

8. REFERENCES

- * ACGIH. 1986. Documentation of the threshold limit values and biological exposure indices. 5th ed. American Conference of Governmental Industrial Hygienists. Cincinnati, OH.

Ackerman DG, Haro MT, Richard G, et al. 1980. Health impacts, emissions, and emission factors for noncriteria pollutants subject to de minimis guidelines and emitted from stationary conventional combustion processes. Report to U.S. Environmental Protection Agency, Research Triangle Park, NC, by TRW, Redondo Beach, CA, and Battelle, Columbus, OH. EPA-450/2-80-074. NTIS No. PB80-221237.
- * Adams DF, Farwell SO, Pack MR, et al. 1979. Preliminary measurements of biogenic sulfur-containing gas emissions from soils. J Air Pollut Control Assoc 29:380-382.
- * AGA. 1983. Odorization manual. Arlington, VA: American Gas Association, 1, 14, 15. Catalog No. X00683.

Ahmed K, Zieve L, Quarfoth G. 1984. Effects of methanethiol on erythrocyte membrane stabilization and on Na⁺,K⁺-adenosine triphosphatase: Relevance to hepatic coma. J Pharmacol Exp Ther 228:103-108.

Al Mardini H, Bartlett K, Record CO. 1981. An improved gas chromatographic method for the detection and quantitation of mercaptans in blood. Clin Chim Acta 113:35-41.
- * Al Mardini H, Bartlett K, Record CO. 1984. Blood and brain concentrations of mercaptans in hepatic and methanethiol induced coma. Gut 25:284-290.
- * Amooore 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 3:272-290.

Anbar M, Bambenek M, Ross AB. 1973. Selected specific rates of reactions of transients from water in aqueous solution. I. Hydrated electron. Washington, DC: Department of Commerce, National Bureau of Standards. NSRDS-NBS-43.
- * ASTM. 1987. Standard recommended practices for sampling atmospheres for analysis of gases or vapors - method D 1605-60. Philadelphia, PA: In: American Society for Testing and Materials. 1987 Annual book of ASTM standards. Vol. 11.03. Atmospheric analysis; occupational health and safety 16-37.

- * Cited in text

8. REFERENCES

- * ASTM. -1988. Standard method for measuring volatile organic matter by aqueous-injection gas chromatography - method D 2908-87. In: Philadelphia, PA: American Society for Testing and Materials. 1988 Annual book of ASTM standards, Vol. 11.02. Water (II) 46-51.
- * Atkinson R, Perry RA, Pitts JN Jr. 1977. Rate constants for the reaction of the OH radical with CH₃SH and CH₃NH₂, over the temperature range 426°K. J Chem Phys 66:1578-1581.
- * Badings HT, DeJong C, Dooper RP. 1985. Automatic system for rapid analysis of volatile compounds by purge-and-cold trapping/capillary gas chromatography. J High Resolut Chromatogr Chromatogr Commun 8:755-763.
- * Balla RJ, Heicklen J. 1985. Oxidation of sulfur compounds. 5. Rate coefficients for the CH₃SH-NO₂, reaction. J Phys Chem 89:4596-4600.

Barnes I, Bastian V, Becker KH. 1987. Products and kinetics of the OH initiated oxidation of SO₂ CH₃SH, DMS, DMDS, and DMSO. In: Angelletti G, Restelli G, eds. Physico-chemical behaviour of atmospheric pollutants. Dordrecht, The Netherlands: D. Reidel Publishing Company, 327-337.
- * Barnes D, Bellin J, DeRosa C, et al. 1988. Reference dose (RfD): Description and use in health risk assessments. Vol. I. Appendix A: Integrated risk information system supportive documentation. Washington, DC U.S. Environmental Protection Agency, Office of Health and Environmental Assessment. EPA/600/8-86/032a.
- * Berkow R, Bondy DC, Bondy PK, et al. 1982. The Merck manual of diagnosis and therapy. 14th ed. Rahway, NJ: Merck Sharp and Dohme Research Laboratories, 1087, 1844, 2277.
- * Blom HJ, Tangerman A. 1988. Methanethiol metabolism in whole blood. J Lab Clin Med 111:606-610.
- * Blom HJ, van den Elzen JP, Yap SH, et al. 1988. Methanethiol and dimethylsulfide formation from 3-methylthiopropionate in human and rat hepatocytes. Biochim Biophys Acta 972:131-136.
- * Blom HJ, Boers GH, van den Elzen JP, et al. 1989. Transamination of methionine in humans. Clin Sci 76:43-49.
- * Brettell TA, Grob RL. 1985. Cryogenic techniques in gas chromatography. American Laboratory (October):19-65.
- * Bronstein AC, Currance PL. 1988. Emergency care for hazardous materials exposure. St. Louis, MO: The C.V. Mosby Company, 66, 169-170.

