9. REFERENCES

ACGIH. 2008. Styrene. Threshold limit values for chemical substances and physical agents and biological exposure indices. Cincinnati, OH: American Conference of Governmental Industrial Hygienists, 53, 108.

Adgate JL, Church TR, Ryan AD, et al. 2004. Outdoor, indoor, and personal exposure to VOCs in children. Environ Health Perspect 112:1386-1392.

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.

Agrawal AK, Srivastava SP, Seth PK. 1982. Effect of styrene on dopamine receptors. Bull Environ Contam Toxicol 39:400-403.

Ahlborg G, Bjerkedal T, Egenaes J. 1987. Delivery outcome among women employed in the plastics industry in Sweden and Norway. Am J Ind Med 12:507-517.

AIHA. 1995. Styrene. Emergency Response Planning Guidelines (ERPG). Fairfax, VA: American Industrial Hygiene Association.

Alarie Y. 1973. Sensory irritation of the upper airways by airborne chemicals. Toxicol Appl Pharmacol 24:279-297.

Ali SF, Hong JS, Wilson WE, et al. 1983. Effect of acrylamide on neurotransmitter metabolism and neuropeptide levels in several brain regions and upon circulating hormones. Arch Toxicol 52:35-43.

Aliberti LM, Severini G. 1987. Urinary enzyme excretion in subjects exposed to styrene. Ann Clin Biochem 24:114.

Al-Mudhaf JF, Alsharifi FA, Abu-Shady ASI. 2009. A survey of organic contaminants in household and bottled drinking water in Kuwait. Sci Total Environ 407(5):1658-1668.

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.

Amoore JE, Hautala E. 1983. Odor as an aid to chemical safety: Odor thresholds compared with threshold limit values and volatilities for 214 industrial chemicals in air and water dilution. J Appl Toxicol 3:272-290.

---

* Not cited in text

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, Gargas ML, et al. 1987a. Physiologically based pharmacokinetics and the risk assessment process for methylene chloride. Toxicol Appl Pharmacol 87(2):185-205.

Andersson HC, Tranberg EA, Uggla AH, et al. 1980. Chromosomal aberrations and sister-chromatid exchanges in lymphocytes of men occupationally exposed to styrene in a plastic-boat factory. Mutat Res 73:387-401.

Antilla A, Pukkala E, Riala R, et al. 1998. Cancer incidence among Finnish workers exposed to aromatic hydrocarbons. Int Arch Occup Environ Health 71:187-193.

Antoine SR, DeLeon IR, O'Dell-Smith RM. 1986. Environmentally significant volatile organic pollutants in human blood. Bull Environ Contam Toxicol 36:364-371.

Anwar WA, Shamy MY. 1995. Chromosomal aberrations and micronuclei in reinforced plastics workers exposed to styrene. Mutat Res 327:41-47.

Apostoli P, Brugnone F, Perbellini L, et al. 1983. Occupational styrene exposure: Environmental and biological monitoring. Am J Ind Med 4:741-754.

Arfini G, Mutti A, Vescovi P, et al. 1987. Impaired dopaminergic modulation of pituitary secretion in workers occupationally exposed to styrene: Further evidence from PRL response to TRH stimulation. J Occup Med 29:826-830.

Arnedo-Pena A, Bellido-Blasco J, Villamarin-Vazquez JL, et al. 2003. Acute health effects after accidental exposure to styrene from drinking water in Spain. Environ Health 2(6):1-9.

Artuso M, Angotzi G, Bonassi S, et al. 1995. Cytogenetic biomonitoring of styrene-exposed plastic boat builders. Arch Environ Contam Toxicol 29:270-274.

Ashley DL, Bonin MA, Cardinali FL, et al. 1992. Determining volatile organic compounds in human blood from a large sample population by using purge and trap gas chromatography/mass spectrometry. Anal Chem 64:1021-1029.

Assmuth T, Kalevi K. 1992. Concentrations and toxicological significance of trace organic compounds in municipal solid waste landfill gas. Chemosphere 24(9):1207-1216.

ASTM. 1988a. D 3686-84. Standard practice for sampling atmospheres to collect organic compound vapors. (Activated charcoal tube adsorption method). In: Storer RA, Cornillot JL, Richardson D, et al., eds. 1988 Annual book of ASTM standards. Vol. 11.03. Section 11: Water and environmental technology. Philadelphia, PA: American Society for Testing and Materials, 234-240.

ASTM. 1988b. D3687-84. Standard practice for analysis of organic compound vapors collected by the activated charcoal tube absorption method. In: Storer RA, Cornillot JL, Richardson D, et al., eds. 1988 Annual book of ASTM standards. Vol. 11.03. Section 11. Water and environmental technology. Philadelphia, PA: American Society for Testing and Materials, 241-246.

9. REFERENCES

Atkinson R, Arey J. 2003. Atmospheric degradation of volatile organic compounds. Chem Rev 103:4605-4638.

Atkinson R, Aschmann SM, Fitz DR, et al. 1982. Rate constants for the gas-phase reactions of O_3 with selected organics at 296K. Int J Chem Kinet 14:13-18.

*Axelson O, Gustavson J. 1978. Some hygienic and clinical observations on styrene exposure. Scand J Work Environ Health 4:215-219.

Ban M, Langonne I, Huguet N, et al. 2006. Inhaled chemicals may enhance allergic airway inflammation in ovalbumin-sensitised mice. Toxicology 226:161-171.

Banerjee S, Yalkowsky SH, Valvani SC. 1980. Water solubility and octanol/water partition coefficients of organics. Limitations of the solubility-partition coefficient correlation. Environ Sci Technol 14:1227-1229.

Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessments. Regul Toxicol Pharmacol 8(4):471-486.

Bartolucci GB, De Rosa E, Gori GP, et al. 1986. Biomonitoring of occupational exposure to styrene. Appl Ind Hyg 1:125-131.

Barua R, Chi LH, Fitzpatrick R, et al. 2008. Determination of volatile organic compounds in biological samples using headspace solid-phase microextraction and gas chromatography: Toluene and styrene. J Anal Toxicol 32(5):379-386.

Baselt RC. 1988a. Styrene. In: Biological monitoring methods for industrial chemicals. 2nd ed. Littleton, MA: PSG Publishing, Inc., 265-267.

Baselt RC. 1988b. Ethylbenzene. In: Biological monitoring methods for industrial chemicals. 2nd ed. Littleton, MA: PSG Publishing, Inc., 146-148.

Basirov AA. 1975. [Biochemical indexes of the gastric juice in the early diagnosis of stomach illness under the effect of toxic substances (1,3-butadiene and styrene).] Azerb Med Zh 52:60-66. (Russian)

Behari M, Choudhary C, Roy S, et al. 1986. Styrene-induced peripheral neuropathy: A case report. Eur Neurol 25:424-427.

Beliles RP, Butala JH, Stack CR, et al. 1985. Chronic toxicity and three-generation reproduction study of styrene monomer in the drinking water of rats. Fundam Appl Toxicol 5:855-868.

Belvedere G, Tursi F. 1981. Styrene oxidation to styrene oxide in human blood erythrocytes and lymphocytes. Res Commun Chem Pathol Pharmacol 33:273-282.

Benignus VA, Geller AM, Boyes WK, et al. 2005. Human neurobehavioral effects of long-term exposure to styrene: A meta-analysis. Environ Health Perspect 113:532-538.

*Bergamaschi E, Mutti A, Cavazzini S, et al. 1995a. Peripheral markers of neurochemical effects among styrene-exposed workers. Neurotoxicology 16(3):545.

Bergamaschi E, Mutti A, Cavazzini S, et al. 1996. Peripheral markers of neurochemical effects among styrene-exposed workers. Neurotoxicology 17(3-4):753-759.

Bergamaschi E, Smargiassi A, Mutti A, et al. 1995b. Immunological changes among workers occupationally exposed to styrene. Int Arch Occup Environ Health 67:165-171.

Bergamaschi E, Smargiassi A, Mutti A, et al. 1997. Peripheral markers of catecholaminergic dysfunction and symptoms of neurotoxicity among styrene-exposed workers. Int Arch Occup Environ Health 69:209-214.

Berger GS, ed. 1994. Epidemiology of endometriosis. In: Endometriosis: Modern surgical management of endometriosis. New York, NY: Springer-Verlag, 3-7.

Berode M, Droz PO, Guillemin M. 1985. Human exposure to styrene: VI. Percutaneous absorption in human volunteers. Int Arch Occup Environ Health 55:331-336.

BFR. 2006. High daily intakes of cinnamon: Health risks cannot be ruled out. Bundesinstitut fur Risikobewertung. BfR Health Assessment No. 044/2006. http://www.bfr.bund.de/cm/245/high_daily_intakes_of_cinnamon_health_risk_cannot_be_ruled_out.pdf. August 17, 2007.

Bigbee WL, Grant SG, Langlois RG, et al. 1996. Glycophorin a somatic cell mutation frequencies in Finnish reinforced plastics workers exposed to styrene. Cancer Epidemiol Biomarkers Prev 5:801-810.

Bignozzi CA, Maldotti A, Chiorboli C, et al. 1981. Kinetics and mechanisms of reactions between aromatic olefins and hydroxyl radicals. Int J Chem Kinet 13:1235-1242.

Biró A, Pallinger E, Major J, et al. 2002. Lymphocyte phenotype analysis and chromosome aberration frequency of workers occupationally exposed to styrene, benzene, polycyclic aromatic hydrocarbons or mixed solvents. Immunol Lett 81:133-140.

Bond GG, Bodner KM, Olsen GW, et al. 1992. Mortality among workers engaged in the development or manufacture of styrene-based products-an update. Scand J Work Environ Health 18:145-154.

Bond JA. 1989. Review of toxicology of styrene. CRC Crit Rev Toxicol 19:227-249.

Bouwer EJ, McCarty PL. 1984. Modeling of trace organics biotransformation in the subsurface. Ground Water 22:433-440.

Braun-Lüllemann A, Majcherczyk A, Huttermann A. 1997. Degradation of styrene by white-rot fungus. Appl Microbiol Biotechnol 47:150-155.

Bridie AL, Wolff CJ, Winter M. 1979. BOD and COD of some petrochemicals. Water Res 13:627-630.

Bronstein AC, Currance PL. 1988. Emergency care for hazardous materials exposure. St. Louis, MO: The C.V. Mosby Company, 221-222.

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

Brugnone F, Perbellini L, Wang GZ, et al. 1993. Blood styrene concentrations in a "normal" population and in exposed workers 16 hours after the end of the workshift. Int Arch Occup Environ Health 65:125-130.

Bunce NJ, Dryfhout HG. 1992. Diurnal and seasonal modeling of the tropospheric half-lives of polycyclic aromatic hydrocarbons. Can J Chem 70:1966-1970.

Burback BL, Perry JJ. 1993. Biodegradation and biotransformation of groundwater pollutant mixtures by *Mycobacterium vaccae*. Appl Environ Microbiol 59(4):1025-1029.

Bushnell PJ. 1994. Styrene impairs serial spatial reversal learning in rats. J Am Coll Toxicol 13(4):279-300.

Calabrese G, Martini A, Sessa G, et al. 1996. Otoneurological study in workers exposed to styrene in the fiberglass industry. Int Arch Occup Environ Health 68(4):219-223.

Campagna D, Gobba F, Mergler D, et al. 1996. Color vision loss among styrene-exposed workers neurotoxicological threshold assessment. Neurotoxicology 17(2):367-373.

Campagna D, Mergler D, Huel G, et al. 1995. Visual dysfunction among styrene-exposed workers. Scand J Work Environ Health 21:382-390.

Campo P, Lataye R, Loquet G, et al. 2001. Styrene-induced hearing loss: A membrane insult. Hear Res 154(1-2):170-180.

Canter LW, Sabatini DA. 1994. Contamination of public ground water supplies by Superfund sites. Int J Environ Stud 46:35-57.

Cantoni L, Salmona M, Facchinetti T, et al. 1978. Hepatic and extrahepatic formation and hydration of styrene oxide *in vitro* in animals of different species and sex. Toxicol Lett 2:179-186.

Carlson EM, Erskine MG. 1973. Styrene. Chemical economics handbook. Menlo Park, CA: Standford Research Institute.

Carlson GP, Mantick NA, Powley MW. 2000. Metabolism of styrene by human liver and lung. J Toxicol Environ Health A 59:591-595.

Carlsson A. 1981. Distribution and elimination of 14-C styrene in rat. Scand J Work Environ Health 7:45-50.

Carpenter CP, Shaffer CB, Weil CS, et al. 1944. Studies on the inhalation of 1,3-butadiene; with a comparison of its narcotic effect with benzol, toluol, and styrene, and a note on the elimination of styrene by the human. J Ind Hyg Toxicol 26:69-78.

Castillo L, Baldwin M, Sassine MP, et al. 2001. Cumulative exposure to styrene and visual functions. Am J Ind Med 39:351-360.

CEFIC. 2008. Styrene monomer: Environmental, health, safety, transport and storage guidelines. European Chemical Industry Council. http://www.styrenemonomer.org/environment-health-safety-guidelines.pdf. March 25, 2009.

