/84/8431gov1.html>. May 16, 2007.
- Hong HL, Canipe J, Jameson CW, et al. 1988. Comparative effects of ethylene glycol and ethylene glycol monomethyl ether exposure on hematopoiesis and histopathology in B6C3F1 mice. *J Environ Pathol Toxicol Oncol* 8(7):27-38.
- Houzé P, Chaussard J, Harry P, et al. 1993. Simultaneous determination of ethylene glycol, propylene glycol, 1,3-butylene glycol and 2,3-butylene glycol in human serum and urine by wide-bore column gas chromatography. *J Chromatog* 619:251-257.
- Hovious JC, Conway RA, Ganze CW. 1973. Anaerobic lagoon pretreatment of petrochemical wastes. *J Water Pollut Control Fed* 45(1):71-84.

9. REFERENCES

- HSDB. 2007. Ethylene glycol. Hazardous Substances Data Bank. National Library of Medicine. <http://toxnet.nlm.nih.gov>. May 14, 2007.
- HSDB. 2009. Ethylene glycol. Hazardous Substances Data Bank. National Library of Medicine. <http://toxnet.nlm.nih.gov>. March 23, 2009.
- Huhn KM, Rosenberg FM. 1995. Critical clue to ethylene glycol poisoning. *Can Med Assoc J* 152(2):193-195.
- IARC. 2006. Agents reviewed by the IARC monographs. Vol. 1-96. Lyon, France: International Agency for Research on Cancer. <http://monographs.iarc.fr/ENG/Classification/index.php>. April 11, 2007.
- IRIS. 2010. Ethylene glycol. Integrated Risk Information System. Washington, DC: U.S. Environmental Protection Agency. <http://www.epa.gov/ncea/iris/subst/0238.htm>. February 10, 2010.
- ITA. 2007. 290531--Ethylene glycol (ethanediol): U.S. Trade quick-reference tables. International Trade Administration, U.S. Department of Commerce. <http://ita.doc.gov/td/industry/otea/trade-detail/index.html>. April 2, 2007.
- Jacobsen D, McMurtin KE. 1986. Methanol and ethylene glycol poisonings: Mechanism of toxicity, clinical course, diagnosis and treatment. *Med Toxicol* 1(5):309-334.
- Jacobsen D, Hewlett TP, Webb R, et al. 1988. Ethylene glycol intoxication: Evaluation of kinetics and crystalluria. *Am J Med* 84(1):145-152.
- Jacobsen D, Ovrebo S, Ostborg J, et al. 1984. Glycolate causes acidosis in ethylene glycol poisoning and is effectively removed by hemodialysis. *Acta Med Scand* 216:409-416.
- Jobard E, Harry P, Turcant A, et al. 1996. 4-Methylpyrazole and hemodialysis in ethylene glycol poisoning. (Comment in *J Toxicol Clin Toxicol* 1996 34(4):379-381). *Clin Toxicol* 34(4):373-377.
- Johanson CE. 1980. Permeability and vascularity of the developing brain: Cerebellum vs cerebral cortex. *Brain Res* 190(1):3-16.
- Johnson B, Meggs WJ, Bentzel CJ. 1999. Emergency department hemodialysis in a case of severe ethylene glycol poisoning. *Ann Emerg Med* 33(1):108-110.
- Jolliff HA, Sivilotti MLA. 2004. Ethylene glycol. In: Dart RC, ed. *Medical toxicology*. 3rd ed. Philadelphia, PA: Lippincott Williams & Wilkins, 1223-1230.
- Jonsson JA, Eklund A, Molin L. 1989. Determination of ethylene glycol in postmortem blood by capillary gas chromatography. *J Anal Toxicol* 13(1):25-26.
- Kaiser RE, Rieder RI. 1987. Native ethylene glycol in wine: Application of a dead volume free, very fast "deans heart-cut" system on-line with multi-chromatography. *J High Resolut Chromatogr Commun* 10(5):240-243.
- Kameya T, Murayama T, Urano K, et al. 1995. Biodegradation ranks for priority organic compounds under anaerobic conditions. *Sci Total Environ* 170:43-51.