8. REFERENCES

- * Calabrese EJ. 1986. Ecogenetics: Historical foundation and current status. *J Occup Med* 28:1096-1102.
- * Canellakis ES, Tarver H. 1953. The metabolism of methyl mercaptan in the intact animal. *Arch Biochem Biophys* 42:446-455.
- * Challenger F, Walshe JM. 1955. Methyl mercaptan in relation to foetor hepaticus. *Biochem J* 59:372-375.
- Ciccioli P, Bertoni G, Brancaleoni E, et al. 1976. Evaluation of organic pollutants in the open air and atmospheres in industrial sites using graphitized carbon black traps and gas chromatographic - mass. Spectrometric analysis with specific detectors. *J Chromatogr* 126:57-770
- * CLPSD. 1986. Contract Laboratory Program Statistical Database. Viar and Company, Management Services Division, Alexandria, VA. June 1986.
- * Cox RA, Sheppard D. 1980. Reactions of OH radicals with gaseous sulphur compounds. *Nature* 284:330-331.
- Cristescu V. 1941. A case of poisoning with mercaptans. *Med Bull Standard Oil Co J* 5:78-84.
- * Cupitt LT. 1980. Fate of toxic and hazardous materials in the air environment. Research Triangle Park, NC: U.S. Environmental Protection Agency, Office of Research and Development. EPA-600/3-80-084. NTIS No. PB80-221948.
- Derr RF, Zieve L. 1982. Methanethiol and fatty acids depress urea synthesis by the isolated perfused rat liver. *J Lab Clin Med* 100:585-592.
- * Derr RF, Draves K. 1983. Methanethiol metabolism in the rat. *Res Commun Chem Pathol Pharmacol* 39:503-506.
- * Derr RF, Draves K. 1984. The time course of methanethiol in the rat. *Res Commun Chem Pathol Pharmacol* 46:363-369.
- * De Souza TL. 1987. Dedicated automatic gas chromatograph for monitoring sulphur gases. *J Chromatogr* 395:413-422.
- * Dlugokencky EJ, Howard CJ. 1988. Laboratory studies of NO, radical reactions with some atmospheric sulfur compounds. *J Phys Chem* 92:1188-1193.
- Doizaki WM, Zieve L. 1977. Method for measuring methanethiol in blood using zinc as reducing agent and utilizing a sensitive gas chromatograph. [Abstract]. *J Lab Clin Med* 90:849-855.

8. REFERENCES

- * Dumont JP, Adda J. 1978. Occurrence of sesquiterpenes in mountain cheese volatiles. *J Agric Food Chem* 26:364-367.
- * Ellenhorn MJ, Barceloux DG. 1988. *Medical toxicology: Diagnosis and treatment of human poisoning*. New York, NY: Elsevier Science Publishing Company, Inc.

Enarson DA, Yeung M. 1985. Determinants of changes in FEV₁ over a workshift. *Br J Ind Med* 42:202-204.
- * EPA. 1983. *Treatability manual. Vol. I. Treatability data*. Washington, DC: U.S. Environmental Protection Agency, Office of Research and Development. EPA-600/2-82-001a.

