

CHAPTER 8. REFERENCES

- Albano E, Poli G, Tomasi A, et al. 1984. Toxicity of 1,2-dibromoethane in isolated hepatocytes: role of lipid peroxidation. *Chem Biol Interact* 50(3):255-265.
- Alumot E, Nachtomi E, Mandel E, et al. 1976. Tolerance and acceptable daily intake of chlorinated fumigants in the rat diet. *Food Cosmet Toxicol* 14(2):105-110. [https://doi.org/10.1016/S0015-6264\(76\)80252-0](https://doi.org/10.1016/S0015-6264(76)80252-0).
- Al-Zahrani SM, Aljodai AM, Wagialla KM. 2001. Modelling and simulation of 1,2-dichloroethane production by ethylene oxychlorination in fluidized-bed reactor. *Chem Eng Sci* 56(2):621-626. [http://doi.org/10.1016/s0009-2509\(00\)00268-2](http://doi.org/10.1016/s0009-2509(00)00268-2).
- Andelman JB. 1985. Inhalation exposure in the home to volatile organic contaminants of drinking water. *Sci Total Environ* 47:443-460. [http://doi.org/10.1016/0048-9697\(85\)90349-3](http://doi.org/10.1016/0048-9697(85)90349-3).
- Anders MW, Livesey JC. 1980. Metabolism of 1,2-dihaloethanes. In: Ames B, Infante P, Reitz R, eds. *Ethylene dichloride: A potential health risk?* Cold Spring Harbor, NY: Cold Spring Harbor Laboratory, 331-341.
- Ansari GA, Gan JC, Barton BK. 1988. Synergistic inactivation of plasma alpha 1-proteinase inhibitor by aldehydes of cigarette smoke with styrene oxide and 1,2-dichloroethane. *Arch Environ Contam Toxicol* 17(4):533-536.
- Ansari GA, Singh SV, Gan JC, et al. 1987. Human erythrocyte glutathione S-transferase: a possible marker of chemical exposure. *Toxicol Lett* 37(1):57-62.
- API. 2008. The environmental behavior of ethylene dibromide and 1,2-dichloroethane in surface water, soil, and groundwater. American Petroleum Institute. API Publication 4774.
- Aragno M, Tamagno E, Danni O, et al. 1992. In vivo studies on halogen compound interactions. III. Effect of carbon tetrachloride plus 1,2-dichloroethane on liver necrosis and fatty accumulation. *Res Commun Chem Pathol Pharmacol* 76(3):341-354.
- Armstrong MJ, Galloway SM. 1993. Micronuclei induced in peripheral blood of Eu-PIM-1 transgenic mice by chronic oral treatment with 2-acetylaminofluorene or benzene but not with diethyl-nitrosamine or 1,2-dichloroethane. *Mutat Res* 302(1):61-70.
- Arnts RR, Seila RL, Bufalini JJ. 1989. Determination of room temperature OH rate constants for acetylene, ethylene dichloride, ethylene dibromide, p-dichlorobenzene and carbon disulfide. *JAPCA* 39(4):453-460. <http://doi.org/10.1080/08940630.1989.10466544>.
- ASTSWMO. 2014. Lead scavengers survey report. Washington, DC: Association of State and Territorial Solid Waste Management Officials. <https://astswmo.org/files/policies/Tanks/2014-08-ASTSWMOLeadScavengersReport-FINAL.pdf>. February 13, 2023.
- Atkinson R. 1986. Kinetics and mechanisms of the gas-phase reactions of the hydroxyl radical with organic compounds. *Chem Rev* 86(1):69-201. <http://doi.org/10.1021/cr00071a004>.
- ATSDR. 1989. Decision guide for identifying substance-specific data needs related to toxicological profiles; notice. Agency for Toxic Substances and Disease Registry. *Fed Regist* 54(174):37618-37634.
- ATSDR. 2022. 1,2-Dichloroethane. Full SPL data. Substance priority list (SPL) resource page. Agency for Toxic Substances and Disease Registry. <http://www.atsdr.cdc.gov/SPL/resources/index.html>. June 1, 2023.
- Austin SG, Schnatter AR. 1983a. A cohort mortality study of petrochemical workers. *J Occup Med* 25(4):304-312.
- Austin SG, Schnatter AR. 1983b. A case-control study of chemical exposures and brain tumors in petrochemical workers. *J Occup Med* 25(4):313-320.
- Baertsch A, Lutz WK, Schlatter C. 1991. Effect of inhalation exposure regimen on DNA binding potency of 1,2-dichloroethane in the rat. *Arch Toxicol* 65(3):169-176.
- Ballerling LA, Nivard MJ, Vogel EW. 1993. Characterization of the genotoxic action of three structurally related 1,2-dihaloalkanes in *Drosophila melanogaster*. *Mutat Res* 285(2):209-217.