*Chakrabarti SK, Labelle L, Tuchweber B. 1987. Studies on the subchronic nephrotoxic potential of styrene in Sprague-Dawley rats. Toxicology 44:355-365.

Chambers DM, McElprang DO, Waterhouse MG, et al. 2006. An improved approach for accurate quantitation of benzene, toluene, ethylbenzene, xylene, and styrene in blood. Anal Chem 78:5375-5383.

Checkoway H, Williams TM. 1982. A hematology survey of workers at a styrene-butadiene synthetic rubber manufacturing plant. Am Ind Hyg Assoc J 43:164-169.

Checkoway H, Costa LG, Camp J, et al. 1992. Peripheral markers of neurochemical function among workers exposed to styrene. Br J Ind Med 49:560-565.

Chemical Week. 2008. Styrene. Product focus. Chem Week September 1/8:41.

Chen S. 2001. Styrene. In: Kirk-Othmer encyclopedia of chemical technology. John Wiley & Sons, Inc. http://www.mrw.interscience.wiley.com/emrw/9780471238966/kirk/article/styrchen.a01/current/pdf. May 30, 2007.

Chen GD, Chi LH, Kostyniak PJ, et al. 2007. Styrene induced alterations in biomarkers of exposure and effects in the cochlea: Mechanisms of hearing loss. Toxicol Sci 98(1):167-177.

Chen GD, Tanaka C, Henderson D. 2008. Relation between outer hair cell loss and hearing loss in rats exposed to styrene. Hear Res 243(1-2):28-34.

Cheng H, Sathiakumar N, Graff J, et al. 2007. 1,3-Butadiene and leukemia among synthetic rubber industry workers: Exposure-response relationships. Chem Biol Interact 166:15-24.

Cherry N, Waldron HA, Wells GG, et al. 1980. An investigation of the acute behavioral effects of styrene on factory workers. Br J Ind Med 37:234-240.

Chia SE, Jeyaratnam J, Ong CN, et al. 1994. Impairment of color vision among workers exposed to low concentrations of styrene. Am J Ind Med 26:481-488.

Chmielewski J, Renke W. 1975. Clinical and experimental studies on the pathogenesis of toxic effects of styrene. II. The effect of styrene on the respiratory system. Bull Inst Marit Trop Med Gdynia 26:299-302.

Cho SI, Damokosh AI, Ryan LM, et al. 2001. Effects of exposure to organic solvents on menstrual cycle length. J Occup Environ Med 43(6):565-575.

Chua SC, Lee BL, Liau LS, et al. 1993. Determination of mandelic acid and phenylglyoxylic acid in the urine and its use in monitoring of styrene exposure. J Anal Toxicol 17(3):129-132.

Clay P. 2004. Styrene monomer does not induce unscheduled DNA synthesis in the mouse liver following inhalation exposure. Mutagenesis 19(6):489-492.

Clewell HJ, Andersen ME. 1985. Risk assessment extrapolations and physiological modeling. Toxicol Ind Health 1(4):111-131.

Cocheo V, Bellomo ML, Bombi GG. 1983. Rubber manufacture: Sampling and identification of volatile pollutants. Am Ind Hyg Assoc J 44:521-527.

Coggon D, Osmond C, Pannett B, et al. 1987. Mortality of workers exposed to styrene in the manufacture of glass-reinforced plastics. Scand J Work Environ Health 13:94-99.

Coleman WE, Munch JW, Streicher RP, et al. 1984. The identification and measurement of components in gasoline, kerosene, and No. 2 fuel oil that partition into the aqueous phase after mixing. Arch Environ Contam Toxicol 13:171-178.

Colombani N, Mastrocicco M, Cargini A, et al. 2009. Modeling the fate of styrene in a mixed petroleum hydrocarbon plume. J Contam Hydrol 105(1-2):39-55.

Compton-Quintana PJ, Jensen RH, Bigbee WL, et al. 1993. Use of the glycophorin A human mutation assay to study workers exposed to styrene. Environ Health Perspect 99:297-301.

Conner MK, Alarie Y, Dombroske RL. 1980. Sister chromatid exchange in Murine alveolar macrophages, bone marrow, and regenerating liver cells induced by styrene inhalation. Toxicol Appl Pharmacol 55:37-42.

Conti B, Maltoni C, Perino G, et al. 1988. Long-term carcinogenicity bioassays on styrene administered by inhalation, ingestion and injection and styrene oxide administered by ingestion in Sprague-Dawley rats, and *para*-methylstyrene administered by ingestion in Sprague-Dawley rats and Swiss mice. Ann NY Acad Sci 534:203-234.

Correa SM, Torres AR, Arbilla G. 2004. Aromatic volatile organic compounds emissions in a tire recapping unit. Bull Environ Contam Toxicol 72:255-260.

CRISP. 2007. Styrene: Computer Retrieval of Information on Scientific Projects Database. Bethesda, MD: National Institutes of Health, Division of Research Grants.

Crofton KM, Lassiter TL, Rebert CS. 1994. Solvent-induced ototoxicity in rats: An atypical selective mid-frequency hearing deficit. Hear Res 80:25-30.

Crump D. 1995. Volatile organic compounds in indoor air. Issues Environ Sci Technol 4:109-124.

Cruzan G, Carlson GP, Johnson KA. 2002. Styrene respiratory tract toxicity and mouse lung tumors are mediated by CYP2F-generated metabolites. Regul Toxicol Pharmacol 35:308-319.

Cruzan G, Carlson GP, Turner M, et al. 2005b. Ring-oxidized metabolites of styrene contribute to styrene-induced Clara-cell toxicity in mice. J Toxicol Environ Health 68A:229-237.

Cruzan G, Cushman JR, Andrews LS, et al. 1997. Subchronic inhalation studies of styrene in CD rats and CD-1 mice. Fundam Appl Toxicol 35(2):152-165.

Cruzan G, Cushman JR, Andrews LS, et al. 1998. Chronic toxicity/oncogenicity study of styrene in CD rats by inhalation exposure for 104 weeks. Toxicol Sci 46:266-281.

Cruzan G, Cushman JR, Andrews LS, et al. 2001. Chronic toxicity/oncogenicity study of styrene in CD-1 mice by inhalation exposure for 104 weeks. J Appl Toxicol 21:185-198.

Cruzan G, Faber WD, Johnson KA, et al. 2005a. Developmental neurotoxicity study of styrene by inhalation in Crl-CD rats. Birth Defects Res B Dev Reprod Toxicol 74(3):221-232.

Csanády GA, Kessler W, Hoffmann HD, et al. 2003. A toxicokinetic model for styrene and its metabolite styrene-7,8-oxide in mouse, rat, and human with special emphasis on the lung. Toxicol Lett 138:75-102.

Csanády GA, Mendrala AL, Noland RJ, et al. 1994. A physiologic pharmacokinetic model for styrene and styrene-7,8-oxide in mouse, rat and man. Arch Toxicol 68:143-157.

Dalton P, Cowart B, Dilks D, et al. 2003. Olfactory function in workers exposed to styrene in the reinforced-plastics industry. Am J Ind Med 44(1):1-11.

Dalton P, Lees PS, Gould M, et al. 2007. Evaluation of long-term occupational exposure to styrene vapor on olfactory function. Chem Senses 32(8):739-747.

Das M, Dixit R, Mushtaq M, et al. 1981. Effect of styrene on hepatic mixed function oxidases, glutathione content and glutathione-S-transferase activity in rats. Drug Chem Toxicol 4:219-227.

Das M, Srivastava SP, Seth PK. 1983. Effect of styrene on glutathione content and some xenobiotic metabolizing enzymes of rat kidney. Acta Pharmacol Toxicol (Copenh) 52:47-50.

Daston GP, Overmann GJ, Taubeneck MW, et al. 1991. The role of metallothionein induction and altered zinc status in maternally mediated developmental toxicity: Comparison of the effects of urethane and styrene in rats. Toxicol Appl Pharmacol 110:450-463.

DeCeaurriz J, Desiles JP, Bonnet P, et al. 1983. Concentration-dependent behavioral changes in mice following short-term inhalation exposure to various industrial solvents. Toxicol Appl Pharmacol 67:383-389.

DeJong G, van Sittert NJ, Natarajan AT. 1988. Cytogenetic monitoring of industrial populations potentially exposed to genotoxic chemicals and of control populations. Mutat Res 204:451-464.

Delzell E, Macalluso M, Sathiakumar N, et al. 2001. Leukemia and exposure to 1,3-butadiene, styrene and dimethyldithiocarbamate among workers in the synthetic rubber industry. Chem Biol Interact 135-136:515-534.

Delzell E, Sathiakumar N, Hovinga M, et al. 1996. A follow-up study of synthetic rubber workers. Toxicology 113:182-189.

DeMeester C, Duverger-van Bogaert M, Lambotte-Vandepaer M, et al. 1981. Mutagenicity of styrene in the *Salmonella typhimurium* test system. Mutat Res 90:443-450.

de Raat VK. 1978. Induction of sister chromatid exchanges by styrene and its presumed metabolite styrene oxide in the presence of rat liver homogenate. Chem Biol Interact 20:163-170.

Dilling WL. 1977. Interphase transfer processes. II. Evaporation rates of chloro methanes, ethanes, ethylenes, propanes, and propylenes from dilute aqueous solutions. Comparisons with theoretical predictions. Environ Sci Technol 11:405-409.

Dixit R, Das M, Mushtaq M, et al. 1982. Depletion of glutathione content and inhibition of glutathione-S-transferase and aryl hydrocarbon hydroxylase activity of rat brain following exposure to styrene. Neurotoxicology 3:142-145.

Dogra RKS, Chandra K, Chandra S, et al. 1992. Host resistance assays as predictive models in styrene immunomodulation. Int J Immunopharmacol 14(6):1003-1009.

Dolara P, Caderni G, Lodovici M, et al. 1984. Determination of styrene in the urine of workers manufacturing polystyrene plastics. Ann Occup Hyg 28:195-199.

Donner M, Sorsa M, Vainio H. 1979. Recessive lethals induced by styrene and styrene oxide in *Drosophila melanogaster*. Mutat Res 67:373-376.

Drummond L, Caldwell J, Wilson HK. 1989. The metabolism of ethylbenzene and styrene to mandelic acid: Stereochemical considerations. Xenobiotica 19:199-207.

Duffy E, Gibney MJ. 2007. Use of a food-consumption database with packaging information to estimate exposure to food-packaging migrants: Epoxidized soybean oil and styrene monomer. Food Addit Contam 24(2):216-225.

Dumont JP, Adda J. 1978. Occurrence of sesquiterpenes in mountain cheese volatiles. J Agric Food Chem 26:364-367.

Dunkel VC, Zeiger E, Brusick D, et al. 1985. Reproducibility of microbial mutagenicity assays: II. Testing of carcinogens and noncarcinogens in *Salmonella typhimurium* and *Escherichia coli*. Environ Mut 7(Suppl 5):1-248.

Dutkiewicz T, Tyras H. 1968. Skin absorption of toluene, styrene, and xylene by man. Br J Ind Med 25:243.

Edling C, Anundi H, Johanson G, et al. 1993. Increase in neuropsychiatric symptoms after occupational exposure to low levels of styrene (Comment in: Occup Environ Med 51(4):286-287). Br J Ind Med 50(9):843-850.

Eguchi T, Kishi R, Harabuchi I, et al. 1995. Impaired colour discrimination among workers exposed to styrene: Relevance of a urinary metabolite. Occup Environ Med 52:534-538.

Eitzer BD. 1995. Emissions of volatile organic chemicals from municipal solid waste composting facilities. Environ Sci Technol 29:896-902.

Elia VJ, Anderson LA, MacDonald TJ, et al. 1980. Determination of urinary mandelic and phenylglyoxylic acids in styrene exposed workers and a control population. Am Ind Hyg Assoc J 41:922-926.

Ellenhorn MJ, Barceloux DG. 1988. Styrene. In: Medical toxicology: Diagnosis and treatment of human poisoning. New York, NY: Elsevier, 956-959.

Engelhardt G, Gamer A, Vodicka P, et al. 2003. A re-assessment of styrene-induced clastogenicity in mice in a subacute inhalation study. Arch Toxicol 77:56-61.

Engstrom J, Astrand I, Wigaeus E. 1978b. Exposure to styrene in a polymerization plant: Uptake in the organism and concentration in subcutaneous adipose tissue. Scand J Work Environ Health 4:324-329.

Engstrom J, Bjurstrom R, Astrand I, et al. 1978a. Uptake, distribution and elimination of styrene in man: Concentration in subcutaneous adipose tissue. Scand J Work Environ Health 4:315-323.

Engstrom K, Harkonen H, Kalliokoski P, et al. 1976. Urinary mandelic acid concentration after occupational exposure to styrene and its use as a biological exposure test. Scand J Work Environ Health 2:21-26.

EPA. 1975. Identification of organic compounds in effluents from industrial sources. Washington, DC: U.S. Environmental Protection Agency, Office of Toxic Substances. EPA560375002.