EPA. 1985. Methyl mercaptan. In: *EPA chemical profiles*. Washington, DC: U.S. Environmental Protection Agency, Office of Toxic Substances.
- * EPA. 1986. Gas chromatography/mass spectrometry for volatile organics - method 8240. In: *Test methods for evaluating solid waste. 3rd ed. SW-846*. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, DC.
- * EPA. 1987a. U.S. Environmental Protection Agency: Part II. Federal Register 52:13400.
- * EPA. 1987b. Toxic air pollutant/source crosswalk: A screening tool for locating possible sources emitting toxic air pollutants. Research Triangle Park, NC: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. EPA-450/4-87-023a.
- * EPA. 1989a. U.S. Environmental Protection Agency: Part V. Federal Register 54:33461.
- * EPA. 1989b. Interim methods for development of inhalation reference doses. Washington, DC: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment. EPA 600/8-88/066F.
- * EPA. 1989c. U.S. Environmental Protection Agency: Part II. Federal Register 54:48417-48478.

Fairchild EJ, Stokinger HE. 1958. Toxicologic studies on organic sulfur compounds: 1. Acute toxicity of some aliphatic and aromatic thiols (mercaptans). *Ind Hyg J* 19:171-189.
- * Farwell SO, Sherrard AE, Pack MR, et al. 1979. Sulfur compounds volatilized from soils at different moisture contents. *Soil Biol Biochem* 11:411-415.

8. REFERENCES

- Finkelstein A. 1985. Alterations in protein function by methanethiol: Relationship to methionine toxicity. *Diss Abstr Int B* 46:1874B-1875B.
- Finkelstein A, Benevenga NJ. 1986. The effect of methanethiol and methionine toxicity on the activities of cytochrome c oxidase and enzymes involved in protection from peroxidative damage. *J Nutr* 116:204-215.
- Foster D, Ahmed K, Zieve L. 1974. Action of methanethiol on Na⁺, K⁺-ATPase: Implications for hepatic coma. *Ann N Y Acad Sci* 242:573-576.
- Garrett S, Fuerst R. 1974. Sex linked mutations in Drosophila after exposure to various mixtures of gas atmospheres. *Environ Res* 7:286-293.
- * Goldfrank IX, Flomenbaum NE, Lewin NA, Weisman RS, Howland MA. 1990. *Toxicologic Emergencies*. Norwalk, CT: Appleton and Lang.
- * Goldstein A, Aronow L, Kalman SM. 1974. *Principles of drug action: The basis of pharmacology*. 2nd ed. New York, NY: John Wiley and Sons, 394, 450-452.
- Gosselin RE, Smith RP, Hodge HC, et al. 1984. *Clinical toxicology of commercial products*. 5th ed. Baltimore, MD: Williams and Wilkins, 115-116.
- * Graedel TE. 1978. Sulfur-containing compounds. In: *Chemical compounds in the atmosphere*. New York, NY: Academic Press, 306-309.
- * Green DR, Le Pape D. 1987. Stability of hydrocarbon samples on solid-phase extraction columns. *Anal Chem* 59:699-703.
- Grey TC, Shrimpton DH. 1967. Volatile components of raw chicken breast muscle. *Br Poult Sci* 8:23-33.
- * Grosjean D. 1984. Photooxidation of methyl sulfide, ethyl sulfide, and methanethiol. *Environ Sci Technol* 18:460-468.
- * Haines WE, Cook GL, Ball JS. 1956. Gaseous decomposition products formed by the action of light on organic sulfur compounds. *J Am Chem Soc* 78:5213-5215.
- * Hassett JJ, Banwart WL, Griffin RA. 1983. Correlation of compound properties with sorption characteristics of nonpolar compounds by soils and sediments: Concepts and limitations. In: Francis CW, Auerbach SI, Jacobs VA, eds. *Environment and solid wastes: Characterization, treatment, and disposal*. Boston, MA: Butterworths, 161-176.
- * Hatakeyama S, Akimoto H. 1983. Reactions of OH radicals with methanethiol, dimethyl sulfide, and dimethyl disulfide in air. *J Phys Chem* 87:2387-2395.