8. REFERENCES

- Ballering LA, Nivard MJ, Vogel EW. 1994. Mutation spectra of 1,2-dibromoethane, 1,2-dichloroethane and 1-bromo-2-chloroethane in excision repair proficient and repair deficient strains of *Drosophila melanogaster*. *Carcinogenesis* 15(5):869-875. <http://doi.org/10.1093/carcin/15.5.869>.
- Banerjee S. 1988. DNA damage in rodent liver by 1,2-dichloroethane, a hepatocarcinogen. *Cancer Biochem Biophys* 10(2):165-173.
- Banerjee S, Van Duuren BL. 1979. Binding of carcinogenic halogenated hydrocarbons to cell macromolecules. *J Natl Cancer Inst* 63(3):707-711. <http://doi.org/10.1093/jnci/63.3.707>.
- Banerjee S, Baughman GL. 1991. Bioconcentration factors and lipid solubility. *Environ Sci Technol* 25(3):536-539. <http://doi.org/10.1021/es00015a024>.
- Banerjee S, Van Duuren BL, Oruambo FI. 1980. Microsome-mediated covalent binding of 1,2-dichloroethane to lung microsomal protein and salmon sperm DNA. *Cancer Res* 40(7):2170-2173.
- Barbash JE, Reinhard M. 1989. Abiotic dehalogenation of 1,2-dichloroethane and 1,2-dibromoethane in aqueous solution containing hydrogen sulfide. *Environ Sci Technol* 23(11):1349-1358. <http://doi.org/10.1021/es00069a004>.
- Barbee GC. 1994. Fate of chlorinated aliphatic hydrocarbons in the vadose zone and ground water. *Ground Water Monit Remediat* 14(1):129-140. <http://doi.org/10.1111/j.1745-6592.1994.tb00098.x>.
- Barber ED, Donish WH, Mueller KR. 1981. A procedure for the quantitative measurement of the mutagenicity of volatile liquids in the Ames Salmonella/microsome assay. *Mutat Res* 90(1):31-48.
- Barkley J, Bunch J, Bursey JT, et al. 1980. Gas chromatography mass spectrometry computer analysis of volatile halogenated hydrocarbons in man and his environment--A multimedia environmental study. *Biomed Mass Spectrom* 7(4):139-147.
- Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessments. *Regul Toxicol Pharmacol* 8(4):471-486.
- Benson LO, Teta MJ. 1993. Mortality due to pancreatic and lymphopietic cancers in chlorohydrin production workers. *Br J Ind Med* 50:710-716.
- Bianchi AP, Varney MS, Phillips J. 1991. Analysis of volatile organic compounds in estuarine sediments using dynamic headspace and gas chromatography—mass spectrometry. *J Chromatogr A* 542:413-450. [http://doi.org/10.1016/s0021-9673\(01\)88779-3](http://doi.org/10.1016/s0021-9673(01)88779-3).
- Blount BC, Kobelski RJ, McElprang DO, et al. 2006. Quantification of 31 volatile organic compounds in whole blood using solid-phase microextraction and gas chromatography—mass spectrometry. *J Chromatogr Sci B* 832(2):292-301.
- Borisover MD, Graber ER. 1997. Specific interactions of organic compounds with soil organic carbon. *Chemosphere* 34(8):1761-1776. [http://doi.org/10.1016/s0045-6535\(97\)00032-5](http://doi.org/10.1016/s0045-6535(97)00032-5).
- Bosma TNP, van Aalst-van Leewen M, Geritse J, et al. 1998. Intrinsic dechlorination of 1,2-dichloroethane at an industrial site. In: Wickramanayake GB, Hinchee RE, eds. N170mbryogenestuation: Chlorinated and recalcitrant compounds. Columbus, OH: Battelle Press, 7-11.
- Bove FJ. 1996. Public drinking water contamination and birthweight, prematurity, fetal deaths, and birth defects. *Toxicol Ind Health* 12(2):255-266.
- Bove FJ, Fulcomer MC, Klotz JB, et al. 1995. Public drinking water contamination and birth outcomes. *Am J Epidemiol* 141(9):850-862. <http://doi.org/10.1093/oxfordjournals.aje.a117521>.
- Boverhof DR, Hotchkiss JA, LeBaron MJ, et al. 2018. Investigation of the potential non-genotoxic mode of action for 1,2-dichloroethane (DCE)-induced mammary tumors in female rats. *Toxicol Lett* 295:S150-S151.
- Bowler RM, Gysens S, Hartney C. 2003. Neuropsychological effects of ethylene dichloride exposure. *Neurotoxicology* 24(4-5):553-562. [http://doi.org/10.1016/S0161-813X\(03\)00027-5](http://doi.org/10.1016/S0161-813X(03)00027-5).
- Brem H, Stein AB, Rosenkranz HS. 1974. The mutagenicity and DNA-modifying effect of haloalkanes. *Cancer Res* 34(10):2576-2579.
- Brender JD, Shinde MU, Zhan FB, et al. 2014. Maternal residential proximity to chlorinated solvent emissions and birth defects in offspring: a case-control study. *Environ Health* 13:96. <http://doi.org/10.1186/1476-069X-13-96>.