EPA. 1976. Frequency of organic compounds identified in water. Athens, GA: U.S. Environmental Protection Agency, Office of Research and Development. EPA600476062. PB265470.

EPA. 1978. Environmental monitoring near industrial sites: Brominated chemicals. Part I. Research Triangle Park, NC: U.S. Environmental Protection Agency, Office of Toxic Substances. PB286484.

EPA. 1979a. Atmospheric reaction products of organic compounds. Washington, DC: U.S. Environmental Protection Agency, Office of Toxic Substances. EPA5601279001. PB301384.

EPA. 1979b. Identification of organic compounds in industrial effluent discharges. Athens, GA: U.S. Environmental Protection Agency, Office of Research and Development. EPA600479016. PB294794.

EPA. 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. EPA600380084. PB80221948.

EPA. 1981. Treatability manual. Vol. I. Treatability data. Washington, DC: U.S. Environmental Protection Agency, Office of Research and Development. EPA600282001A.

EPA. 1982a. Aquatic fate process data for organic priority pollutants. Washington, DC: U.S. Environmental Protection Agency, Office of Water Regulations and Standards. EPA440481014. PB87169090.

*EPA. 1982b. Chemical information rules; manufacturers reporting; preliminary assessment information. U.S. Environmental Protection Agency. Fed Regist 47:26992, 27007.

EPA. 1983. Volatile organic chemicals in the atmosphere: An assessment of available data. Research Triangle Park, NC: U.S. Environmental Protection Agency, Office of Research and Development. EPA600383027A.

EPA. 1984a. Drinking water criteria document for styrene. Cincinnati, OH: U.S. Environmental Protection Agency, Environmental Criteria and Assessment Office. EPA600X84195.

EPA. 1984b. Health and environmental effects profile for styrene. Cincinnati, OH: U.S. Environmental Protection Agency, Environmental Criteria and Assessment Office. EPA600X84325.

EPA. 1985a. Drinking water criteria document for styrene. Final draft. Cincinnati, OH: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment. ECAOCIN409.

EPA. 1985b. Synthetic organic compound sampling survey of public water supplies. Washington, DC: U.S. Environmental Protection Agency. PB85214427.

EPA. 1986a. National primary drinking water regulations; synthetic organic chemicals, inorganic chemicals and microorganisms; correction. U.S. Environmental Protection Agency. Fed Regist 51(25):4618.

EPA. 1986b. Gas chromatography/mass spectrometry for volatile organics, method 8240. In: Test methods for evaluating solid waste. Vol. IA: Laboratory manual, physical/chemical methods. 3rd ed. SW-846. Washington, DC: U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

EPA. 1986c. Method 8020. Aromatic volatile organics. In: Test methods for evaluating solid waste. 3rd ed. SW-846. Washington, DC: U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response.

EPA. 1986d. Broad scan analysis of the FY82 national human adipose tissue survey specimens. Vol. I. Executive summary. Washington, DC: U.S. Environmental Protection Agency, Office of Toxic Substances. EPA560586035.

*EPA. 1987a. Styrene: Health advisory. Washington, DC: U.S. Environmental Protection Agency, Office of Drinking Water.

*EPA. 1987b. National primary drinking water regulations; synthetic organic chemicals, monitoring for unregulated contaminants. Part II. U.S. Environmental Protection Agency. Fed Regist 52:25710.

*EPA. 1987c. List (phase 1) of hazardous constituents for ground water monitoring, final rule. U.S. Environmental Protection Agency: Fed Regist 52(131):25942-25952.

EPA. 1987d. 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. EPA450487023a. PB88161146.

EPA. 1987e. The Total Exposure Assessment Methodology (TEAM) study: Summary and analysis. Vol. I. Washington, DC: U.S. Environmental Protection Agency, Office of Research and Development. EPA600687002a. PB088100060.

EPA. 1988a. Toxic chemical release reporting: Community right to know. U.S. Environmental Protection Agency. Fed Regist 53:4500-4501.

EPA. 1988b. Drinking water criteria document for styrene. Final draft. Cincinnati, OH: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment. ECAOCIN409.

EPA. 1988c. National ambient volatile organic compounds (VOCs) database update. Research Triangle Park, NC: U.S. Environmental Protection Agency. EPA600338010a. PB88195631.

*EPA. 1989a. List of hazardous substances and reportable quantities. U.S. Environmental Protection Agency. Fed Regist 54(155):33425-33484.

*EPA. 1989b. National primary and secondary drinking water regulations. U.S. Environmental Protection Agency. Fed Regist 54:22064, 22090.

EPA. 1989c. The toxics-release inventory: A national perspective. Washington, DC: U.S. Environmental Protection Agency, Office of Toxic Substances. EPA560489005.

EPA. 1989d. Interim methods for development of inhalation reference doses. Washington, DC: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment. EPA600888066F.

EPA. 1989e. Exposure factors handbook. Washington, DC: U.S. Environmental Protection Agency, Office of Health and Environmental Assessment. EPA600889043.

EPA. 1989f. Method 503.1 volatile aromatic and unsaturated organic compounds in water by purge and trap gas chromatography. U.S. Environmental Protection Agency, Office of Research and Development.

EPA. 1989g. Methods 508, 501.1, 502.2. Methods for the determination of organic compounds in drinking water. Cincinnati, OH: U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory. EPA600488039.

EPA. 1989h. Method 524.1. Measurement of purgeable organic compounds in water by packed column gas chromatography/mass spectrometry. Methods for the determination of organic compounds in drinking water. Cincinnati, OH: U.S. Environmental Protection Agency, Office of Research and Development. EPA600488039.

EPA. 1989i. Method 524.2. Measurement of purgeable organic compounds in water by capillary column gas chromatography/mass spectrometry. In: Methods for the determination of organic compounds in drinking water. Cincinnati, OH: U.S. Environmental Protection Agency, Office of Research and Development. EPA600488039.

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. PB90238890.

EPA. 1993a. 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. 1993b. Final report on literature review of atmospheric transformation products of Clean Air Act Title III hazardous air pollutants. Research Triangle Park: U.S. Environmental Protection Agency. EPA600R94088.

EPA. 1995. Method 502.2. Volatile organic compounds in water by purge and trap capillary column gas chromatography with photoionization and electrolytic conductivity detectors in series. Cincinnati, OH: U.S. Environmental Protection Agency.

EPA. 1996. Method 8021B: Aromatic and halogenated volatiles by gas chromatography using photoionization and/or electrolytic conductivitiy detectors. Washington, DC: U.S. Environmental Protection Agency, Office of Solid Waste.

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. 2001. Method 1625. Semivolatile organic compounds by isotope dilution GCMS. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR Part 136, App. A.

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. 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. 2006. 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) Washington, DC: U.S. Environmental Protection Agency, Office of Pollution Prevention and Toxics.

EPA. 2007b. Designated as hazardous substances in accordance with Section 311(b)(2)(A) of the Clean Water Act. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 116.4. http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm. April 11, 2007.

EPA. 2007c. 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. 2007d. 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. 2007e. Reportable quantities of hazardous substances designated pursuant to Section 311 of the Clean Water Act. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 117.3. http://www.epa.gov/epacfr40/chapt-I.info/chi-toc.htm. April 11, 2007.

EPA. 2007f. 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. 2007g. 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.

ESIS. 2009. Styrene. European chemical Substances Information System. European Commission. http://ecb.jrc.ec.europa.eu/esis/. March 17, 2009.

Fallas C, Fallas J, Maslard P, et al. 1992. Subclinical impairment of colour vision among workers exposed to styrene. Br J Ind Med 49(10):679-682.

FDA. 2006a. Beverages. Bottled water. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 165.110. http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm. April 11, 2007.

FDA. 2006b. 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.

FDA. 2007a. Everything added to food in the United States (EAFUS). Washington, DC: U.S. Food and Drug Administration. http://vm.cfsan.fda.gov/~dms/eafus.html. April 11, 2007.

FDA. 2007b. Food additives permitted for direct addition to food for human. Code of Federal Regulations. 21 CFR 172. Washington, DC: U.S. Food and Drug Administration. http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm. May 15, 2007.

FEDRIP. 2007. Styrene. Federal Research in Progress database. Springfield, VA: National Technical Information Service.

Fishbein L. 1992. Exposure from occupational versus other sources. Scand J Work Environ Health 18(1):5-16.

Fisher J, Mahle D, Bankston L, et al. 1997. Lactational transfer of volatile chemicals in breast milk. Am Ind Hyg Assoc J 58(6):425-431.

Fleming-Jones ME, Smith RE. 2003. Volatile organic compounds in foods: A five-year study. J Agric Food Chem 51(27):8120-8127.

Flodin U, Ekberg K, Andersson L. 1989. Neuropsychiatric effects of low exposure to styrene. Br J Ind Med 46:805-808.

Fomon SJ. 1966. Body composition of the infant: Part 1: The male reference infant. In: Faulkner F, eds. 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.

Frentzel-Beyme R, Thiess AM, Wieland R. 1978. Survey of mortality among employees engaged in manufacture of styrene and polystyrene at the BASF Ludwigshafen works. Scand J Work Environ Health 4:231-239.

Fu MH, Alexander M. 1992. Biodegradation of styrene in samples of natural environments. Environ Sci Technol 26:1540-1544.

Fu MH, Alexander M. 1996. Biodegradation of styrene in waterlogged soils and aquifer solids. Soil Sci 161(12):846-851.

Fu MH, Mayton H, Alexander M. 1994. Desorption and biodegradation of sorbed styrene in soil and aquifer solids. Environ Toxicol Chem 13(5):749-753.

Fujita H, Koizumi A, Furusawa T, et al. 1987. Decreased erythrocyte β-aminolevulinate dehydratase activity after styrene exposure. Biochem Pharmacol 36:711-716.

Fung F, Clark RF. 1999. Styrene-induced peripheral neuropathy. Clin Toxicol 37(1):91-97.

Fustinoni S, Campo L, Manini P, et al. 2008. An integrated approach to biomonitoring exposure to styrene and styrene-(7,8)-oxide using a repeated measurements sampling design. Biomarkers 13(6):560-578.

Gamberale F, Lisper HO, Olson BA. 1976. The effect of styrene vapour on the reaction time of workers in the plastic boat industry. In: Horvath M, ed. Adverse effects of environmental chemicals and psychomotor drugs. Neurophysiological and behavioral tests. London, England: Elsevier Scientific Pub., 135-148.

Gargas ML, Burgess RJ, Voisard DE, et al. 1989. Partition coefficients of low-molecular-weight volatile chemicals in various liquids and tissues. Toxicol Appl Pharmacol 98:87-99.

Gerin M, Siemiatycki J, Desy M, et al. 1998. Associations between several sites of cancer and occupational exposure to benzene, toluene, xylene, and styrene: Results of a case-control study in Montreal. Am J Ind Med 34:144-156.

Geuskens RBM, van der Klaauw MM, van der Tuin J, et al. 1992. Exposure to styrene and health complaints in the Dutch glass-reinforced plastics industry. Ann Occup Hyg 36:47-57.

Ghittori S, Imbriani M, Pezzagno G, et al. 1987. The urinary concentration of solvents as a biological indicator of exposure: Proposal for the biological equivalent exposure limit for nine solvents. Am Ind Hyg Assoc J 48:786-790.

Gilbert J, Startin JR. 1983. A survey of styrene monomer levels in foods and plastic packaging by coupled mass spectrometry-automatic headspace gas chromatography. J Sci Food Agric 34:647-652.

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.

Gobba F, Cavalleri F, Bontadi D, et al. 1995. Peripheral neuropathy in styrene-exposed workers. Scand J Work Environ Health 21:517-520.

Gobba F, Galassi C, Ghittori S, et al. 1993. Urinary styrene in the biological monitoring of styrene exposure. Scand J Work Environ Health 19:175-182.

Gobba F, Galassi C, Imbriani M, et al. 1991. Acquired dyschromatopsia among styrene-exposed workers (Comment in: J Occup Med 34(5):563-564). J Occup Med 33(7):761-765.

Gong YY, Kishi R, Katakura Y, et al. 2002. Relation between colour vision loss and occupational styrene exposure level. Occup Environ Med 59(12):824-829.

Goodley PC, Gordon M. 1976. Characterization of industrial organic compounds in water. Trans KY Acad Sci 37(1-2):11-15.

Gosselin RE, Smith RP, Hodge HC, et al. 1984. Clinical toxicology of commercial products. 5th ed. Baltimore, MD: Williams and Wilkins, II-152.

Gotz R, Bauer OR, Friesel P, et al. 1998. Organic trace compounds in the water of the River Elbe near Hamburg. Part II. Chemosphere 36:2103-2118.

Graedel TE. 1978. Aromatic compounds: Benzene and derivatives. In: Chemical compounds in the atmosphere. New York, NY: Academic Press, 105-113.

Graff JJ, Sathiakumar N, Macaluso M, et al. 2005. Chemical exposures in the synthetic rubber industry and lymphohematopoietic cancer mortality. J Occup Environ Med 47(9):916-932.