8. REFERENCES

- * Hayward NJ, Jeavons TH, Nicholson AJ, et al. 1977. Methyl mercaptan and dimethyl disulfide production from methionine by *Proteus* species detected by head-space gas-liquid chromatography. *J Clin Microbiol* 6:187-194.
- * Hine J, Mookerjee PK. 1975. The intrinsic hydrophilic character of organic compounds. Correlations in terms of structural contributions, *J Org Chem* 40:292-298.
- * HSDB. 1989. Hazardous Substances Data Bank. National Library of Medicine, National Toxicology Information Program, Bethesda, MD. September 5, 1989.
- * Hynes AJ, Wine PH. 1987. Kinetics of the OH + CH₃SH reaction under atmospheric conditions. *J Phys Chem* 91:3672-3676.
- IRPTC. 1989. International Register of Potentially Toxic Chemicals. United Nations Environment Programme, Geneva, Switzerland. September 1989.
- * Johnson PW, Tonzetich J. 1985. Sulfur uptake by type I collagen from methyl mercaptan, dimethyl disulfide air mixtures. *J Dent Res* 64:1361-1364.
- * Junk GA, Ford CS. 1980. A review of organic emissions from selected combustion processes. *Chemosphere* 9:187,199,216-230.
- * Kangas J, Ryosa H. 1988. The analysis of reduced sulphur gases in ambient air of workplaces. *Chemosphere* 17:905-914.
- * Kangas J, Jappinen P, Savolainen H. 1984. Exposure to hydrogen sulfide, mercaptans and sulfur dioxide in pulp industry. *Am Ind Hyg Assoc J* 45:787-790.
- * Kenaga EE. 1980. Predicted bioconcentration factors and soil sorption coefficients of pesticides and other chemicals. *Ecotoxicol Environ Safety* 4:26-38.
- * Key MM, Henschel J, Butler RN, et al. 1977. Occupational diseases. A guide to their recognition. Washington, DC: National Institute for Occupation Safety and Health, 310-312.
- Kiene RP. 1988. Dimethylsulfide metabolism in salt marsh sediments. *FEMS Microbiol (Ecol)* 53:71-78.
- * Kinlin TE, Muralidhara R, Pittet AO, et al. 1972. Volatile components of roasted filberts. *J Agr Food Chem* 20:1021-1028.
- Klingberg J, Beviz A, Ohlson CG, et al. 1988. Disturbed iron metabolism among workers exposed to organic sulfides in a pulp plant. *Stand J Work Environ Health* 14:17-20.

8. REFERENCES

- * Knarr R, Rappaport SM. 1980. Determination of methanethiol at parts-permillion air concentrations by gas chromatography. Anal Chem 52:733-736.
- * Krill RM, Sonzogni WC. 1986. Chemical monitoring of Wisconsin's groundwater. J Am Water Works Assoc 78:70-75.
- Lee JH, Tang IN. 1983. Absolute rate constants for the hydroxyl radical reactions with CH₃SH and C₂H₅SH at room temperature. J Chem Phys 78:6646-6649.
- Ljunggren G, Norberg B. 1943. On the effect and toxicity of dimethyl sulfide, dimethyl disulfide and methyl mercaptan. Acta Physiol Stand 5:248-255.
- * Mabey WR, Smith JH, Pod011 RT, et al. 1982. Aquatic fate process data for organic priority pollutants. Report to U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Washington, DC, by SRI International, Menlo Park, CA. EPA 440/4-81-014. NTIS No. PB87-169090.
- * MacLeod H, Jourdain JL, Poulet G, et al. 1984. Kinetic study of reactions of some organic sulfur compounds with OH radicals. Atmos Environ 18:2621-2626.
- * MacLeod H, Aschmann SM, Atkinson R, et al. 1986. Kinetics and mechanisms of the gas phase reactions of the NO₂ radical with a series of reduced sulfur compounds. Washington, DC: National Bureau of Standards. Special Publication #716.
- * Manahan SE. 1989. Toxicological Chemistry. Chelsea, MI: Lewis Publishers, Inc., 77-81.
- Marks GS. 1985. Exposure to toxic agents: The heme biosynthetic pathway and hemoproteins as indicator. CRC Crit Rev Toxicol 15:151-179.
- * McCune EG. 1990. Written communication (April 16) to Barry L. Johnson, Agency for Toxic Substances and Disease Registry, regarding emissions from toxic air pollutants. Department of Environment, Health, and Natural Resources, State of North Carolina, Raleigh, NC.
- * Michael LC, Pellizzari ED, Wiseman RW. 1988. Development and evaluation of a procedure for determining volatile organics in water. Environ Sci Technol 22:565-570.
- * NAS/NRC. 1989. Biologic markers in reproductive toxicology. Washington, DC: National Academy of Sciences, National Research Council, National Academy Press.