9. REFERENCES

- Karlson-Stiber C, Persson H. 1992. Ethylene glycol poisoning: Experiences from an epidemic in Sweden. *Clin Toxicol* 30(4):565-574.
- Kashtock M, Breder CV. 1980. Migration of ethylene glycol from polyethylene terephthalate bottles into 3% acetic acid. *J Assoc Off Anal Chem* 63(2):168-172.
- *Kavlock RJ, Short RD, Chernoff N. 1987. Further evaluation of an in vivo teratology screen. *Teratog Carcinog Mutagen* 7:7-16.
- Kersting EJ, Nielsen SW. 1965. Ethylene glycol poisoning in small animals. *J Am Vet Med Assoc* 146(2):113-118.
- Khan SR, Shevock PN, Hackett RL. 1993. Magnesium oxide administration and prevention of calcium oxalate nephrolithiasis. *J Urol* 149(2):412-416.
- *Kinnunen T, Hannuksela M. 1989. Skin reactions to hexylene glycol. *Contact Dermatitis* 21(3):154-158.
- Klaus R, Fischer W. 1987. A means of analyzing glycols especially ethylene glycol and diethylene glycol by a method used for the determination of carbohydrates in alcoholic beverages. *Chromatographia* 23(2):137-140.
- Klecka GM, Carpenter CL, Landenberger BD. 1993. Biodegradation of aircraft deicing fluids in soil at low temperatures. *Ecotoxicol Environ Saf* 25:280-295.
- Klug, S, Merker, HJ, Jackh, R, 2001. Effects of ethylene glycol and metabolites on in vitro development of rat embryos during organogenesis. *Toxicol In Vitro* 15:635-642.
- Komori M, Nishio K, Kitada M, et al. 1990. Fetus-specific expression of a form of cytochrome P-450 in human livers. *Biochemistry* 29(18):4430-4433.
- Kralova I, Stepanek Z, Dusek J. 2006. Ethylene glycol intoxication misdiagnosed as eclampsia. (Comment in: *Acta Anaesthesiol Scand* 50:1037). *Acta Anaesthesiol Scand* 50(3):385-387.
- Kring EV, Damrell DJ, Basilio AN, et al. 1984. Laboratory validation and field verification of a new passive air monitoring badge for sampling ethylene oxide in air. *Am Ind Hyg Assoc J* 45(10):697-707.
- Krishnan K, Andersen ME. 1994. Physiologically based pharmacokinetic modeling in toxicology. In: Hayes AW, ed. *Principles and methods of toxicology*. 3rd ed. New York, NY: Raven Press, Ltd., 149-188.
- Krishnan K, Andersen ME, Clewell HJ, et al. 1994. Physiologically based pharmacokinetic modeling of chemical mixtures. In: Yang RSH, ed. *Toxicology of chemical mixtures: Case studies, mechanisms, and novel approaches*. San Diego, CA: Academic Press, 399-437.
- Kubo T, Urano K, Utsumi H. 2002. Mutagenicity characteristics of 255 environmental chemicals. *J Health Sci* 48(6):545-554.
- Kuczkowski KM. 2006. Ethylene glycol and other solvent use in pregnancy: A new phenomenon and a new diagnostic dilemma. (Comment on: *Acta Anaesthesiol Scand* 50:385-387). *Acta Anaesthesiol Scand* 50(8):1037.

9. REFERENCES

*Kulick MI, Wong R, Okarma TB et al. 1985. Prospective study of side effects associated with the use of silver sulfadiazine in severely burned patients. *Ann Plast Surg* 14(5):407-419.

LA DOTD. 1989. Fate of ethylene glycol in the environment. New Orleans, LA: Louisiana Department of Transportation and Development. PB90264672.

Lai MW, Klein-Schwartz W, Rodgers GC, et al. 2006. 2005 Annual report of the American Association of Poison Control Centers' national poisoning and exposure database. *Clin Toxicol* 44:803-932.

Laitinen J, Liesivuori J, Savolainen H. 1995. Exposure to glycols and their renal effects in motor servicing workers. *Occup Med (Lond)* 45(5):259-262.

LaKind JS, McKenna EA, Hubner RP, et al. 1999. A review of the comparative mammalian toxicity of ethylene glycol and propylene glycol. *Crit Rev Toxicol* 29(4):331-365.

Lamb CB, Jenkins GF. 1952. B.O.D. of synthetic organic chemicals. *Proc Ind Waste Conf* 7:326-329. ADD419968.

Lamb JC, Maronpot RR, Gulati DK, et al. 1985. Reproductive and developmental toxicity of ethylene glycol in the mouse. *Toxicol Appl Pharmacol* 81(1):100-112.

Leeder JS, Kearns GL. 1997. Pharmacogenetics in pediatrics: Implications for practice. *Pediatr Clin North Am* 44(1):55-77.

Leggat PA, Smith DR. 2006. Dermatitis and aircrew. *Contact Dermatitis* 54(1):1-4.

Leth PM, Gregersen M. 2005. Ethylene glycol poisoning. *Forensic Sci Int* 155(2-3):179-184.

Letzel S, Gündel J, Schaller KH, et al. 2000. Biomonitoring von glykol-belasteten personen-kapillargaschromatographische bestimmung von ethylenglykol und 1,2-propylenglykol im harn. *Arbeitsmed Sozialmed Umweltmed* 35:160-162.

Leung HW. 1993. Physiologically-based pharmacokinetic modelling. In: Ballentyne B, Marrs T, Turner P, eds. General and applied toxicology. Vol. 1. New York, NY: Stockton Press, 153-164.

Lewis RJ. 2001. Hawley's condensed chemical dictionary. 14th ed. New York, NY: John Wiley & Sons, Inc., 465.

Lewis LD, Smith BW, Mamourian AC. 1997. Delayed sequelae after acute overdoses or poisonings: Cranial neuropathy related to ethylene glycol ingestion. *Clin Pharmacol Ther* 61:692-699.

Lide DR. 2005. CRC handbook of chemistry and physics. 86th ed. Boca Raton, FL: Taylor & Francis Group, 3-232.

Litovitz TL, Klein-Schwartz W, Rodgers GC, et al. 2002. 2001 Annual report of the American Association of Poison Control Centers Toxic Exposure Surveillance System. *Am J Emerg Med* 20:391-452.

Litovitz TL, Schmitz BF, Bailey KM. 1990. Annual report of the American Association of Poison Control Centers national data collection system. *Am J Emerg Med* 8(5):394-442.