Grbic-Galic D, Churchman-Eisel N, Mrakovic I. 1990. Microbial transformation of styrene by anaerobic consortia. J Appl Bacteriol 69:247-260.

Green DR, Le Pape D. 1987. Stability of hydrocarbon samples on solid-phase extraction columns. Anal Chem 59:699-703.

Green T, Lee R, Toghill A, et al. 2001a. The toxicity of styrene to the nasal epithelium of mice and rats: Studies on the mode of action and relevance to humans. Chem Biol Interact 137:185-202.

Grosjean D, Fung K. 1984. Hydrocarbons and carbonyls in Los Angeles air. J Air Pollut Control Assoc 34:537-543.

Grosjean E, Grosjean D, Rasmussen RA. 1998. Ambient concentrations, sources, emission rates, and photochemical reactivity of C2-C10 hydrocarbons in Porto Alegre, Brazil. Environ Sci Technol 32(14):2061-2069.

Guillemin MP, Bauer D. 1979. Human exposure to styrene. III. Elimination kinetics of urinary mandelic and phenylglyoxylic acids after single experimental exposure. Int Arch Occup Environ Health 44:249-263.

Guillemin MP, Berode M. 1988. Biological monitoring of styrene: A review. Am Ind Hyg Assoc J 49:497-505.

Guzelian PS, Henry CJ, Olin SS, eds. 1992. Similarities and differences between children and adults: implications for risk assessment. Washington DC: International Life Sciences and Press Institute Press.

Haddad LM, Winchester JF. 1990. Clinical management of poisoning and drug overdose. 2nd ed. Philadelphia, PA: W.B. Saunders Company, 1226-1228.

Hallier E, Goergens HW, Hallier K, et al. 1994. Intervention study on the influence of reduction of occupational exposure to styrene on sister chromatid exchanges in lymphocytes. Int Arch Occup Environ Health 66(3):167-172.

Hallier E, Goergens HW, Karels H, et al. 1995. A note on individual differences in the urinary excretion of optical enantiomers of styrene metabolites and of styrene-derived mercapturic acids in humans. Arch Toxicol 69(5):300-305.

Hampton CV, Pierson WR, Harvey TM, et al. 1982. Hydrocarbon gases emitted from vehicles on the road. 1. A qualitative gas chromatography/mass spectrometry survey. Environ Sci Technol 16:287-298.

Hampton CV, Pierson WR, Schuetzie D, et al. 1983. Hydrocarbon gases emitted from vehicles on the road. 2. Determination of emission rates from diesel and spark-ignition vehicles. Environ Sci Technol 17:699-708.

Hansch C, Leo A, Hoekman D. 1995. Exploring QSAR. Hydrophobic, electronic, and steric constants. Washington, DC: American Chemical Society, 40.

Hansteen IL, Jelmert O, Torgrimsen T, et al. 1984. Low human exposure to styrene in relation to chromosome breaks, gaps and sister-chromatid exchanges. Hereditas 100:87-91.

Härkönen H, Holmberg PC. 1982. Obstetric histories of women occupationally exposed to styrene. Scand J Work Environ Health 8:74-77.

Härkönen H, Lehtniemi A, Aitio A. 1984. Styrene exposure and the liver. Scand J Work Environ Health 10:59-61.

Härkönen H, Kalliokoski P, Hietala S, et al. 1974. Concentrations of mandelic and phenlyglyoxylic acid in urine as indicators of styrene exposure. Work Environ Health 11:162-169.

Härkönen H, Lindstrom K, Seppäläinen AM, et al. 1978. Exposure-response relationship between styrene exposure and central nervous functions. Scand J Work Environ Health 4:53-59.

Harkov R, Gianti SJ, Bozzelli JW, et al. 1985. Monitoring volatile organic compounds at hazardous and sanitary landfills in New Jersey. J Environ Sci Health A20:491-501.

Hartmans S. 1995. Microbial degradation of styrene. In: Singh VP, ed. Biotransformations: Microbial degradation of health risk compounds. Amsterdam: Elsevier Science, 227-238.

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, eds. Environmental and solid wastes: Characterization, treatment, and disposal. Boston, MA: Butterworths, 161-176.

HazDat. 2007. Styrene. 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. May 21, 2007.

Hemminki K, Franssila E, Vainio H. 1980. Spontaneous abortions among female chemical workers in Finland. Int Arch Occup Environ Health 45:123-126.

Hemminki K, Lindbohm ML, Hemminki T, et al. 1984. Reproductive hazards and plastics industry. In: Jarvisalo J, Pfaffli P, Vainio H, eds. Industrial hazards of plastics and synthetic elastomers. New York, NY: Alan R. Liss, Inc., 79-87.

Heylin M, ed. 1989. Production by the U.S. chemical industry: Growth maintains a strong pace. Chem Eng News 67:38-45.

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.

Hodgson JT, Jones RD. 1985. Mortality of styrene production, polymerization and processing workers at a site in northwest England. Scand J Work Environ Health 11:347-352.

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.

Hogstedt B, Akesson B, Axell K, et al. 1983. Increased frequency of lymphocyte micronuclei in workers producing reinforced polyester resin with low exposure to styrene. Scand J Work Environ Health 9:241-246.

Hogstedt B, Hender K, Mark-Vendel E, et al. 1979. Increased frequency of chromosome aberrations in workers exposed to styrene. Scand J Work Environ Health 5:333-335.

Hotz P, Guillemin MP, Lob M. 1980. Study of some hepatic effects (induction and toxicity) caused by occupational exposure to styrene in the polyester industry. Scand J Work Environ Health 6:206-215.

HSDB. 2009. Styrene. Hazardous Substances Data Bank. National Library of Medicine. http://toxnet.nlm.nih.gov. March 17, 2009.

Husain R, Srivastava SP, Mushtaq M, et al. 1980. Effect of styrene on levels of serotonin, noradrenaline, dopamine and activity of acetyl cholinesterase and monoamine oxidase in rat brain. Toxicol Lett 7:47-50.

Husain R, Srivastava SP, Seth PK. 1985. Some behavioral effects of early styrene intoxication in experimental animals. Arch Toxicol 57:53-55.

Hynes DE, DeNicola DB, Carlson GP. 1999. Metabolism of styrene by mouse and rat isolated lung cells. Toxicol Sci 51:195-201.

IARC. 1979. Styrene, polystyrene and styrene-butadiene copolymers. IARC monographs on the evaluation of the carcinogenic risk of chemicals to humans. Vol. 19. Some monomers, plastics and synthetic elastomers, and acrolein. Geneva, Switzerland: International Agency for Research on Cancer, World Health Organization, 231-274.

IARC. 1994. IARC monographs on the evaluation of the carcinogenic risk of chemicals to humans. Lyon, France: International Agency for Research on Cancer, 233-320.

IARC. 2002. IARC monographs on the evaluation of carcinogenic risk to humans. Vol. 82. Some traditional herbal medicines, some mycotoxins, naphthalene and styrene. Lyon, France: International Agency for Research on Cancer, 437-550.

IARC. 2006. Agents Reviewed by the IARC Monographs. Volumes 1–96. Lyon, France: International Agency for Research on Cancer. http://monographs.iarc.fr/ENG/Classification/index.php. April 11, 2007.

Ikeda M, Hirayama T. 1978. Possible metabolic interaction of styrene with organic solvents. Scand J Work Environ Health 4:41-46.

Ikeda M, Ohtsuji H, Imamura T. 1972. *In vivo* suppression of benzene and styrene oxidation by co-administered toluene in rats and effects of phenobarbital. Xenobiotica 2:101-106.

Iregren A, Johnson AC, Nylen P. 2005. Low-level styrene exposure and color vision in Swedish styrene workers. Environ Toxicol Pharmacol 20(3):506.

IRIS. 2009. Styrene. Integrated Risk Information System. Washington, DC: U.S. Environmental Protection Agency. http://www.epa.gov/iris/subst/index.html. March 26, 2009.

Islam MA, Stancheva E. 1999. Volatile organic compounds in the ambient air of Rousse, Bulgaria. Water Air Soil Pollut 115:309-320.

Jablonicka A, Karelova J, Polakova H, et al. 1988. Analysis of chromosomes in peripheral blood lymphocytes of styrene-exposed workers. Mutat Res 206:167-169.

James DH, Castor WM. 2005. Styrene. In: Ullman's encyclopedia of industrial chemistry. http://www.mrw.interscience.wiley.com/emrw/9783527306732/ueic/article/a25_329/current/pdf. May 30, 2007.

Jantunen K, Maki-Paakkanen J, Norppa H. 1986. Induction of chromosome aberrations by styrene and vinylacetate in cultured human lymphocytes: Dependence on erythrocytes. Mutat Res 159:109-116.

Jarry H, Metten M, Gamer AO, et al. 2002. Effects of 5-day styrene inhalation on serum prolactin and dopamine levels and on hypothalamic and striatal catecholamine concentrations in male rats. Arch Toxicol 76:657-663.

Jegaden D, Amann D, Simon JF, et al. 1993. Study of the neurobehavioural toxicity of styrene at low levels of exposure. Int Arch Occup Environ Health 64(7):527-531.

Jersey GM, Balmer J, Quast J, et al. 1978. Two-year chronic inhalation toxicity and carcinogenicity study on monomeric styrene in rats - final report. Dow Chemical Company. Submitted to the U.S. Environmental Protection Agency under TSCA Section 8E. OTS8EHQ-0692-4867.

Johanson CE. 1980. Permeability and vascularity of the developing brain: Cerebellum vs. cerebral cortex. Brain Res 190(1):3-16.

Johanson G, Ernstgard L, Gullstrand E, et al. 2000. Styrene oxide in blood, hemoglobin adducts, and urinary metabolites in human volunteers exposed to $^{13}C_8$-styrene vapors. Toxicol Appl Pharmacol 168:36-49.

Johnston R, Mensik D, Linscombe A, et al. 1983. An evaluation of styrene vapor inhalation in pigs. Report of Dow Chemical U.S.A., Freeport, TX.

Jonsson F, Johanson G. 2002. Physiologically based modeling of the inhalation kinetics of styrene in humans using a Bayesian population approach. Toxicol Appl Pharmacol 179:35-49.

Junk GA, Ford CS. 1980. A review of organic emissions from selected combustion processes. Chemosphere 9:187-230.

Kagi N, Fujii S, Horiba Y, et al. 2007. Indoor air quality for chemical and ultrafine particle contaminants from printers. Build Environ 42(5):1949-1954.

Kankaanpää JT, Eovaara E, Hemminki K, et al. 1980. The effect of maternally inhaled styrene on embryonal and foetal development in mice and Chinese hamsters. Acta Pharmacol Toxicol 47:127-129.

Karakaya AE, Karahalil B, Yilmazer M, et al. 1997. Evaluation of genotoxic potential of styrene in furniture workers using unsaturated polyester resins. Mutat Res 392:261-268.

Katakura Y, Kishi R, Ikeda T, et al. 1999. Effects of prenatal exposure to styrene on neurochemical levels in rat brain. Toxicol Lett 105:239-249.

Katakura Y, Kishi R, Ikeda T, et al. 2001. Effects of prenatal styrene exposure on postnatal development and brain serotonin and catecholamine levels in rats. Environ Res 85(1):41-47.

*Katoh T, Higashi K, Inoue N. 1989. Subchronic effects of styrene and styrene oxide on lipid peroxidation and the metabolism of glutathione in rat liver and brain. J Toxicol Sci 14:1-9.

Keenan C, Harriman E. 1993. Styrene use in Massachusetts. Lowell, MA: University of Massachusetts. Toxic Use Reduction Institute.

Kenaga EE. 1980. Predicted bioconcentration factors and soil sorption coefficients of pesticides and other chemicals. Ecotoxicol Environ Safety 4:26-38.

Kenaga EE, Goring CAI. 1980. Relationship between water solubility, soil sorption, octanol-water partitioning, and concentration of chemicals in biota. ASTM Spec Tech Publ 707:78-115.

Kessler W, Jiang X, Filser JG. 1990. Direct determination of styrene-7,8-oxide in blood by gas chromatography with flame ionization detector. J Chromatog 534:67-75.

Khanna VK, Husain R, Seth PK. 1994. Effect of protein malnutrition on the neurobehavioural toxicity of styrene in young rats. J Appl Toxicol 14(5):351-356.

Kim H, Wang RS, Elovaara E, et al. 1997. Cytochrome P450 isozymes responsible for the metabolism of toluene and styrene in human liver microsomes. Xenobiotica 27(7):657-665.

King L, Sherbin G. 1986. Point sources of toxic organics to the upper St. Clair River. Water Poll Res J Canada 21:433-446.

Kinlin TE, Muralidhara R, Pittet AO, et al. 1972. Volatile components of roasted filberts. J Agric Food Chem 20:1021-1028.

Kinney PL, Chillrud SN, Ramstrom S, et al. 2002. Exposures to multiple air toxics in New York City. Environ Health Perspect 110(Suppl 4):539-546.

*Kishi R, Chen BQ, Katakura Y, et al. 1995. Effect of prenatal exposure to styrene on the neurobehavioral development, activity, motor coordination, and learning behavior of rats. Neurobehav Toxicol Teratol 17(2):121-130.