8. REFERENCES

- * NATICH. 1989. National Air Toxics Information Clearinghouse: NATICH data base report on state, local and EPA air toxics activities. July, 1989. Report to U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC, by Radian Corporation, Austin, TX, EPA-450/3-89-29.

Ng W, Tonzetich J. 1984. Effect of hydrogen sulfide and methyl mercaptan on the permeability of oral mucosa. J Dent Res 63:994-997.

- * NIOSH. 1985. Pocket guide to chemical hazards. Washington, DC: U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health. DHHS (NIOSH) Publication No. 85-114.
- * Nip WS, Singleton DL, Cvetanovic RJ. 1981. Gas-phase reactions of O(³P) atoms with methanethiol, ethanethiol, methyl sulfide, and dimethyl disulfide. 1. Rate constants and Arrhenius parameters. J Am Chem Soc 103:3526-3530.
- * NLM . 1989. Chemline. National Library of Medicine, Bethesda, MD. September 5, 1989.
- * NOES. 1989. National Occupational Exposure Survey. National Institute of Occupational Safety and Health, Cincinnati, OH. October 18, 1989.
- * NOHS. 1989. National Occupational Hazard Survey. National Institute of Occupational Safety and Health, Cincinnati, OH. October 18, 1989.

Oberton AC, Stack VT. 1957. Biochemical oxygen demand of organic chemicals. Sew Ind Wastes 29:1267-1272.

- * Okita T. 1970. Filter method for the determination of trace quantities of amines, mercaptans, and organic sulfides in the atmosphere. Atmos Environ 4:93.
- * OSHA. 1989. Occupational Safety and Health Administration: Part III. Federal Register 54:2945.

Pitts JN Jr, Winer AM, Darnall KR, et al. 1977. Hydrocarbon reactivity and the role of hydrocarbons, oxides of nitrogen, and aged smog in the production of photochemical oxidants. In: Dimitriades B, ed. International conference on photochemical oxidant pollution and its control. Proceedings: Volume II. Research Triangle Park, NC: U.S. Environmental Protection Agency, Office of Research and Development.

Proctor NH, Hughes JP, Fischman ML. 1988. Chemical hazards of the workplace. 2nd ed. Philadelphia, PA: J.B. Lippincott Company.

Quarfoth G, Ahmed K, Foster D, et al. 1976. Action of methanethiol on membrane (Na⁺,K⁺)-ATPase of rat brain. Biochem Pharmacol 25:1039-1044.