9. REFERENCES

- Litovitz TL, Schmitz BF, Bailey KM. 1991. 1990 Annual report of the American Poison Control Centers national data collection system. *Toxicology* 9(5):461-500.
- Livingston AL. 1978. Forage plant estrogens. *J Toxicol Environ Health* 4(2-3):301-324.
- Loden M. 1986. The *in vitro* permeability of human skin to benzene, ethylene glycol, formaldehyde, and n-hexane. *Acta Pharmacol Toxicol* 58(5):382-389.
- Løkke H. 1984. Leaching of ethylene glycol and ethanol in subsoils. *Water Air Soil Pollut* 22:373-387.
- Lovrić Granic P, Cubrilo-Turek M, et al. 2007. Ethylene glycol poisoning. *Forensic Sci Int* 170(2-3):213-215.
- Mallya KB, Mendis T, Guberman A. 1986. Bilateral facial paralysis following ethylene glycol ingestion. *Can J Neurol Sci* 13(4):340-341.
- Manius GJ. 1979. Determination of ethylene oxide, ethylene chlorohydrin, and ethylene glycol residues in ophthalmic solutions at proposed concentration limits. *J Pharm Sci* 68(12):1547-1549.
- Marion CV, Malaney GW. 1963. The oxidation of aliphatic compounds by *Alcaligenes faecalis*. *J Water Pollut Control Fed* 35:1269-1284.
- Maronpot RR, Zelenak JP, Weaver EV, et al. 1983. Teratogenicity study of ethylene glycol in rats. *Drug Chem Toxicol* 6(6):579-594.
- Marr MC, Price CJ, Myers CB, et al. 1992. Developmental stages of the CD® (Sprague-Dawley) rat skeleton after maternal exposure to ethylene glycol. *Teratology* 46(2):169-181.
- Marshall TC. 1982. Dose-dependent disposition of ethylene glycol in the rat after intravenous administration. *J Toxicol Environ Health* 10:397-409.
- Marshall TC, Cheng YS. 1983. Deposition and fate of inhaled ethylene glycol vapor and condensation aerosol in the rat. *Fundam Appl Toxicol* 3(3):175-181.
- Martis L, Kroes T, Darby TD, et al. 1982. Disposition kinetics of ethylene oxide, ethylene glycol, and 2-chlorethanol in the dog. *J Toxicol Environ Health* 10:847-856.
- Matusik JE, Eilers PP, Waldron EM, et al. 1993. Confirmation of identities of propylene and ethylene glycols in anchovies by tandem mass spectrometry. *J Assoc Off Anal Chem Int* 76:1344-1347.
- Mayr U, Butsch A, Schneider S. 1992. Validation of two *in vitro* test systems for estrogenic activities with zearalenone, phytoestrogens and cereal extracts. *Toxicology* 74(2-3):135-149.
- McCann J, Choi E, Yamasaki E, et al. 1975. Detection of carcinogens as mutagens in the *Salmonella/microsome* test: Assay of 300 chemicals. *Proc Natl Acad Sci USA* 72(12):5135-5139.
- McCarroll NE, Piper CE, Keech BH. 1981. An *E. coli* micro-suspension assay for the detection of DNA damage induced by direct-acting agents and promutagens. *Environ Mutagen* 3(4):429-444.

9. REFERENCES

- McChesney EW, Goldberg L, Parekh CK, et al. 1971. Reappraisal of the toxicology of ethylene glycol. II. Metabolism studies in laboratory animals. *Food Cosmet Toxicol* 9:21-38.
- McClelland CP, Rector PR. 1951. Glycols. In: Kirk RE, Othmer DF, eds. *Kirk-Othmer encyclopedia of chemical technology*. Vol. 7. New York, NY: Interscience Encyclopedia, Inc., 238-263.
- McGahey C, Bouwer EJ. 1992. Biodegradation of ethylene glycol in simulated subsurface environments. *Water Sci Technol* 26(1):41-49.
- McGregor DB, Brown AG, Howgate S, et al. 1991. Responses of the L5178Y mouse lymphoma cell forward mutation assay. V. 27 coded chemicals. *Environ Mol Mutagen* 17(3):196-219.
- McMartin K. 2007. Summary report received from Kenneth McMartin, Ph.D. Summary report of the external peer review of the draft toxicological profile for ethylene glycol. Submitted to: The Agency for Toxic Substances and Disease Registry, Division of Toxicology. Submitted by: Eastern Research Group, 27.
- McMartin KE, Wallace KB. 2005. Calcium oxalate monohydrate, a metabolite of ethylene glycol, is toxic for rat renal mitochondrial function. *Toxicol Sci* 84:195-200.
- Means JL, Anderson SJ. 1981. Comparison of five different methods for measuring biodegradability in aqueous environments. *Water Air Soil Pollut* 16(3):301-315.
- Mégarbane B, Borron SW, Baud FJ. 2005. Current recommendations for treatment of severe toxic alcohol poisonings. *Intensive Care Med* 31(2):189-195.
- Melnick RL. 1984. Toxicities of ethylene glycol and ethylene glycol monoethyl ether in Fischer 344/N rats and B6C3F1 mice. *Environ Health Perspect* 57:147-155.
- Miller PH. 1966. Glycols. In: Kirk RE, Othmer DF, eds. *Kirk-Othmer encyclopedia of chemical technology*. Vol. 10. 2nd ed. New York, NY: John Wiley & Sons, Inc., 638-660.
- Miller JE, Vlasakova K, Glaab WE, et al. 2005. A low volume, high-throughput forward mutation assay in *Salmonella typhimurium* based on fluorouracil resistance. *Mutat Res* 578(1-2):210-224.
- Moossavi S, Wadhwa NK, Nord EP. 2003. Recurrent severe anion gap metabolic acidosis secondary to episodic ethylene glycol intoxication. *Clin Nephrol* 60(3):205-210.
- Morgan BW, Ford MD, Follmer R. 2000. Ethylene glycol ingestion resulting in brainstem and midbrain dysfunction. *J Toxicol Clin Toxicol* 38(4):445-451.
- Morselli PL, Franco-Morselli R, Bossi L. 1980. Clinical pharmacokinetics in newborns and infants: Age-related differences and therapeutic implications. *Clin Pharmacokin* 5(6):485-527.
- *Morris HJ, Nelson AA, Calvery HO. 1942. Observations on the chronic toxicities of propylene glycol, ethylene glycol, diethylene glycol, ethylene glycol mono-ethyl-ether and diethylene glycol mono-ethyl-ether. *J Pharmacol Exp Ther* 74:266-273.
- Morrissey RE, Lamb JC, Morris RW, et al. 1989. Results and evaluations of 48 continuous breeding reproduction studies conducted in mice. *Fundam Appl Toxicol* 13(4):747-777.