Kishi R, Eguchi T, Yuasa J, et al. 2001. Effects of low-level occupational exposure to styrene on color vision: Dose relation with a urinary metabolite. Environ Res 85(1):25-30.

*Kishi R, Katakura Y, Ikeda T, et al. 1992. Neurochemical effects in rats following gestational exposure to styrene. Toxicol Lett 63:141-146.

Kleopfer RD, Fairless BJ. 1972. Characterization of organic components in a municipal water supply. Environ Sci Technol 6:1036-1037.

Kligerman AD, Allen JW, Bryant MF, et al. 1992. Cytogenetic studies of mice exposed to styrene by inhalation. Mutat Res 280:35-43.

Kneip TJ, Crable JV. 1988a. Styrene in expired air. In: Methods for biological monitoring. Washington, DC: American Public Health Association, 457-462.

Kneip TJ, Crable JV. 1988b. Mandelic acid in urine. In: Methods for biological monitoring. Washington, DC: American Public Health Association, 387-391.

Kneip TJ, Crable JV. 1988c. Phenylglyoxylic acid in urine. In: Methods for biological monitoring. Washington, DC: American Public Health Association, 393-399.

Kogevinas M, Ferro G, Andersen A, et al. 1994. Cancer mortality in a historical cohort study of workers exposed to styrene. Scand J Work Environ Health 50:251-261.

Kogevinas M, Ferro G, Saracci R, et al. 1993. Cancer mortality in an international cohort of workers exposed to styrene. IARC Sci Publ (127):289-300.

Kohn AN. 1978. Ocular toxicity of styrene. Am J Ophthalmol 85:569-570.

Kolstad HA, Bisanti L, Roeleveld N, et al. 1999c. Time to pregnancy for men occupationally exposed to styrene in several European reinforced plastics companies. Scand J Work Environ Health 25:66-69.

Kolstad HA, Bisanti L, Roeleveld N, et al. 2000. Time to pregnancy among male workers of the reinforced plastics industry in Denmark, Italy and the Netherlands. Scand J Work Environ Health 26(4):353-358.

Kolstad HA, Bonde JP, Spano M, et al. 1999a. Change in semen quality and sperm chromatin structure following occupational styrene exposure. Int Arch Occup Environ Health 72:135-141.

Kolstad HA, Bonde JPE, Spano M, et al. 1999b. Sperm chromatin structure and semen quality following occupational styrene exposure. Scand J Work Environ Health 25:70-73.

Kolstad HA, Juel K, Olsen J, et al. 1995. Exposure to styrene and chronic health effects: Mortality and incidence of solid cancers in the Danish reinforced plastics industry. Occup Environ Med 52:320-327.

Kolstad HA, Lynge E, Olsen J. 1993. Cancer incidence in the Danish reinforced plastics industry. IARC Sci Publ (127):301-308.

Kolstad HA, Lynge E, Olsen J, et al. 1994. Incidence of lymphohematopoietic malignancies among styrene-exposed workers of the reinforced plastics industry. Scand J Work Environ Health 20:272-278.

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.

Konasewich D, Traversy W, Zar H. 1978. Status report on organic and heavy metal contaminants in the Lakes Erie, Michigan, Huron and Superior basins. Great Lakes Water Quality Board.

Kool HJ, van Kreijl CF, Zoeteman BC. 1982. Toxicology assessment of organic compounds in drinking water. Crit Rev Environ Control 12:307-357.

Korn M, Wodarz R, Drysch K, et al. 1987. Stereometabolism of styrene in man. Urinary excretion of chiral styrene metabolites. Arch Toxicol 60:86-88.

Korn M, Wodarz R, Schoknecht W, et al. 1984. Styrene metabolism in man: Gas chromatographic separation of mandelic acid enantiomers in the urine of exposed persons. Arch Toxicol 55:59-63.

Krill RM, Sonzogni WC. 1986. Chemical monitoring of Wisconsin's groundwater. J Am Water Works Assoc 78:70-75.

Krishnan K, Andersen ME. 1994. Physiologically based pharmacokinetic modeling in toxicology. In: Hayes AW, eds. Principles and methods of toxicology. 3rd ed. New York, NY: Raven Press, Ltd.,149-188.

Krishnan K, Anderson ME, Clewell HJ, et al. 1994. Physiologically based pharmacokinetic modeling of chemical mixtures. In: Yang RSH, eds. Toxicology of chemical mixtures. New York, NY: Academic Press, 399-437.

Kulig BM. 1988. The neurobehavioral effects of chronic styrene exposure in the rat. Neurotoxicol Teratol 10:511-517.

Laffon B, Pasaro E, Mendez J. 2002. Evaluation of genotoxic effects in a group of workers exposed to low levels of styrene. Toxicology 171(2-3):175-186.

Laib RJ, Tucholski M, Filser JG, et al. 1992. Pharmacokinetic interaction between 1,3-butadiene and styrene in Sprague-Dawley rats. Arch Toxicol 66(5):310-314.

Langvardt PW, Nolan RJ. 1991. Determination of styrene 7,8-oxide in whole rat blood by gas chromatography-mass spectrometry. J Chromatog 567:93-103.

Lataye R, Campo P, Barthelemy C, et al. 2001. Cochlear pathology induced by styrene. Neurotoxicol Teratol 23(1):71-79.

Lataye R, Campo P, Loquet G. 2000. Combined effects of noise and styrene exposure on hearing function in the rat. Hear Res 139:86-96.

Lataye R, Campo P, Pouyatos B, et al. 2003. Solvent ototoxicity in the rat and guinea pig. Neurotoxicol Teratol 25(1):39-50.

Leavens TL, Bond JA. 1996. Pharmacokinetic model describing the disposition of butadiene and styrene in mice. Toxicology 113(1-3):310-313.

Leavens TL, Farris GM, James RA, et al. 1997. Genotoxicity and cytotoxicity in male B6C3F1 mice following exposure to mixtures of 1,3-butadiene and styrene. Environ Mol Mutagen 29:335-345.

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

Leibman KC. 1975. Metabolism and toxicity of styrene. Environ Health Perspect 11:115-119.

Lemasters GK, Carson A, Samuels SJ. 1985. Occupational styrene exposure for twelve product categories in the reinforced-plastics industry. Am Ind Hyg Assoc J 46:434-441.

Lemasters GK, Samuels SJ, Morrison JA, et al. 1989. Reproductive outcomes of pregnant workers employed at 36 reinforced plastics companies. II. Lowered birth weight. J Occup Med 31:115-120.

Leovic KW, Sheldon LS, Whitaker DA, et al. 1996. Measurement of indoor air emissions from dry-process photocopy machines. J Air Waste Manage Assoc 46:821-829.

Leovic KW, Whitaker D, Northeim C, et al. 1998. Evaluation of a test method for measuring indoor air emissions from dry-process photocopiers. J Air Waste Manage Assoc 48:915-923.

Leung HW. 1993. Physiologically-based pharmacokinetic modelling. In: Ballantyne B, Marro T, Turner P, eds. General and applied toxicology. Vol. 1.1 New York, NY: Stockton Press, 153-164.

Lide CR. 2005. Styrene. In: CRC Handbook of chemistry and physics. 86th ed. Boca Raton, FL: Taylor & Francis, 3-464.

Lindbohm ML, Hemminki K, Kyyronen P. 1985. Spontaneous abortions among women employed in the plastics industry. Am J Ind Med 8:579-586.

Lindstrom K, Harkonen H, Hernberg S. 1976. Disturbances in psychological functions of workers occupationally exposed to styrene. Scand J Work Environ Health 3:129-139.

Livingston AL. 1978. Forage plant estrogens. J Toxicol Environ Health 4(2-3):301-324.

Lof A, Johanson G. 1993. Dose-dependent kinetics of inhaled styrene in man. IARC Sci Publ (127):89-99.

Lof A, Gullstrand E, Byfalt Nordqvist M. 1983. Tissue distribution of styrene, styrene glycol and more polar styrene metabolites in the mouse. Scand J Work Environ Health 9:419-430.

Lof A, Gullstrand E, Lundgren E, et al. 1984. Occurrence of styrene-7,8-oxide and styrene glycol in mouse after the administration of styrene. Scand J Work Environ Health 10:179-187.

Lof A, Lundgren E, Byfalt Nordqvist M. 1986b. Kinetics of styrene in workers from a plastics industry after controlled exposure: A comparison with subjects not previously exposed. Br J Ind Med 43:537-543.

Lof A, Lundgren E, Nydahl EM, et al. 1986a. Biological monitoring of styrene metabolites in blood. Scand J W Environ Health 12:70-74.

Loquet G, Campo P, Lataye R. 1999. Comparison of toluene-induced and styrene-induced hearing losses. Neurotoxicology 21(6):689-697.

Loquet G, Campo P, Lataye R, et al. 2000. Combined effects of exposure to styrene and ethanol on the auditory function in the rat. Hear Res 148(1-2):173-180.

Lorimer WV, Lilis R, Fischbein A, et al. 1978. Health status of styrene-polystyrene polymerization workers. Scand J Work Environ Health 4:220-226.

Lovegren NV, Fisher GS, Legendre MG, et al. 1979. Volatile constituents of dried legumes. J Agric Food Chem 27:851-853.

Luderer U, Tornero-Velez R, Shay T, et al. 2004. Temporal association between serum prolactin concentration and exposure to styrene. Occup Environ Med 61(4):325-333.

Macaluso M, Larson R, Delzell E, et al. 1996. Leukemia and cumulative exposure to butadiene, styrene and benzene among workers in the synthetic rubber industry. Toxicology 113:190-202.

Mackay CJ, Kelman GR. 1986. Choice reaction time in workers exposed to styrene vapour. Human Toxicol 5:85-89.

Mac Leod 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.

Maestri L, Ghittori S, Imbriani M. 1997a. Determination of specific mercapturic acids as an index of exposure to environmental benzene, toluene, and styrene. Ind Health 35:489-501.

Maki-Paakkanen J. 1987. Chromosome aberrations, micronuclei and sister-chromatid exchanges in blood lymphocytes after occupational exposure to low levels of styrene. Mutat Res 189:39-406.

Maki-Paakkanen J, Walles S, Osterman-Golkar S, et al. 1991. Single-strand breaks, chromosome aberrations, sister-chromatid exchanges, and micronuclei in blood lymphocytes of workers exposed to styrene during the production of reinforced plastics. Environ Mol Mutagen 17(1):27-31.

Makitie A, Pirvola U, Pyykko I, et al. 2002. Functional and morphological effects of styrene on the auditory system of the rat. Arch Toxicol 76:40-47.

Maltoni C, Ciliberti A, Carretti D. 1982. Experimental contributions in identifying brain potential carcinogens in the petrochemical industry. Ann NY Acad Sci 381:216-249.

Maltoni C, Failla G, Kassapidis G. 1979. First experimental demonstration of the carcinogenic effects of styrene oxide. Med Lav 5:358-362.

Matanoski G, Schwartz L. 1987. Mortality of workers in styrene-butadiene polymer production. J Occup Med 29:675-680.

Matanoski G, Elliott E, Tao X, et al. 1997. Lymphohematopoietic cancers and butadiene and styrene exposure in synthetic rubber manufacture. Ann N Y Acad Sci 837:157-169.

Matanoski G, Francis M, Correa-Villasenor A, et al. 1993. Cancer epidemiology among styrene-butadiene rubber workers. IARC Sci Publ (127):363-374.

Matanoski G, Santos-Burgoa C, Schwartz L. 1990. Mortality of a cohort of workers in the styrene-butadiene polymer manufacturing industry. Environ Health Perspect 86:107-117.

Matikainen E, Forsman-Gronholm L, Pfaffli P, et al. 1993a. Nervous system effects of occupational exposure to styrene: A clinical and neurophysiological study. Environ Res 61(1):84-92.

Matikainen E, Forsman-Gronholm L, Pfaffli P, et al. 1993b. Neurotoxicity in workers exposed to styrene. IARC Sci Publ (127):153-161.

Mattie DR, Bates GD, Jepson GW, et al. 1994. Determination of skin: Air partition coefficients for volatile chemicals: Experimental method and applications. Fundam Appl Toxicol 22:51-57.

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.

McDonald AD, Lavoie J, Côté R. 1988. Spontaneous abortion in women employed in plastics manufacture. Am J Ind Med 14:9-14.

McMichael AJ, Spirtas R, Gamble JF, et al. 1976. Mortality among rubber workers: relationship to specific jobs. J Occup Med 18:178-185.

Meinhardt TJ, Lemen RA, Crandall MS, et al. 1982. Environmental epidemiologic investigation of the styrene-butadiene rubber industry: Mortality patterns with discussion of the hematopoietic and lymphatic malignancies. Scand J Work Environ Health 8:250-259.

Mendrala AL, Langvardt PW, Nitschke KD, et al. 1991. *In vitro* metabolism of styrene and styrene oxide in human and animal tissues. Midland, MI: Dow Chemical Company, 1-63.