8. REFERENCES

- Brittebo EB, Kowalski B, Ghantous H, et al. 1989. Epithelial binding of 1,2-dichloroethane in mice. *Toxicology* 56(1):35-45. [http://doi.org/10.1016/0300-483x\(89\)90210-2](http://doi.org/10.1016/0300-483x(89)90210-2).
- Brondeau GR, Bonnet P, Guenier JP, et al. 1983. Short-term inhalation test for evaluating industrial hepatotoxicants in rats. *Toxicol Lett* 19:139-146.
- Brosseau J, Heitz M. 1994. Trace gas compound emissions from municipal landfill sanitary sites. *Atmos Environ* 28(2):285-293. [http://doi.org/10.1016/1352-2310\(94\)90103-1](http://doi.org/10.1016/1352-2310(94)90103-1).
- Brown HS, Bishop DR, Rowan CA. 1984. The role of skin absorption as a route of exposure for volatile organic compounds (VOCs) in drinking water. *Am J Public Health* 74(5):479-484. <http://doi.org/10.2105/ajph.74.5.479>.
- Brüggemann R, Trapp S, Matthies M. 1991. Behavior assessment of a volatile chemical in the Rhine River. *Environ Toxicol Chem* 10(9):1097-1103. <http://doi.org/10.1002/etc.5620100901>.
- Budava'i S, O'Neil MJ, Smith A, et al. 2013. Ethylene dichloride. In: *The Merck-index - An encyclopedia of chemicals, drugs, and biologicals*. Cambridge, UK: Royal Society of Chemistry, 3849.
- Buijs W, van der Gen A, Mohn GR, et al. 1984. The direct mutagenic activity of alpha, omega-dihalogenoalkanes in *Salmonella typhimurium*. Strong correlation between chemical properties and mutagenic activity. *Mutat Res* 141(1):11-14.
- Bundschuh I, Herbort C, Fels LM, et al. 1993. Renal fibronectin excretion as a marker for renal environmental toxins. *Contrib Nephrol* 101:177-184.
- Burk T, Zarus G. 2013. Community exposures to chemicals through vapor intrusion: a review of past agency for toxic substances and Disease Registry public health evaluations. *J Environ Health* 75(9):36-41.
- Canter LW, Sabatini DA. 1994. Contamination of public ground water supplies by Superfund sites. *Int J Environ Stud* 46(1):35-57. <http://doi.org/10.1080/00207239408710909>.
- Capel PD, Larson SJ. 1995. A chemodynamic approach for estimating losses of target organic chemicals from water during sample holding time. *Chemosphere* 30(6):1097-1107. [http://doi.org/10.1016/0045-6535\(94\)00004-e](http://doi.org/10.1016/0045-6535(94)00004-e).
- Casciola LA, Ivanetich KM. 1984. Metabolism of chloroethanes by rat liver nuclear cytochrome P-450. *Carcinogenesis* 5(5):543-548. <http://doi.org/10.1093/carcin/5.5.543>.
- CDC. 2018. National Health and Nutrition Examination Survey data. Volatile organic compounds and trihalomethane-/MTBE - Blood (VOCWB_I). Hyattsville, MD: Centers for Disease Control and Prevention. https://wwwn.cdc.gov/Nchs/Nhanes/2015-2016/VOCWB_I.htm. April 30, 2021.
- CDPR. 2019. Output reporting for ethylene dichloride (274). California Department of Pesticide Regulation. https://apps.cdpr.ca.gov/cgi-bin/label/labq.pl?p_chem=274&activeonly=off. April 30, 2021.
- Chan MH, Chen HH, Lin YR. 2002. Aliphatic chlorinated hydrocarbons alter the contractile responses of tracheal smooth muscle in piglet. *J Toxicol Environ Health A* 65(3-4):293-304. <http://doi.org/10.1080/15287390252800873>.
- Chang HL, Alvarez-Cohen L. 1996. Biodegradation of individual and multiple chlorinated aliphatic hydrocarbons by methane-oxidizing cultures. *Appl Environ Microbiol* 62(9):3371-3377.
- Charlap JH. 2015. An extended one-generation drinking water reproductive toxicity study of ethylene dichloride in rats. HAP Task Force. Submitted to the U.S. Environmental Protection Agency. WIL-417007. <https://www.regulations.gov/document/EPA-HQ-OPPT-2003-0010-0134>. April 30, 2021.
- Cheever KL, Cholakis JM, el-Hawari AM, et al. 1990. Ethylene dichloride: the influence of disulfiram or ethanol on oncogenicity, metabolism, and DNA covalent binding in rats. *Fundam Appl Toxicol* 14(2):243-261. [http://doi.org/10.1016/0272-0590\(90\)90205-x](http://doi.org/10.1016/0272-0590(90)90205-x).
- Cheh AM, Hooper AB, Skochdopole J, et al. 1980. A comparison of the ability of frog and rat S-9 to activate promutagens in the Ames test. *Environ Mutagen* 2(4):487-508.
- Chen C, Puhakka JA, Ferguson JF. 1996. Transformations of 1,1,2,2-tetrachloroethane under methanogenic conditions. *Environ Sci Technol* 30(2):542-547. <http://doi.org/10.1021/es9502987>.