9. REFERENCES

- Munley SM, Kennedy GL, Hurt ME, 1999. Developmental toxicity study of glycolic acid in rats. *Drug Chem Toxicol* 22:569-582.
- Muzeni RJ. 1985. Rapid gas chromatographic determination of ethylene oxide, ethylene chlorohydrin, and ethylene glycol residues in rubber catheters. *J Assoc Off Anal Chem* 68(3):506-508.
- *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.
- Nepper-Bradley TL. 1990. Developmental toxicity evaluation of ethylene glycol administered by gavage to CD (Sprague-Dawley) rats: Determination of a “no observed effect level” (NOEL). Bushy Run Research Center. CMA Project Report 52-656.
- Nepper-Bradley TL, Tyl RW, Fisher LC, et al. 1995. Determination of a no-observed-effect level for developmental toxicity of ethylene glycol administered by gavage to CD rats and CD-1 mice. *Fundam Appl Toxicol* 27(1):121-130.
- NIOSH. 1990. Ethylene glycol. Estimated numbers of employees potentially exposed to specific agents by 2-digit Standard Industrial Classification (SIC). National Occupational Exposure Survey conducted from 1981-1983. Centers for Disease Control. National Institute for Occupational Safety and Health. <http://www.cdc.gov/noes/>. April 20, 2007.
- NIOSH. 1996. Method 5523, Issue 1. Glycols. NIOSH manual of analytical methods. National Institute for Occupational Safety and Health. <http://www.cdc.gov/niosh/nmam/pdfs/5523.pdf>. June 28, 2007.
- NIOSH. 2005. Ethylene glycol. NIOSH pocket guide to chemical hazards. Atlanta, GA: National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention. <http://www.cdc.gov/niosh/npg/>. May 10, 2007.
- NIOSH. 2006. Health hazard evaluation report: HETA-2005-0361-3005, Buffalo Newspress, Buffalo, New York. Atlanta, GA: National Institute for Occupational Safety and Health. <http://www2a.cdc.gov/hhe/select.asp?PjtName=41278&bFlag=0&ID=3>. April 04, 2007.
- NRC. 1993. Pesticides in the diets of infants and children. Washington, DC: National Academy Press. National Research Council.
- NTP. 1986. Ethylene glycol: Reproduction and fertility assessment in CD-1 mice when administered in drinking water. Research Triangle Park, NC: National Toxicology Program. PB86177383.
- NTP. 1988. Developmental toxicity evaluation of ethylene glycol (CAS No. 107-21-1) in CD rats. Final report. Research Triangle Park, NC: National Toxicology Program. NTP-88-079. PB88204326/h.
- NTP. 1993. Toxicology and carcinogenesis studies of ethylene glycol (CAS No. 107-21-1) in B6C3F₁ mice (feed studies). Research Triangle Park, NC: National Toxicology Program. NTP-TR-413.

9. REFERENCES

NTP. 2005. Introduction. Report on carcinogens. 11th ed. Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, 1-10. <http://ntp-server.niehs.nih.gov/ntp/roc/toc11.html>. March 08, 2006.

NTP. 2007. Testing status of agents at NTP. Ethylene glycol. Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program. <http://ntp.niehs.nih.gov:8080/index.html?col=010stat>. May 10, 2007.

NTP-CERHR. 2004. NTP-CERHR Expert Panel report on the reproductive and developmental toxicity of ethylene glycol. National Toxicology Program-Center for the Evaluation of Risks to Human Reproduction, 457-532.

Ochs ML, Glick MR, Ryder WW, et al. 1988. Improved method for emergency screening for ethylene glycol in serum. *Clin Chem* 34(7):1507-1508.

Olivero JJ. 1993. A comatose man with marked acidosis and crystaluria. *Hosp Pract* 28(7):86-88.

O'Neil MJ, Smith A, Heckelman PE, et al. 2001. Ethylene glycol. In: The Merck index: An encyclopedia of chemicals, drugs, and biologicals. 13th ed. Whitehouse Station, NJ: Merck & Co., Inc., 3832-3833.

OSHA. 2006. Air contaminants. Occupational safety and health standards for shipyard employment. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1915.1000. <http://www.osha.gov/comp-links.html>. April 11, 2007.

OTA. 1990. Neurotoxicity: Identifying and controlling poisons of the nervous system. Washington, DC: Office of Technology Assessment. OTABA438.

Ovrebo S, Jacobsen D, Sejersted OM. 1987. Determination of ionic metabolites from ethylene glycol in human blood by isotachophoresis. *J Chromatogr Biomed Appl* 416(1):111-118.

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: WB Saunders, 222-238.