Meretoja T, Jarventaus H, Sorsa M, et al. 1978. Chromosome aberrations in lymphocytes of workers exposed to styrene. Scand J Work Environ Health 4:259-264.

Meretoja T, Vainio H, Sorsa M, et al. 1977. Occupational styrene exposure and chromosomal aberrations. Mutat Res 56:193-197.

Miermans CJH, van der Velde LE, Frintrop PCM. 2000. Analysis of volatile organic compounds, using the purge and trap injector coupled to a gas chromatograph/ion-trap mass spectrometer: Review of the results in Dutch surface water of the Rhine, Meuse, Northern Delta area and Westerscheldt over the period 1992-1997. Chemosphere 40:39-48.

Möller C, Ödkvist L, Larsby B, et al. 1990. Otoneurological findings in workers exposed to styrene. Scand J Work Environ Health 16:189-194.

Morata TC, Johnson AC, Nylen P, et al. 2002. Audiometric findings in workers exposed to low levels of styrene and noise. J Occup Environ Med 44(9):806-814.

Morgan DL, Cooper SW, Carlock DL, et al. 1991. Dermal absorption of neat and aqueous volatile organic chemicals in the Fischer 344 rat. Environ Res 55:51-63.

Morgan DL, Mahler JF, Dill JA, et al. 1993a. Styrene inhalation toxicity studies in mice: II. Sex differences in susceptibility of B6C3F1 mice. Fundam Appl Toxicol 21:317-325.

Morgan DL, Mahler JF, Dill JA, et al. 1993b. Styrene inhalation toxicity studies in mice: III. Strain differences in susceptibility. Fundam Appl Toxicol 21:326-333.

Morgan DL, Mahler JF, O'Connor RW, et al. 1993c. Styrene inhalation toxicity studies in mice: I. Hepatotoxicity in B6C3F1 mice. Fundam Appl Toxicol 20:325-335.

Morioka I, Kuroda M, Miyashita K, et al. 1999. Evaluation of organic solvent ototoxicity by the upper limit of hearing. Arch Environ Health 54(5):341-346.

Morris JB. 2000. Uptake of styrene in the upper respiratory tract of the CD mouse and Sprague-Dawley rat. Toxicol Sci 54:222-228.

Morselli PL, Franco-Morselli R, Bossi L. 1980. Clinical pharmacokinetics in newborns and infants: Age-related differences and therapeutic implications. Clin Pharmacokinet 5(6):485-527.

Muijser H, Hoogendijk EM, Hooisma J. 1988. The effects of occupational exposure to styrene on high-frequency hearing thresholds. Toxicology 49:331-340.

Murata K, Araki S, Yokoyama K. 1991. Assessment of the peripheral, central, and autonomic nervous system function in styrene workers. Am J Ind Med 20:775-784.

Murray FJ, John JA, Balmer MF, et al. 1978. Teratologic evaluation of styrene given to rats and rabbits by inhalation or by gavage. Toxicology 11:335-343.

Mutti A, Mazzucchi A, Rustichelli P, et al. 1984a. Exposure-effect and exposure-response relationships between occupational exposure to styrene and neuropsychological functions. Am J Ind Med 5:275-286.

Mutti A, Vescovi PP, Falsoi M, et al. 1984b. Neuroendocrine effects of styrene on occupationally exposed workers. Scand J Work Environ Health 10:225-228.

Nakajima T, Elovaara E, Gonzalez FJ, et al. 1993. Characterization of the human cytochrome P450 isozymes responsible for styrene metabolism. IARC Sci Publ (127):101-108.

Nakajima T, Wang R-S, Elovaara E, et al. 1994. CYP2C11 and CYP2B1 are major cytochrome P450 forms involved in styrene oxidation in liver and lung microsomes from untreated rats, respectively. Biochem Pharmacol 48(4):637-642.

NAS/NRC. 1989. Report of the oversight committee. Biologic markers in reproductive toxicology. Washington, DC: National Academy of Sciences, National Research Council, National Academy Press, 15-35.

*NCI. 1979a. Bioassay of a solution of β-nitrostyrene and styrene for possible carcinogenicity. Bethesda, MD: National Cancer Institute, Division of Cancer Cause and Prevention. DHEW Publication No. (NIH) 79-1726.

NCI. 1979b. Bioassay of styrene for possible carcinogenicity. Bethesda, MD: National Cancer Institute, Division of Cancer Cause and Prevention. Technical Report Series No. 185. NCI-CG-TR-185. NIH 79-1741. PB300977.

Nicholson WJ, Selikoff IJ, Seidman H. 1978. Mortality experience of styrene-polystyrene polymerization workers: Initial findings. Scand J Work Environ Health 4:247-252.

Niklasson M, Tham R, Larsby B, et al. 1993. Effects of toluene, styrene, trichloroethylene, and trichloroethane on the vestibulo- and opto-oculo motor system in rats. Neurotoxicol Teratol 15:327-334.

NIOSH. 1983. Criteria for a recommended standard: Occupational exposure to styrene. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health. PB84148295.

NIOSH. 1984. Method 1501: Hydrocarbons, aromatic. In: NIOSH manual of analytical methods. Vol. 2. Cincinnati, OH: U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health.

NIOSH. 1990. Styrene. 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/. August 09, 2007.

NIOSH. 2005. 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 15, 2007.

Nordenson I, Beckman L. 1984. Chromosomal aberrations in lymphocytes of workers exposed to low levels of styrene. Hum Hered 34:178-182.

Normandeau J, Chakrabarti S, Brodeur J. 1984. Influence of simultaneous exposure to acrylonitrile and styrene on the toxicity and metabolism of styrene in rats. Toxicol Appl Pharmacol 75:346-349.

Norppa H. 1981. Styrene and vinyltoluene induce micronuclei in mouse bone marrow. Toxicol Lett 8:247-251.

Norppa H, Maki-Paakkanen J, Jantunen K, et al. 1988. Mutagenicity studies on styrene and vinyl acetate. Ann NY Acad Sci 534:671-678.

Norppa H, Sorsa M, Pfaffli P, et al. 1979. Effects of styrene oxide on chromosome aberrations, sister chromatid exchange and hepatic drug biotransformation in Chinese hamsters *in vivo*. Chem Biol Interact 26:305-315.

Norppa H, Sorsa M, Pfaffli P, et al. 1980a. Styrene and styrene oxide induce SCEs and are metabolized in human lymphocyte cultures. Carcinogenesis 1:357-361.

Norppa H, Sorsa M, Vainio H. 1980b. Chromosomal aberrations in bone marrow of Chinese hamsters exposed to styrene and ethanol. Toxicol Lett 5:241-244.

Norppa H, Vainio H, Sorsa M. 1981. Chromosome aberrations in lymphocytes of workers exposed to styrene. Am J Ind Med 2:299-304.

Norppa H, Vainio H, Sorsa M. 1983. Metabolic activation of styrene by erythrocytes detected as increased sister-chromatid exchanges in cultured human lymphocytes. Cancer Res 43:3579-3582.

Norppa H, Vainio H, Sorsa M, et al. 1984. Erythrocyte-dependent metabolic activation of styrene and induction of sister-chromatid exchange in cultured human lymphocytes. Arch Toxicol Suppl 7:286-290.

Norström A, Lof A, Aringer L, et al. 1992. Determination of N-acetyl-S-(2-phenyl-2-hydroxyethyl) cysteine in human urine after experimental exposure to styrene. Chemosphere 24(11):1553-1561.

NRC. 1993. Pesticides in the diets of infants and children. Washington, DC: National Research Council. National Academy Press. PB93216091.

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. http://ntp.nieh.nih.gov/ntp/roc/eleventh/intro.pdf. May 23, 2007.

NTP. 2006. NTP-CERHR monograph on the potential human reproductive and developmental effects of styrene. National Toxicology Program. NIH Publication No. 06-4475.

Ödkvist LM, Edling C, Hellquist H, et al. 1985. Influence of vapours on the nasal mucosa among industry workers. Rhinology 23:121-127.

Ödkvist LM, Larsby B, Tham R, et al. 1982. Vestibulo-oculomotor disturbances in humans exposed to styrene. Acta Otolaryngol 94:487-493.

Ogata M, Fujisawa K, Ogino Y, et al. 1984. Partition coefficients as a measure of bioconcentration potential of crude oil compounds in fish and shellfish. Bull Environ Contam Toxicol 33:561-567.

Ohashi Y, Nakai Y, Ikeoka H, et al. 1986. Degeneration and regeneration of respiratory mucosa of rats after exposure to styrene. J Appl Toxicol 6:405-412.

Ohtani H, Ichikawa Y, Iwamoto E, et al. 2001. Effects of styrene monomer and trimer on gonadal sex differentiation of genetic males of the frog *Rana rugosa*. Environ Res 87(3):175-180.

Okun AH, Beaumont JJ, Meinhardt TJ, et al. 1985. Mortality patterns among styrene-exposed boatbuilders. Am J Ind Med 8:193-205.

Onchoi C, Kongtip P, Yoosook W, et al. 2008. High performance liquid chromatography for determination of urinary metabolites of toluene, xylene and styrene and its application. Southeast Asian J Trop Med Public Health 39(6):1164-1171.

O'Neil MJ, Smith A, Heckelman PE, et al., eds. 2001. Styrene. In: The Merck index. An encyclopedia of chemicals, drugs, and biologicals. 13th ed. Whitehouse Station, NJ: Merck & Co., Inc., 1578.

Ong CN, Shi CY, Chia SE, et al. 1994. Biological monitoring of exposure to low concentrations of styrene. Am J Ind Med 25(5):719-730.

OSHA. 2006a. 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.

OSHA. 2006b. Gases, vapors, fumes, dusts, and mists. Safety and health regulations for construction. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1926.55, Appendix A. http://www.osha.gov/comp-links.html. April 11, 2007.

OSHA. 2006c. Toxic and Hazardous Substances. Occupational safety and health standards. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.1000, Table Z-2. http://www.osha.gov/comp-links.html. May 15, 2007.

Otson R. 1987. Purgeable organics in Great Lakes raw and treated water. Int J Environ Anal Chem 31:41-53.

Ott MG, Kolesar RC, Schamweber HC, et al. 1980. A mortality survey of employees engaged in the development or manufacture of styrene-based products. J Occup Med 22:445-460.

Owen GM, Brozek J. 1966. Influence of age, sex and nutrition on body composition during childhood and adolescence. In: Falkner F, ed., eds. Human development. Philadelphia, PA: WB Saunders, 222-238.

Pahren HR, Bloodgood DE. 1961. Biological oxidation of several vinyl compounds. J Water Pollut Control Fed 33:233-238.

Parkki MG. 1978. The role of glutathione in the toxicity of styrene. Scand J Work Environ Health 4(Suppl 2):53-59.

Peck DP. 1994. Immunoassay for aromatic ring containing compounds. United States Patent no. 5,358,851. Date of patent June 06, 1991. http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=7&f=G&l=50&co1=AND&d=PTXT&s1=5358851&OS=5358851&RS=5358851. May 30, 2007.

Pellizzari ED, Castillo NP, Willis S, et al. 1979. Identification of organic components in aqueous effluents from energy-related processes. ASTM Spec Tech Publ 686:256-274.

Pellizzari ED, Hartwell TD, Harris BS, et al. 1982. Purgeable organic compounds in mother's milk. Bull Environ Contam Toxicol 28:322-328.

Pero RW, Bryngelsson T, Hogstedt B, et al. 1982. Occupational and *in vitro* exposure to styrene assessed by unscheduled DNA synthesis in resting human lymphocytes. Carcinogenesis 3:681-685.

Pezzagno G, Ghittori S, Imbriani M, et al. 1985. Urinary elimination of styrene in experimental and occupational exposure. Scand J Work Environ Health 11:371-379.

Pfaffli P, Hesso A, Vainio H, et al. 1981. 4-Vinylphenol excretion suggestive of arene oxide formation in workers occupationally exposed to styrene. Toxicol Appl Pharmacol 60:85-90.

Plotnick HB, Weigel WW. 1979. Tissue distribution and excretion of ^{14}C-styrene in male and female rats. Res Commun Chem Pathol Pharmacol 24:515-524.

Pohlova H, Rossner P, Sram RJ. 1985. Cytogenetic analysis of human peripheral blood lymphocytes in culture exposed *in vitro* to styrene and styrene oxide. J Hyg Epidem Microbiol Immunol 29:269-274.

Ponomarkov V, Tomatis L. 1978. Effects of long-term oral administration of styrene to mice and rats. Scand J Work Environ Health 4(Suppl 2):127-135.

Pouyatos B, Campo P, Lataye R. 2002. Use of DPOAEs for assessing hearing loss caused by styrene in the rat. Hear Res 165(1-2):156-164.

Pratt GC, Palmer K, Wu CY, et al. 2000. An assessment of air toxics in Minnesota. Environ Health Perspect 108(9):815-825.

Prince MM, Stayner LT, Smith RJ, et al. 1997. A re-examination of risk estimates from the NIOSH Occupational Noise and Hearing Survey (OHNS). J Acoust Soc Am 101(2):950-963.