8. REFERENCES

- Chen S, Zhang Z, Lin H, et al. 2015. 1,2-Dichloroethane-induced toxic encephalopathy: a case series with morphological investigations. *J Neurol Sci* 351(1-2):36-40.
<http://doi.org/10.1016/j.jns.2015.02.020>.
- Cheng TJ, Huang ML, You NC, et al. 1999. Abnormal liver function in workers exposed to low levels of ethylene dichloride and vinyl chloride monomer. *J Occup Environ Med* 41(12):1128-1133.
- Cheng TJ, Chou PY, Huang ML, et al. 2000. Increased lymphocyte sister chromatid exchange frequency in workers with exposure to low level of ethylene dichloride. *Mutat Res* 470(2):109-114.
- Chiou CT, Freed VH, Peters LJ, et al. 1980. Evaporation of solutes from water. *Environ Int* 3(3):231-236. [http://doi.org/10.1016/0160-4120\(80\)90123-3](http://doi.org/10.1016/0160-4120(80)90123-3).
- Chroust K, Jowett T, Farid-Wajidi MF, et al. 2001. Activation or detoxification of mutagenic and carcinogenic compounds in transgenic *Drosophila* expressing human glutathione S-transferase. *Mutat Res Genet Toxicol Environ Mutagen* 498(1):169-179.
- Chroust K, Pavlová M, Prokop Z, et al. 2007. Quantitative structure-activity relationships for toxicity and genotoxicity of halogenated aliphatic compounds: wing spot test of *Drosophila melanogaster*. *Chemosphere* 67(1):152-159. <http://doi.org/10.1016/j.chemosphere.2006.09.020>.
- Clark RM, Goodrich JA, Deininger RA. 1986. Drinking water and cancer mortality. *Sci Total Environ* 53(3):153-172.
- Class T, Ballschmiter K. 1986. Chemistry of organic traces in air. VI: Distribution of chlorinated C1-C4 hydrocarbons in air over the northern and southern Atlantic Ocean. *Chemosphere* 15(4):413-427.
[http://doi.org/10.1016/0045-6535\(86\)90535-7](http://doi.org/10.1016/0045-6535(86)90535-7).
- Clewell HJ, Andersen ME. 1985. Risk assessment extrapolations and physiological modeling. *Toxicol Ind Health* 1:111-113.
- Cmarik JL, Inskeep PB, Meredith MJ, et al. 1990. Selectivity of rat and human glutathione S-transferase in activation of ethylene dibromide by glutathione conjugation and DNA binding and induction of unscheduled DNA synthesis in human hepatocytes. *Cancer Res* 50:2747-2752.
- CMR. 1998. Chemical profile: Ethylene dichloride. *Chem Market Rep* (February 16, 1998):45.
- Cohen MA, Ryan PB, Yanagisawa Y, et al. 1989. Indoor/outdoor measurements of volatile organic compounds in the Kanawha Valley of West Virginia. *JAPCA* 39(8):1086-1093.