Parry MF, Wallach R. 1974. Ethylene glycol poisoning. *Am J Med* 57(1):143-150.

Pellegrino B, Parravani A, Cook L, et al. 2006. Ethylene glycol intoxication: Disparate findings of immediate versus delayed presentation. *W V Med J* 102(4):32-34.

Penmarthy L, Oehme FW. 1975. Treatment of ethylene glycol toxicosis in cats. *Am J Vet Res* 36(2):209-212.

Peterson CD, Collins AJ, Himes JM, et al. 1981. Ethylene glycol poisoning: Pharmacokinetics during therapy with ethanol and hemodialysis. *New Eng J Med* 304:21-23.

Pfeiffer EH, Dunkelberg H. 1980. Mutagenicity of ethylene oxide and propylene oxide and of the glycols and halohydrins formed from them during the fumigation of foodstuffs. *Food Cosmet Toxicol* 18:115-118.

Piagnerelli M, Carlier E, Lejeune P. 1999. Adult respiratory distress syndrome and medullary toxicity: Two unusual complications of ethylene glycol intoxication. *Intensive Care Med* 25(10):1200.

9. REFERENCES

- Pitter P. 1976. Determination of biological degradability of organic substances. *Water Res* 10:231-235.
- Pizon AF, Brooks DE. 2006. Hyperosmolality: Another indication for hemodialysis following acute ethylene glycol poisoning. *Clin Toxicol* 44(2):181-183.
- Porter WH, Rutter PW, Yao HH. 1999. Simultaneous determination of ethylene glycol and glycolic acid in serum by gas chromatography-mass spectrometry. *J Anal Toxicol* 23(7):591-597.
- Pottenger LH, Carney EW, Bartels MJ. 2001. Dose-dependent nonlinear pharmacokinetics of ethylene glycol metabolites in pregnant (GD 10) and nonpregnant Sprague-Dawley rats following oral administration of ethylene glycol. *Toxicol Sci* 62(1):10-19.
- Price CJ, Kimmell CA, Tyl RW, et al. 1985. The developmental toxicity of ethylene glycol in rats and mice. *Toxicol Appl Pharmacol* 81(1):113-127.
- Price KS, Waggy GT, Conway RA. 1974. Brine shrimp bioassay and seawater BOD of petrochemicals. *J Water Pollut Contr Fed* 46(1):63-77.
- Rajagopal G, Venkatesan K, Ranganathan P, et al. 1977. Calcium and phosphorus metabolism in ethylene glycol toxicity in rats. *Toxicol Appl Pharmacol* 39(3):543-547.
- Rasic S, Cengic M, Golemac S, et al. 1999. Acute renal insufficiency after poisoning with ethylene glycol. *Nephron* 81(1):119-120.
- Rebsdat S, Mayer D. 2005. Ethylene glycol. Ullmann's encyclopedia of industrial chemistry. Wiley-VCH Verlag GmbH & Co.
http://www.mrw.interscience.wiley.com/emrw/9783527306732/ueic/article/a10_101/current/pdf. May 16, 2007.
- Reddy NJ, Lewis LD, Gardner TB, et al. 2007. Two cases of rapid onset Parkinson's syndrome following toxic ingestion of ethylene glycol and methanol. *Clin Pharmacol Ther* 81(1):114-121.
- Revitt DM, Worrall P. 2003. Low temperature biodegradation of airport de-icing fluids. *Water Sci Technol* 48(9):103-111.
- Richardson KE. 1973. The effect of partial hepatectomy on the toxicity of ethylene glycol, glycolic acid, glyoxilic acid and glycine. *Toxicol Appl Pharmacol* 24:530-538.
- Riley JH, Stahr HM, O'Brien S, et al. 1982. Urine and tissue oxalate and hippurate levels in ethylene glycol intoxication in the dog. *Vet Hum Toxicol* 24(5):331-334.
- Roberts JA, Seibold HR. 1969. Ethylene glycol toxicity in the monkey. *Toxicol Appl Pharmacol* 15(3):624-631.
- Robinson D, McCoy CA. 1989. Ethylene glycol toxicity. *Crit Care Nurse* 9(6):70-74.
- Robinson M, Pond CL, Laurie RD, et al. 1990. Subacute and subchronic toxicity of ethylene glycol administered in drinking water to Sprague-Dawley rats. *Drug Chem Toxicol* 13:43-70.