Pryor GT, Rebert CS, Howd RA. 1987. Hearing loss in rats caused by inhalation of mixed xylenes and styrene. J Appl Toxicol 7:55-61.

Quast JF, Humiston CG, Kalnins RV, et al. 1979. Results of a toxicity study of monomeric styrene administered to beagle dogs by oral intubation for 19 months. Midland, MI: Toxicology Research Laboratory, 199.

Ramsey JC, Andersen ME. 1984. A physiologically based description of the inhalation pharmacokinetics of styrene in rats and humans. Toxicol Appl Pharmacol 73:159-175.

Ramsey JC, Young JD. 1978. Pharmacokinetics of inhaled styrene in rats and humans. Scand J Work Environ Health 4(Suppl 2):84-91.

Ramsey JC, Young JD, Karbowski RJ, et al. 1980. Pharmacokinetics of inhaled styrene in human volunteers. Toxicol Appl Pharmacol 53:54-63.

Rappaport SM, Fraser DA. 1977. Air sampling and analysis in a rubber vulcanization area. Am Ind Hyg Assoc J 38:205-210.

Rathbun Re. 2000. Transport, behavior and fate of volatile organic compounds in streams. Crit Rev Environ Sci 30:129-295.

Regnaud L, Sirois G, Colin P, et al. 1987. Simultaneous ion-pairing liquid chromatographic determination of the major metabolites of styrene and carbamazepine and of unchanged carbamazepine in urine. J Liq Chromatogr 10(11):2369-2382.

Rihs HP, Triebig G, Werner P, et al. 2008. Association between genetic polymorphisms in styrene-metabolizing enzymes and biomarkers in styrene-exposed workers. J Toxicol Environ Health A 71(13-14):866-873.

Riihimaki V, Pfaffli P. 1978. Percutaneous absorption of solvent vapors in man. Scand J Work Environ Health 4:73-85.

Roberts PV, McCarty PL, Reinhard M, et al. 1980. Organic contaminant behavior during groundwater recharge. J Water Pollut Control Fed 52(1):161-172.

Romieu I, Ramirez M, Meneses F, et al. 1999. Environmental exposure to volatile organic compounds among workers in Mexico City assessed by personal monitors and blood concentrations. Environ Health Perspect 107:511-515.

Rosen I, Haeger-Aronsen B, Rehnstrom S, et al. 1978. Neurophysiological observations after chronic styrene exposure. Scand J Work Environ Health 4(Supp. 2):184-194.

Rosengren LE, Haglid KG. 1989. Long term neurotoxicity of styrene. A quantitative study of glial fibrillary acidic protein (GFA) and S-100. Br J Ind Med 46:316-320.

Rothweiler H, Wager PA, Schlatter C. 1992. Volatile organic compounds and some very volatile organic compounds in new and recently renovated buildings in Switzerland. Atmos Environ 26(12):2219-2225.

Roy WR, Griffin RA. 1985. Mobility of organic solvents in water-saturated soil materials. Environ Geol Water Sci 7:241-247.

Ruder AM, Ward EM, Dong M, et al. 2004. Mortality patterns among workers exposed to styrene in the reinforced plastic boatbuilding industry: An update. Am J Ind Med 45(2):165-176.

Sabljic A, Gusten H, Hermens J. 1995. QSAR modelling of soil sorption. Improvements and systematics of log K_{oc} vs. log K_{ow} correlations. Chemosphere 31:4489-4514.

Sakaguchi J, Akabayashi S. 2003. Field survey of indoor air quality in detached houses in Niigata Prefecture. Indoor Air 13:42-49.

Sallmén M, Lindbohm M-L, Anttila A, et al. 1998. Time to pregnancy among the wives of men exposed to organic solvents. Occup Environ Med 55:24-30.

Salomaa S, Donner M, Norppa H. 1985. Inactivity of styrene in the mouse sperm morphology test. Toxicol Lett 24:151-155.

Sanjivamurthy VA. 1978. Analysis of organics in Cleveland water supply. Water Res 12:31-33.

Santos-Burgoa C, Matanoski GM, Zeger S, et al. 1992. Lymphohematopoietic cancer in styrene-butadiene polymerization workers. Am J Epidemiol 136(7):843-854.

Sarangapani R, Teeguarden JG, Cruzan G, et al. 2002. Physiologically based pharmacokinetic modeling of styrene and styrene oxide respiratory-tract dosimetry in rodents and humans. Inhal Toxicol 14:789-834.

Sathiakumar N, Graff J, Macaluso M, et al. 2005. An updated study of mortality among North American synthetic rubber industry workers. Occup Environ Med 62(12):822-829.

Sato A, Nakajima T. 1979. Partition coefficients of some aromatic hydrocarbons and ketones in water, blood and oil. Br J Ind Med 36:231-234.

Sato T, Kishi R, Gong Y, et al. 2009. Effects of styrene exposure on vibration perception threshold. Neurotoxicology 30:97-102.

Savolainen H, Pfaffli P. 1978. Accumulation of styrene monomer and neurochemical effects of long-term inhalation exposure in rats. Scand J Work Environ Health 4:78-83.

Sax NI, Lewis RJ. 1987. Hawley's condensed chemical dictionary. 11th ed. New York: Van Nostrand Reinhold Company, 1101.

Sbrana I, Lascialfari D, Rossi AM, et al. 1983. Bone marrow cell chromosomal aberrations and styrene biotransformation in mice given styrene on a repeated oral schedule. Chem Biol Interact 45:349-357.

Schaeffer VH, Bhooshan B, Chen S-B, et al. 1996. Characterization of volatile organic chemical emissions from carpet cushions. J Air Waste Manage Assoc 46:813-820.

Sedivec V, Flek J, Mraz M. 1984. Urinary excretion of mandelic and phenylglyoxylic acids after human exposure to styrene vapour. J Hyg Epid Microbiol Immunol 28:241-255.

Seeber A, Blaszkewicz M, Golka K, et al. 2004. Neurobehavioral effects of experimental exposures to low levels of styrene. Toxicol Lett 151:183-192.

Seeber A, Bruckner T, Triebig G. 2009a. Occupational styrene exposure and nuerobehavioural functions: A cohort study with repeated measurements. Int Arch Occup Environ Health 82(8):969-984.

Seeber A, Bruchner T, Triebig G. 2009b. Occupational styrene exposure, colour vision and contrast sensitivity: a cohort study with repeated measurements. Int Arch Occup Environ Health 82(6):757-770.

Seppäläinen AM, Härkönen H. 1976. Neurophysiological findings among workers occupationally exposed to styrene. Scand J Work Environ Health 3:140-146.

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.

Sexton K, Adgate JL, Church TR, et al. 2005. Children's exposure to volatile organic compounds as determined by longitudinal measurements in blood. Environ Health Perspect 113(3):342-349.

Shamy MY, Osman HH, Kandeel KM, et al. 2002. DNA single strand breaks induced by low levels of occupational exposure to styrene: The gap between standards and reality. J Environ Pathol Toxicol Oncol 21(1):57-61.

Sheldon LS, Hites RA. 1978. Organic compounds in the Delaware River. Environ Sci Tech 12:1188-1194.

Shields HC, Weschler CJ. 1992. Volatile organic compounds measured at a telephone switching center form 5/30/85-12/6/88: A detailed case study. J Air Waste Manage Assoc 42:792-804.

Shugaev BB. 1969. Concentrations of hydrocarbons in tissues as a measure of toxicity. Arch Environ Health 18:878-882.

Sielicki M, Focht DD, Martin JP. 1978. Microbial transformations of styrene and [^{14}C] styrene in soil and enrichment cultures. Appl Environ Microbiol 35:124-128.

Simula AP, Priestly BG. 1992. Species differences in the genotoxicity of cyclophosphamide and styrene in three *in vivo* assays. Mutat Res 271:49-58.

Sinha AK, Jersey GC, Linscombe VA, et al. 1983. Cytogenetic evaluation of bone marrow cells from rats exposed to styrene vapor for one year. Fundam Appl Toxicol 3:95-98.

Sjöborg S, Fregert S, Trulsson L. 1984. Contact allergy to styrene and related chemicals. Contact Dermatitis 10:94-96.

Ska B, Vyskocil A, Tardif R, et al. 2003. Effects of peak concentrations on the neurotoxicity of styrene in volunteers. Hum Exp Toxicol 22:407-415.

Śliwińska-Kowalska M, Zamyslowska-Szmytke E, Szymczak W, et al. 2003. Ototoxic effects of occupational exposure to styrene and co-exposure to styrene and noise. J Occup Environ Med 45(1):15-24.

Sloane TM, Brudzynski RJ. 1979. Competition between reactive sites in the reactions of oxygen atoms and hydroxyl radicals with phenylacetylene and styrene. J Am Chem Soc 101 (March 14):1495-1499.

Sollenberg J, Bjurstrom R, Wrangskag K, et al. 1988. Biological exposure limits estimated from relations between occupational styrene exposure during a workweek and excretion of mandelic and phenylglyoxylic acids in urine. Int Arch Occup Environ Health 60:365-370.

Somorovská M, Jahnova E, Tulinska J, et al. 1999. Biomonitoring of occupational exposure to styrene in a plastic lamination plant. Mutat Res 428(1-2):255-269.

Spencer HC, Irish DD, Adams EM, et al. 1942. The response of laboratory animals to monomeric styrene. J Ind Hyg Toxicol 24:295-301.

Squillace PJ, Moran MJ, Lapman WW, et al. 1999. Volatile organic compounds in untreated ambient groundwater of the United States, 1985-1995. Environ Sci Technol 33(23):4176-4187.

SRI. 1989. Directory of chemical producers: United States of America. Menlo Park, CA: SRI International, 968.

SRI. 2006. Directory of chemical producers. United Status of America. Menlo Park, CA: SRI Consulting, 894.

SRI. 2008. [Styrene] Directory of Chemical Producers. United States. Menlo Park, CA: SRI Consulting. Access Intelligence, LLC., 856.

Srivastava S, Das M, Mushtaq M, et al. 1982. Hepatic effects of orally administered styrene in rats. J Appl Toxicol 2:219-222.

Srivastava S, Seth PK, Srivastava SP. 1989. Effect of styrene administration on rat testis. Arch Toxicol 63:43-46.

Srivastava S, Seth PK, Srivastava SP, et al. 1992a. Biochemical and morphological studies in testes of rat offspring of mothers exposed to styrene during lactation. Pharmacol Toxicol 70:314-316.

Srivastava S, Seth PK, Srivastava SP. 1992b. Effect of styrene on testicular enzymes of growing rat. Ind J Exp Biol 30:399-401.

Stefaniak AB, Breysse PN, Murray MPM, et al. 2000. An evaluation of employee exposure to volatile organic compounds in three photocopy centers. Environ Res 83:162-173.

Štětkářová I, Urban P, Prochazka B, et al. 1993. Somatosensory evoked potentials in workers exposed to toluene and styrene. Br J Ind Med 50(6):520-527.

Stewart RD, Dodd HC, Baretta ED, et al. 1968. Human exposure to styrene vapor. Arch Environ Health 16:656-662.

Sumner SJ, Fennell TR. 1994. Review of the metabolic fate of styrene. Crit Rev Toxicol 24(Suppl 1):S11-S33.

Symanski E, Bergamaschi E, Mutti A. 2001. Inter-and intra-individual sources of variation in levels of urinary styrene metabolites. Int Arch Occup Environ Health 74:336-344.

Takeoko GR, Flath RA, Guntert M, et al. 1988. Nectarine volatiles: Vacuum steam distillation versus headspace. J Agric Food Chem 36:553-560.

Tang J, Jin QZ, Shen GH, et al. 1983. Isolation and identification of volatile compounds from fried chicken. J Agric Food Chem 31:1287-1292.

Tang W, Hemm I, Eisenbrand G. 2000. Estimation of human exposure to styrene and ethylbenzene. Toxicology. Toxicology 144(1-3):39-50.

Teramoto K, Horiguchi S. 1979. Absorption, distribution and elimination of styrene in man and experimental animals. Arh Hig Rada Toksikol 30:431-437.

Thiess AM, Friedheim M. 1978. Morbidity among persons employed in styrene production, polymerization and processing plants. Scand J Work Environ Health 4 (Suppl 2):203-214.

Thiess AM, Schwegler H, Fleig I. 1980. Chromosome investigations in lymphocytes of workers employed in areas in which styrene-containing unsaturated polyester resins are manufactured. Am J Ind Med 1:205-210.

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.

Till D, Schwope AD, Ehntholt DJ, et al. 1987. Indirect food additive migration from polymeric food packaging materials. CRC Crit Rev Toxicol 18:215-243.

Tomanin R, Ballarin C, Bartolucci GB, et al. 1992. Chromosome aberrations and micronuclei in lymphocytes of workers exposed to low and medium levels of styrene. Int Arch Occup Environ Health 64:209-215.

Toppila E, Forsman P, Pyykko I, et al. 2006. Effect of styrene on postural stability among reinforced plastic boat plant workers in Finland. J Occup Environ Med 48(2):175-180.

Trenga CA, Kunkel DD, Eaton DL, et al. 1991. Effects of styrene oxide on rat brain glutathione. Neurotoxicity 12:165-178.