8. REFERENCES

- * Reid EE. 1958. Mercaptans. In: Organic chemistry of bivalent sulfur. Vol. 1. New York, NY: Chemical Publishing Company, Inc., 16-19, 58-59, 62-63.
- Rimbault A, Niel P, Darbord JC, et al. 1986. Headspace gas chromatographic mass spectrometric analysis of light hydrocarbons and volatile organosulfur compounds in reduced-pressure cultures of Clostridium. J Chromatogr Biomed Appl 375:11-26.
- * Roy WR, Griffin RA. 1985. Mobility of organic solvents in water-saturated soil materials. Environ Geol Water Sci 7:241-247.
- * Rydell CD. 1990. Written communication (March 27) to Barry L. Johnson, Agency for Toxic Substances and Disease Registry, regarding classification of air contaminants. Department of Health and Consolidated Laboratories, State of North Dakota, Bismarck, ND.
- * Santodonato J, Bosch S, Meylan W, et al. 1985. Monograph on human exposure to chemicals in the workplace: Mercaptans. Report to National Cancer Institute, Bethesda, MD, by Syracuse Research Corporation, Center for Chemical Hazard Assessment, Syracuse, New York. Report No. SRC-TR-85-187. NTIS No. PB86-155090.
- * Sax NI, Lewis RJ. 1987. Hawley's condensed chemical dictionary. 11th ed. New York: Van Nostrand Reinhold Company, 752.
- Shackelford WM, Cline DM, Faas L, et al. 1983. An evaluation of automated spectrum matching for survey identification of wastewater components by gas chromatography-mass spectrometry. Anal Chim Acta 146:15-27.
- * Shannon K, Buchanan GR. 1982. Severe hemolytic anemia in black children with glucose-6-phosphate dehydrogenase deficiency. Pediatrics 70:364-369.
- Sharpe ME, Law BA, Phillips BA, et al. 1977. Methanethiol production by coryneform bacteria: Strains from dairy and human skin sources and Brevibacterium linens. J Gen Microbiol 101:345-349.
- * Sheraton DF, Murray FE. 1981. Quantum yields in the photolytic oxidation of some sulfur compounds. Can J Chem 59:2750-2754.
- * Shults WT., Fountain EN, Lynch EC. 1970. Methanethiol poisoning: Irreversible coma and hemolytic anemia following inhalation. J Am Med Assoc 211:2153-2154.

8. REFERENCES

- * Sickles JE II, Wright RS. 1979. Atmospheric chemistry of selected sulfurcontaining compounds. Outdoor smog chamber study - phase I. Report to U.S. Environmental Protection Agency, Office of Research and Development, Research Triangle Park, NC, by Research Triangle Institute, Research Triangle Park, NC. EPA-600/7-79-227. NTIS No. PB81 141525.

Sittig M. 1985. Methyl mercaptan. In: Handbook of toxic and hazardous chemicals and carcinogens. 2nd ed. Park Ridge, NJ: Noyes Publications, 611-612.

- * Sklarew DS, Hayes DJ, Peterson MR, et al. 1984. Trace sulfur-containing species in the offgas from two oil shale retorting processes. Environ Sci Technol 18:592-600.
- * Slagle IR, Graham RE, Gutman D. 1976. Direct identification of reactive routes and measurement of rate constants in the reactions of oxygen atoms with methanethiol, ethanethiol, and methylsulfide. Int J Chem Kinetics 8:451-458.
- * Smith KA, Bremner JM, Tabatabai MA. 1973. Sorption of gaseous atmospheric pollutants by soils. Soil Science 116:313-319.
- * Smith RD. 1988. Supercritical fluid chromatography. Anal Chem 60:1394A.

SRI. 1986. Directory of chemical producers: United States of America. Menlo Park, CA: SRI International, 811.

- * SRI. 1987. Directory of chemical producers: United States of America. Menlo Park, CA: SRI International, 798.
- * SRI. 1988. Directory of chemical producers: United States of America. Menlo Park, CA: SRI International, 783.
- * SRI. 1989. Directory of chemical producers: United States of America. Menlo Park, CA: SRI International, 787.
- * Stutz DR, Janusz SJ. 1988. Hazardous materials injuries: A handbook for pre-hospital care. 2nd ed. Beltsville, MD: Bradford Communications Corporation, 396-397.
- * Susman JL, Hornig JF, Thomae SC, et al. 1978. Pulmonary excretion of hydrogen sulfide, methanethiol, dimethyl sulfide and dimethyl disulfide in mice. Drug Chem Toxicol 1:327-338.
- * Tangerman A. 1986. Determination of volatile sulfur compounds in air at the parts-per-trillion level by Tenax" trapping and gas chromatography. J Chromatogr 366:205-216.