9. REFERENCES

- Rofe AM, Bais R, Conyers RAJ. 1986. The effect of dietary refined sugars and sugar alcohols on renal calcium oxalate deposition in ethylene glycol-treated rats. *Food Chem Toxicol* 24(5):397-403.
- Rothman A, Normann SA, Manoguerra AS, et al. 1986. Short-term hemodialysis in childhood ethylene glycol poisoning. *J Pediatr* 108:153-155.
- Rowe VK, Wolf MA. 1982. Glycols. In: Clayton GD, Clayton FE, eds. *Patty's industrial hygiene and toxicology*. Vol. 2C: Toxicology. 3rd ed. New York, NY: John Wiley & Sons, 3817-3853.
- Ryder KW, Glick MR, Jackson SA. 1986. Emergency screening for ethylene glycol in serum. *Clin Chem* 32(8):1574-1577.
- Scalley RD, Ferguson DR, Piccaro JC, et al. 2002. Treatment of ethylene glycol poisoning. *Am Fam Physician* 66(5):807-812.
- Schladt L, Ivens I, Karbe E, et al. 1998. Subacute oral toxicity of tetraethylene glycol and ethylene glycol administered to Wistar rats. *Exp Toxic Pathol* 50:257-265.
- Schoenberg T, Veltman S, Switzenbaum M. 2001. Kinetics of anaerobic degradation of glycol-based Type I aircraft deicing fluids. *Biodegradation* 12:59-68.
- Schuler RL, Hardin BD, Niemeier RW, et al. 1984. Results of testing fifteen glycol ethers in a short-term in vivo reproductive toxicity assay. *Environ Health Perspect* 57:141-146.
- Schumacher JN, Green CR, Best FW, et al. 1977. Smoke composition: An extensive investigation of the water-soluble portion of cigarette smoke. *J Agric Food Chem* 25(2):310-320.
- Schwerk N, Desel H, Schulz M, et al. 2007. Successful therapy of paediatric ethylene glycol poisoning: a case report and annual survey by a regional poison centre. *Acta Paediatr* 96(3):461-463.
- *Setchell BP, Waites GMH. 1975. The blood-testis barrier. In: Creep RO, Astwood EB, Geiger SR, eds. *Handbook of physiology: Endocrinology V*. Washington, DC: American Physiological Society, 143-172.
- Shoemaker JD, Lynch RE, Hoffmann JW, et al. 1992. Misidentification of propionic acid as ethylene glycol in a patient with methylmalonic acidemia. *J Pediatr* 120:417-421.
- Siew S, Matta RK, Johnson M. 1975a. Investigation of "crystallosis" in ethylene glycol toxicity. *Scan Electron Microsc* 8:555-562.
- Siew S, Matta RK, Johnson M. 1975b. Microanalysis of crystals in biological tissue. In: Tenth annual conference of the Microbeam Analysis Society: August 11-15, 1975, MGM hotel, Las Vegas, Nevada. Bethlehem, PA: Microbeam Analysis Society, 48-A to 48-D.
- Sills RD, Blakeslee PA. 1992. The environmental impact of deicers in airport stormwater runoff. In: *Chemical Deicers and the Environment*. Boca Raton, FL: Lewis Publishers, 323-340.
- Simmons P, Branson D, Bailey R. 1976. 1,2,4-Trichlorobenzene: Biodegradable or not? In: Book pap, Int Tech Conf. Research Triangle Park, NC: American Association Text, 212-217.

9. REFERENCES

- Singh M, Murtaza M, D'Souza N, et al. 2001. Abdominal pain and lactic acidosis with ethylene glycol poisoning. (Comment in: Am J Emerg Med 20:263). Am J Emerg Med 19(6):529-530.
- Sivilotti MLA, Burns MJ, McMartin KE, et al. 2000. Toxicokinetics of ethylene glycol during fomepizole therapy: Implications for management. Ann Emerg Med 36(2):114-125.
- Slave T, Mihail A, Burmaz N. 1974. [Degradation of some organic impurities in residual waters.] Rev Chim 25:666-670. (Hungarian)
- Slikker W, Andersen ME, Bogdanffy MS, et al. 2004. Dose-dependent transitions in mechanisms of toxicity: Case studies. Toxicol Appl Pharmacol 201(3):226-294.
- Smith BJ, Anderson BG, Smith SA, et al. 1990. Early effects of ethylene glycol on the ultrastructure of the renal cortex in dogs. Am J Vet Res 51(1):89-96.
- Smith NB. 1984. Determination of serum ethylene glycol by capillary gas chromatography. Clin Chim Acta 144(2-3):269-272.
- Spillane L, Roberts JR, Meyer AE. 1991. Multiple cranial nerve deficits after ethylene glycol poisoning. Ann Emerg Med 20(2):208-210.
- Spitz HD, Weinberger J. 1971. Determination of ethylene oxide, ethylene chlorohydrin, and ethylene glycol by gas chromatography. J Pharm Sci 60(2):271-274.
- SRI. 2008. 2006 Directory of chemical producers. Menlo Park, CA: SRI Consulting, 563.
- Staples CA, Williams JB, Craig GR, et al. 2001. Fate, effects and potential environmental risks of ethylene glycol: A review. Chemosphere 43:377-383.
- *Stenback F, Shubik P. 1974. Lack of toxicity and carcinogenicity of some commonly used cutaneous agents. Toxicol Appl Pharmacol 30:7-13.
- Storer RD, McKelvey TW, Kraynak AR, et al. 1996. Revalidation of the in vitro alkaline elution/rat hepatocyte assay for DNA damage: Improved criteria for assessment of cytotoxicity and genotoxicity and results for 81 compounds. Mutat Res 368:59-101.
- Swann RL, 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. Residue Rev 85:18-28.
- Takayesu JK, Bazari H, Linshaw M. 2006. Case 7-2006: A 47-year-old man with altered mental status and acute renal failure. (Erratum in N Engl J Med 355:429-b). N Engl J Med 354(10):1065-1072.
- Taylor R, Bower J, Salem MM. 1997. Acidosis and coma after hemodialysis. J Am Soc Nephrol 8:853-856.
- Thomas RG. 1990. Volatilization from water. In: Lyman WJ, Reehl WF, Rosenblatt DH, eds. Handbook of chemical property estimation methods: Environmental behavior of organic compounds. Washington, DC: American Chemical Society, 15-1 to 15-34.