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/. February 19, 2009.

Triebig G, Bruckner T, Seeber A. 2009. Occupational styrene exposure and hearing loss: A cohort study with repeated measurements. Int Arch Occup Environ Health 82(4):463-480.

Triebig G, Lehrl S, Weltle D, et al. 1989. Clinical and neurobehavioral study of the acute and chronic neurotoxicity of styrene. Br J Ind Med 46:799-804.

Triebig G, Schaller KH, Valentin H. 1985. Investigations on neurotoxicity of chemical substances at the workplace. Int Arch Occup Environ Health 56:239-247.

Triebig G, Bruckner T, Seeber A. 2009. Occupational styrene exposure and hearing loss: A cohort study with repeated measurements. Int Arch Occup Environ Health 82(4):463-480.

Triebig G, Stark T, Ihrig A, et al. 2001. Intervention study on acquired color vision deficiencies in styrene-exposed workers. J Occup Environ Med 43(5):494-500.

Tsai SP, Chen JD. 1996. Neurobehavioural effects of occupational exposure to low-level styrene. Neurotoxicol Teratol 18(4):463-469.

Tulinska J, Dusinska M, Jahnova E, et al. 2000. Changes in cellular immunity among workers occupationally exposed to styrene in a plastics lamination plant. Am J Ind Med 38(5):576-583.

Uchiyama S, Hasegawa S. 2000. Investigation of a long-term sampling period for monitoring volatile organic compounds in ambient air. Environ Sci Technol 34:4656-4661.

Umemura T, Kurahashi N, Kondo T, et al. 2005. Acute effects of styrene inhalation on the neuroendocrinological system of rats and the different effects in male and female rats. Arch Toxicol 79(11):653-659.

USGS. 1998. Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory: Determination of 86 volatile organic compounds in water by gas chromatography/mass spectrometry, including detections less than reporting limits. Denver, CO: U.S. Geological Survey, 97-829.

USGS. 2006. Volatile organic compounds in the nation's ground water and drinking water supply wells. Reston, VA: U.S. Geological Survey.

USITC. 1987. Synthetic organic chemicals: United States production and sales, 1986. Washington, DC: U.S. International Trade Commission. USITC Publication 2009, 26, 39.

USITC. 1988. Synthetic organic chemicals: United States production and sales, 1987. Washington, DC: U.S. International Trade Commission. USITC Publication 2118, 3-2, 3-14.

Vainio H, Jarvisalo J, Taskinen E. 1979. Adaptive changes caused by intermittent styrene inhalation on xenobiotic biotransformation. Toxicol Appl Pharmacol 49:7-14.

Vainio H, Paakkonen R, Ronnholm K, et al. 1976. A study on the mutagenic activity of styrene and styrene oxide. Scand J Work Environ Health 3:147-151.

Vainiotalo S, Vaananen V, Vaaranrinta R. 2008. Measurement of 16 volatile organic compounds in restaurant air contaminated with environmental tobacco smoke. Environ Res 108(3):280-288.

Valvani SC, Yalkowsky SH, Roseman TJ. 1981. Solubility and partitioning IV: Aqueous solubility and octanol-water partition coefficients of liquid nonelectrolytes. J Pharm Sci 70:502-507.

Van Rooij JG, Kasper A, Triebig G, et al. 2008. Trends in occupational exposure to styrene in the European glass fibre-reinforced plastics industry. Ann Occup Hyg 52(5):337-349.

Varner SL, Breder CV. 1981. Headspace sampling and gas chromatographic determination of styrene migration from food-contact polystyrene cups into beverages and food stimulants. J Assoc Off Anal Chem 64:1122-1130.

Verplanke AJW, Herber RFM. 1998. Effects on the kidney of occupational exposure to styrene. Int Arch Occup Environ Health 71:47-52.

Verschueren K. 1983. Handbook of environmental data on organic chemicals. 2nd ed. New York: Van Nostrand Reinhold Company, 1055-1057.

Verschueren K. 2001. Handbook of environmental data on organic chemicals. Vol. 2. 4th ed. New York, NY: John Wiley & Sons, Inc., 1899-1902.

Viaene MK, Pauwels W, Veulemans H, et al. 2001. Neurobehavioural changes and persistence of complaints in workers exposed to styrene in a polyester boat building plant: Influence of exposure. Occup Environ Med 58(2):103-112.

Viaene M, Veulemans H, Masschelein R. 1998. Experience with a vocabulary test for workers previously and still exposed to styrene. Scand J Work Environ Health 24(4):308-311.

Viau C, Bernard A, De Russis R, et al. 1987. Evaluation of the nephrotoxic potential of styrene in man and in rat. J Appl Toxicol 7(5):313-316.

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.

Vitrac O, Leblanc JC. 2007. Consumer exposure to substances in plastic packaging. I. Assessment of the contribution of styrene from yogurt pots. Food Addit Contam 24(2):194-215.

Vodicka P, Bastlova T, Vodickova L, et al. 1995. Biomarkers of styrene exposure in lamination workers: Levels of {IO}{+6}-guanine DNA adducts, DNA strand breaks and mutant frequencies in the hypoxanthine guanine phosphoribosyltransferase gene in T-lymphocytes. Carcinogenesis 16(7):1473-1481.

Vodicka P, Koskinen M, Vodickova L, et al. 2001a. DNA adducts, strand breaks and micronuclei in mice exposed to styrene by inhalation. Chem Biol Interact 137:213-227.

*Vodicka P, Soucek P, Tates AD, et al. 2001b. Association between genetic polymorphisms and biomarkers in styrene-exposed workers. Mutat Res 482(1-2):89-103.

Vodicka P, Tuimala J, Stetina R, et al. 2004. Cytogenetic markers, DNA single-strand breaks, urinary metabolites, and DNA repair rates in styrene-exposed lamination workers. Environ Health Perspect 112:867-871.

Vyskocil A, Emminger S, Malir F, et al. 1989. Lack of nephrotoxicity of styrene at current TLV level (50 ppm). Int Arch Occup Environ Health 61:409-411.

Wallace L, Buckley T, Pellizzari E, Gordon S. 1996. Breath measurements as volatile organic compounds biomarkers. Environ Health Perspect 104:861-869.

Wallace LA, Pellizzari ED. 1995. Recent advances in measuring exhaled breath and estimating exposure and body burden for volatile organic compounds. Environ Health Perspect 103:95-98.

Wallace LA, Pellizzari ED, Hartwell TD, et al. 1986a. Total exposure assessment methodology (TEAM) study: Personal exposures, indoor-outdoor relationships, and breath levels of volatile organic compounds in New Jersey. Environ Int 12:369-387.

Wallace LA, Pellizzari ED, Leaderer B, et al. 1987b. Emissions of volatile organic compounds from building materials and consumer products. Atmos Environ 21:385-393.

Wallace LA, Pellizzari ED, Sheldon L, et al. 1986b. The total exposure assessment methodology (TEAM) study: Direct measurement of personal exposures through air and water for 600 residents of several U.S. cities. In: Cohen Y, ed. Pollutants in a multimedia environment. New York, NY: Plenum Publishing Corporation, 289-315.

Walles SAS, Orsen I. 1983. Single-strand breaks in DNA of various organs of mice induced by styrene and styrene oxide. Cancer Lett 21:9-15.

Walles SAS, Edling C, Anundi H, et al. 1993. Exposure dependent increase in DNA single strand breaks in leucocytes from workers exposed to low concentrations of styrene. Br J Ind Med 50:570-574.

Warhurst AM, Fewson CA. 1994. Microbial metabolism and biotransformation of styrene. J Appl Bacteriol 77:597-606.

Watanabe T, Endo A, Sato K, et al. 1981. Mutagenic potential of styrene in man. Ind Health 19:37-45.

Weast RC, ed. 1985. CRC handbook of chemistry and physics. Boca Raton, FL: CRC Press, Inc., C-498.

Welp E, Kogevinas M, Andersen A, et al. 1996c. Exposure to styrene and mortality from nervous system diseases and mental disorders. Am J Epidemiol 144(7):623-633.

Wenker MAM, Kezic S, Monster AC, et al. 2001. Stereochemical metabolism of styrene in volunteers. Int Arch Occup Environ Health 74:359-365.

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.

WHO. 1983. Environmental health criteria 26: Styrene. Geneva: World Health Organization. http://www.inchem.org/documents/ehc/ehc/ehc26.htm. April 05, 2007.

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. 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.

Widdowson EM, Dickerson JWT. 1964. Chemical composition of the body. In: Comar CL, Bronner F, eds. Mineral metabolism: An advanced treatise. Volume II: The elements Part A. New York, NY: Academic Press.

Wigaeus E, Lof A, Bjurstrom R, et al. 1983. Exposure to styrene: Uptake, distribution, metabolism and elimination in man. Scand J Work Environ Health 9:479-488.

Wilson JT, McNabb JF, Wilson BH, et al. 1983. Biotransformation of selected organic pollutants in ground water. Developments in Industrial Microbiology 24:225-233.

Windholz, M, ed. 1983. Styrene. The Merck index. 10th ed. Rahway, NJ: Merck and Co., Inc., 1270.

Wintrobe MM, Thorn GW, Adams RD, et al., eds. 1970. Harrison's principles of internal medicine. Vol. 2. 6th ed. New York, NY: McGraw-Hill, Inc., 1614-1615.

Withey JR. 1976. Quantitative analysis of styrene monomer in polystyrene and foods including some preliminary studies of the uptake and pharmacodynamics of the monomer in rats. Environ Health Perspect 17:125-133.

Withey JR, Collins PG. 1977. Pharmacokinetics and distribution of styrene monomer in rats after intravenous administration. J Toxicol Environ Health 3:1011-1020.

Withey JR, Collins PG. 1978. Styrene monomer in foods: A limited Canadian survey. Bull Environ Contam Toxicol 19:86-94.

Withey JR, Collins PG. 1979. The distribution and pharmacokinetics of styrene monomer in rats by the pulmonary route. J Environ Pathol Toxicol 2:1329-1342.

Withey JR, Karpinski K. 1985. Fetal distribution of styrene in rats after vapor phase exposures. Biol Res Pregnancy 6:59-64.

Wolf MA, Rowe VK, McCollister DD, et al. 1956. Toxicological studies of certain alkylated benzenes and benzene: Experiments on laboratory animals. AMA Arch Ind Health 14:387-398.

Wong O. 1990. A cohort mortality study and a case-control study of workers potentially exposed to styrene in the reinforced plastics and composites industry. Br J Ind Med 47:753-762.

Wong O, Trent LS, Whorton MD. 1994. An updated cohort mortality study of workers exposed to styrene in the reinforced plastics and composites industry. Occup Environ Med 51:386-396.

Yager JW, Paradisin WM, Rappaport SM. 1993. Sister-chromatid exchanges in lymphocytes are increased in relation to longitudinally measured occupational exposure to low concentrations of styrene. Mutat Res 319:155-165.

Yamamoto T, Teramoto K, Horiguchi S. 1997. Effects of styrene on peripheral nerve conduction velocities in rats. J Occup Health 39:319-324.

Yang WP, Hu BH, Chen GD, et al. 2008. Protective effect of N-acetyl-L-cysteine (L-NAC) against styrene-induced cochlear injuries. Acta Otolaryngol [Epub ahead of print]:1-8.

Yano BL, Dittenber DA, Albee RR, et al. 1992. Abnormal auditory brainstem responses and cochlear pathology in rats induced by an exaggerated styrene exposure regimen. Toxicol Pathol 20(1):1-6.

Yoshikawa K, Isobe M, Watabe T, et al. 1980. Studies on metabolism and toxicity of styrene: III. The effect of metabolic inactivation by rat-liver S9 on the mutagenicity of phenyloxirane toward *Salmonella typhimurium*. Mutat Res 78:219-226.

Young JD, Ramsey JC, Blau GE, et al. 1979. Pharmacokinetics of inhaled or intraperitoneally administered styrene in rats. In: Toxicology and Occupational Medicine. New York, NY: Elsevier/North-Holland, 297-310.

Yuasa J, Kishi R, Eguchi T, et al. 1996. Study of urinary mandelic acid concentration and peripheral nerve conduction among styrene workers. Am J Ind Med 30:41-47.

Zaidi NF, Agrawal AK, Srivastava SP, et al. 1985. Effect of gestational and neonatal styrene exposure on dopamine receptors. Neurobehav Toxicol Teratol 7:23-28.

Zelano V, Rizzi S, Gastaldi D, et al. 1998. Volatile organic compounds in drinking water. Ann Chim 88:449-460.

Ziegler EE, Edwards BB, Jensen RL, et al. 1978. Absorption and retention of lead by infants. Pediatr Res 12(1):29-34.

Zielinska B, Sagebiel JC, Harshfield G, et al. 1996. Volatile organic compounds up to C_{20} emitted from motor vehicles; measurement methods. Atmos Environ 30:2269-2286.

Zoeteman BC, Harmsen K, Linders JB, et al. 1980. Persistent organic pollutants in river water and groundwater of the Netherlands. Chemosphere 9:231-241.