8. REFERENCES

- * Tangerman A, Meuwese-Arends MT, van Tongeren JH. 1983. A new sensitive assay for measuring volatile, sulphur compounds in human breath by Tenax trapping and gas chromatography and its application in liver cirrhosis. *Clin Chim Acta* 130:103-110.
- * Tangerman A, Meuwese-Arends MT, van Tongeren JH. 1985. New methods for the release of volatile sulfur compounds from human serum: Its determination by Tenax trapping and gas chromatography and its application in liver diseases. *J Lab Clin Med* 106:175-182.
- * Tansy MF, Kendall FM, Fantasia J, et al. 1981. Acute and subchronic toxicity studies of rats exposed to vapors of methyl mercaptan and other reduced-sulfur compounds. *J Toxicol Environ Health* 8:71-88.
- Tenhunen R, Savolainen H, Jappinen P. 1983. Changes in haem synthesis associated with occupational exposure to organic and inorganic sulphides. *Clin Sci* 64:187-191.
- Tonzetich J, Ng SK. 1976. Reduction of malodor by oral cleansing procedures. *Oral Surg Oral Med Oral Pathol* 42:172-181.
- * TRI. 1989. Toxic Chemical Release Inventory. National Library of Medicine, National Toxicology Information Program, Bethesda, MD.
- USITC. 1987. Synthetic organic chemicals: United States production and sales, 1986. Washington, DC: U.S. International Trade Commission. USITC Publication 2009.
- USITC. 1988. Synthetic organic chemicals: United States production and Sales, 1987. Washington, DC: U.S. International Trade Commission. USITC Publication 2118.
- Vahlkamp T, Meijer AJ, Wilms J, et al. 1979. Inhibition of mitochondrial electron transfer in rats by ethanethiol and methanethiol. *Clin Sci* 56:147-156.
- * Van Langenhove H, Roelstraete K, Schamp N, et al. 1985. GC-MS identification of odorous volatiles in wastewater. *Water Res* 19:597-603.
- * Verschueren K. 1983. -Handbook of environmental data on organic chemicals. 2nd ed. New York: Van Nostrand Reinhold Company, 859.
- * View Database. 1989. Agency for Toxic Substances and Disease Registry (ATSDR), Office of External Affairs, Exposure and Disease Registry Branch, Atlanta, GA. September 25, 1989.
- Waller RL. 1977, Methanethiol inhibition of mitochondrial respiration. *Toxicol Appl Pharmacol* 42:111-117.

8. REFERENCES

- Weast RC, ed. 1985. CRC handbook of chemistry and physics. Boca Raton, FL: CRC Press, Inc., C-351, D-211.
- * Wieboldt RC, Adams GE, Later DW. 1988. Sensitivity improvement in infrared detection for supercritical fluid chromatography. *Anal Chem* 60:2422-2427.
- Wilms J, Lub J, Wever R. 1980. Reactions of mercaptans with cytochrome c oxidase and cytochrome c. *Biochim Biophys Acta* 589:324-335.
- * Windholz M, ed. 1983. The Merck index: An encyclopedia of chemicals, drugs, and biologicals. 10th ed. Rahway, NJ: Merck and Company, Inc., 853.
- * Wine PH, Thompson RJ, Semmes DH. 1984. Kinetics of OH reactions with aliphatic thiols. *Int J Chem Kinetics* 16:1623-1636.
- * Yabroff DL. 1940. Extraction of mercaptans with alkaline solutions. *Ind Eng Chem* 32:257-262.
- * Zieve L. 1981. The mechanism of hepatic coma. *Hepatology* 1:360-365.
- * Zieve L, Doizaki WM, Zieve FJ. 1974. Synergism between mercaptans and ammonia or fatty acids in the production of coma: A possible role for mercaptans in the pathogenesis of hepatic coma. *J Lab Clin Med* 83:16-28.
- * Zieve L, Doizaki WM, Lyftogt C. 1984. Brain methanethiol and ammonia concentrations in experimental hepatic coma and coma induced by injections of various combinations of these substances. *J Lab Clin Med* 104:655-664.
- * Zinder SH, Brock TD. 1978. Production of methane and carbon dioxide from methane thiol and dimethyl sulfide by anaerobic lake sediments. *Nature* 273:226-228.