9. REFERENCES

- Thomas K, Colborn T. 1992. Organochlorine endocrine disruptors in human tissue. In: Colborn T, Clement C, eds. *Chemically induced alterations in sexual and functional development: The wildlife/human connection*. Princeton, NJ: Princeton Scientific Publishing, 365-394.
- Tobe TJ, Braam GB, Meulenbelt J. 2002. Ethylene glycol poisoning mimicking Snow White (Comment on Lancet 2001 358(9289):1236). *Lancet* 359(9304):444-445.
- TRI06. 2008. TRI explorer: Providing access to EPA's toxics release inventory data. Washington, DC: Office of Information Analysis and Access. Office of Environmental Information. U.S. Environmental Protection Agency. Toxics Release Inventory. <http://www.epa.gov/triexplorer/>. May 29, 2007.
- Troisi FM. 1950. Chronic intoxication by ethylene glycol vapour. *Br J Ind Med* 7:65-69.
- Tucker SP, Deye GJ. 1981. Sampling and analytical method for ethylene glycol in air. *Anal Lett* 14(A12):959-976.
- Tyl RW. 1985. Evaluation of the teratogenic potential of ethylene glycol aerosol in the CD rat and CD-1 mouse. Bushy Run Research Center, Union Carbide Corp., Report No. 48-100.
- Tyl RW. 1988a. Ethylene glycol: Developmental toxicity evaluation of the aerosol in CD-1 mice by nose-only or whole-body exposure. Bushy Run Research Center, Union Carbide Corp., Report No. 50-121.
- Tyl RW. 1988b. Developmental toxicity evaluation of ethylene glycol applied cutaneously to CD-1 mouse. Bushy Run Research Center. CMA Project Report 50-597.
- Tyl RW. 1989. Developmental toxicity evaluation of ethylene glycol administrated by gavage to CD-1 mice: Determination of a "no-observed-effect-level" (NOEL). Bushy Run Research Center, CMA Project Report 51-591.
- Tyl RW, Ballantyne B, Fisher LC, et al. 1994. Evaluation of exposure to water aerosol or air by nose-only or whole-body inhalation procedures for CD-1 mice in developmental toxicity studies. *Fundam Appl Toxicol* 23:251-260.
- Tyl RW, Ballantyne B, Fisher LC, et al. 1995a. Evaluation of the developmental toxicity of ethylene glycol aerosol in Cd-1 mice by nose-only exposure. *Fundam Appl Toxicol* 27:49-62.
- Tyl RW, Ballantyne B, Fisher LC, et al. 1995b. Evaluation of the developmental toxicity of ethylene glycol aerosol in the CD rat and CD-1 mouse by whole-body exposure. *Fundam Appl Toxicol* 24:57-75.
- Tyl RW, Fisher LC, Kubena MF, et al. 1995c. Assessment of the developmental toxicity of ethylene glycol applied cutaneously to CD-1 mice. *Fundam Appl Toxicol* 27:155-166.
- Tyl RW, Price CJ, Marr MC, et al. 1993. Developmental toxicity evaluation of ethylene glycol by gavage in New Zealand White (NZW) rabbits. *Fundam Appl Toxicol* 20:402-412.
- Underwood F, Bennett WM. 1973. Ethylene glycol intoxication: Prevention of renal failure by aggressive management. *J Am Med Assoc* 226(12):1453-1454.

9. REFERENCES

- Upadhyay S, Carstens J, Klein D, et al. 2008. Inhalation and epidermal exposure of volunteers to ethylene glycol: Kinetics of absorption, urinary excretion, and metabolism to glycolate and oxalate. *Toxicol Lett* 178:131-141.
- Vale JA. 1979. Ethylene glycol poisoning. *Vet Hum Toxicol* 21:118-120.
- Verrilli MR, Deyling CL, Pippenger CE, et al. 1987. Fatal ethylene glycol intoxication. Report of a case and review of the literature. *Cleve Clin J Med* 54(4):289-295.
- Vesper SJ, Murdoch LC, Hayes S, et al. 1994. Solid oxygen source for bioremediation in subsurface soils. *J Hazard Mater* 36:265-274.
- Vieira I, Sonnier M, Cresteil T. 1996. Developmental expression of CYP2E1 in the human liver: Hypermethylation control of gene expression during the neonatal period. *Eur J Biochem* 238(2):476-483.
- Wagner RJ. 1976. Study of the degradation behavior of organic materials by means of the respirometric dilution method. II. The degradation kinetics of test substances. *Vom Wasser* 47:241-265.
- Walder AD, Tyler CK. 1994. Ethylene glycol antifreeze poisoning. Three case reports and a review of treatment. *Anaesthesia* 49(11):964-967.
- Walton EW. 1978. An epidemic of antifreeze poisoning. *Med Sci Law* 18(4):231-237.
- Ware GW, ed. 1988. Ethylene Glycol. *Rev Environ Contam Toxicol* 106:133-141.
- Watson GK, Jones N. 1977. The biodegradation of polyethylene glycols by sewage bacteria. *Water Res* 11:95-100.
- Watson WA, Litovitz TL, Klein-Schwartz W, et al. 2004. 2003 Annual report of the American Association of Poison Control Centers Toxic Exposure Surveillance System. *Am J Emerg Med* 22:335-404.
- West JR, Smith HW, Chasis H. 1948. Glomerular filtration rate, effective renal blood flow, and maximal tubular excretory capacity in infancy. *J Pediatr* 32:10-18.
- Wezorek C, Hodgman M, Dean B, et al. 1995. Inadvertent ethylene glycol inhalation resulting in a toxic level. *J Toxicol Clin Toxicol* 33:553.
- White ML, Liebelt EL. 2006. Update on antidotes for pediatric poisoning. *Pediatr Emerg Care* 22(11):740-749.
- WHO. 2000. Air quality guidelines. 2nd ed. Geneva, Switzerland: World Health Organization. <http://www.euro.who.int/Document/AIQ/AirQualRepMtg.pdf>. March 08, 2006.
- WHO. 2002. Ethylene glycol: Human health aspects. Concise international chemical assessment document 45. Geneva: World Health Organization. <http://www.who.int/entity/ipcs/publications/cicad/en/cicad45.pdf>. March 27, 2007.
- WHO. 2004. Guidelines for drinking-water quality. Vol 1. Recommendations. 3rd ed. Geneva, Switzerland: World Health Organization. http://www.who.int/water_sanitation_health/dwq/gdwq3/en/. March 08, 2006.

9. REFERENCES

- White NC, Litovitz T, White MK, et al. 2008. The impact of bittering agents on suicidal ingestions of antifreeze. *Clin Toxicol (Phila)*46(6):507-514.
- Widdowson EM, Dickerson JWT. 1964. Chemical composition of the body. In: Comar CL, Bronner F, eds. *Mineral metabolism: An advanced treatise. Vol. II: The elements Part A.* New York, NY: Academic Press, 1-247.
- Wiener SW. 2006. Toxic alcohols. In: Flomenbaum NE, Goldfrank LR, Hoffman RS, et al., eds. *Goldfrank's toxicologic emergencies.* New York, NY: McGraw-Hill Companies, Inc., 1447-1459.
- Wiener HL, Richardson KE. 1988. The metabolism and toxicity of ethylene glycol. *Res Commun Subst Abuse* 9(2):77-87.
- Wiley JF. 1999. Novel therapies for ethylene glycol intoxication. *Curr Opin Pediatr* 11:269-273.
- Williams RH, Shah SM, Maggiore JA, et al. 2000. Simultaneous detection and quantitation of diethylene glycol, ethylene glycol, and the toxic alcohols in serum using capillary column gas chromatography. *J Anal Toxicol* 24(7):621-626.
- Williamson SA, Iverson WG. 1993. Determination of short-chain diols and selected fermentation by-products in beer. *J Am Soc Brew Chem* 51:114-118.
- *Willis CM, Stephens CJ, Wilkinson JD. 1988. Experimentally-induced irritant contact dermatitis: Determination of optimum irritant concentrations. *Contact Dermatitis* 18(1):20-24.
- *Willis CM, Stephens CJ, Wilkinson JD. 1989. Epidermal damage induced by irritants in man: A light and electron microscopic study. *J Invest Dermatol* 93(5):695-699.
- Wills JH, Coulston F, Harris ES, et al. 1974. Inhalation of aerosolized ethylene glycol by man. *Clin Toxicol* 7(5):463-476.
- Wilson DM, Dryzga MD, Bartels MJ, et al. 2005. Ethylene glycol: 12-month dietary toxicity study in Wistar Han rats. Arlington, VA: Ethylene Glycol Toxicology Research Task Group. American Chemistry Council. [unpublished study]
- Winek CL, Shingleton DP, Shanor SP. 1978. Ethylene and diethylene glycol toxicity. *Clin Toxicol* 13(2):297-324.
- Winter ML, Ellis MD, Snodgrass WR. 1990. Urine fluorescence using a Wood's lamp to detect the antifreeze additive sodium fluorescein: A qualitative adjunctive test in suspected ethylene glycol ingestions. *Ann Emerg Med* 19:663-667.
- Woodside MD. 1982. Ethylene glycol: Twenty-four month feeding in the diet of rats. Bushy Run Research Center, Union Carbide Chemicals and Plastics Co., Inc., Report No. 44-109.
- Woolf AD, Wynshaw-Boris A, Rinaldo P, et al. 1992. Intentional infantile ethylene glycol poisoning presenting as an inherited metabolic disorder. *J Pediatr* 120(3):421-424.
- Wu NM, Malinin TI. 1987. High performance liquid chromatography determination of ethylene glycol and ethylene chlorohydrin in tissues. *J Anal Toxicol* 11(2):63-66.

9. REFERENCES

- Yao HH, Porter WH. 1996. Simultaneous determination of ethylene glycol and its major toxic metabolite, glycolic acid, in serum by gas chromatography. *Clin Chem* 42(2):292-297.
- Young RHF, Ryckman DW, Buzzell JC. 1968. An improved tool for measuring biodegradability. *J Water Pollut Control Fed* 40(8, Part 2):354-368.
- Zabrodskii PF, Germanchuk VG. 2000. Immunotoxic effects during acute ethylene glycol poisoning. *Bull Exp Biol Med* 130(10):967-968.
- Zabrodskii PF, Kirichuk VF, Germanchuk VS, et al. 2003. Suppression of natural killer cells after acute intoxication with alcohols and cholinotropic preparations and their reactivation with T-Activin. *Bull Exp Biol Med* 135(1):3369-371.
- Zeiger E, Anderson B, Haworth S, et al. 1987. Salmonella mutagenicity tests: III. Results from the testing of 255 chemicals. *Environ Mutagen* 9(Suppl 9):1-109.
- Zeiss J, Velasco ME, McCann KM, et al. 1989. Cerebral CT of lethal ethylene glycol intoxication with pathologic correlation. *Am J Neuroradiol* 10(2):440-442.
- Ziegler EE, Edwards BB, Jensen RL, et al. 1978. Absorption and retention of lead by infants. *Pediatr Res* 12(1):29-34.