<http://doi.org/10.1080/08940630.1989.10466593>.
- Cole RH, Frederick RE, Healy RP, et al. 1984. Preliminary findings of the priority pollutant monitoring project of the nationwide urban runoff program. *J Water Pollut Control Fed* 56(7):898-908.
- Conkle JP, Camp BJ, Welch BE. 1975. Trace composition of human respiratory gas. *Arch Environ Health* 30(6):290-295.
- Corapcioglu MY, Hossain MA. 1990. Ground-water contamination by high-density immiscible hydrocarbon slugs in gravity-driven gravel aquifers. *Groundwater* 28(3):403-412.
<http://doi.org/10.1111/j.1745-6584.1990.tb02270.x>.
- Cottalasso D, Domenicotti C, Traverso N, et al. 2002. Influence of chronic ethanol consumption on toxic effects of 1,2-dichloroethane: glycolipoprotein retention and impairment of dolichol concentration in rat liver microsomes and Golgi apparatus. *Toxicology* 178(3):229-240.
[http://doi.org/10.1016/s0300-483x\(02\)00235-4](http://doi.org/10.1016/s0300-483x(02)00235-4).
- Cox EE, McMaster M, Major DW, et al. 1998. Natural attenuation of 1,2-dichloroethane and chloroform in groundwater at a superfund site. In: Wickramanayake GB, Hinchee RE, eds. N172mbryogenestuation: Chlorinated and recalcitrant compounds. Columbus, OH: Battelle Press, 309-314.
- Crebelli R, Conti G, Conti L, et al. 1984. Induction of somatic segregation by halogenated aliphatic hydrocarbons in *Aspergillus nidulans*. *Mutat Res* 138(1):33-38.
- Crebelli R, Benigni R, Franekic J, et al. 1988. Induction of chromosome malsegregation by halogenated organic solvents in *Aspergillus nidulans*: unspecific or specific mechanism? *Mutat Res* 201(2):401-411. [http://doi.org/10.1016/0027-5107\(88\)90027-9](http://doi.org/10.1016/0027-5107(88)90027-9).

8. REFERENCES

- Crespi CL, Seixas GM, Turner TR, et al. 1985. Mutagenicity of 1,2-dichloroethane and 1,2-dibromoethane in two human lymphoblastoid cell lines. *Mutat Res* 142(3):133-140. [http://doi.org/10.1016/0165-7992\(85\)90053-3](http://doi.org/10.1016/0165-7992(85)90053-3).
- Croen LA, Shaw GM, Sanbonmatsu L, et al. 1997. Maternal residential proximity to hazardous waste sites and risk for selected congenital malformations. *Epidemiology* 8(4):347-354. <http://doi.org/10.1097/00001648-199707000-00001>.
- Daft JL. 1988. Rapid determination of fumigant and industrial chemical residues in food. *J Assoc Off Anal Chem* 71(4):748-760.
- Daft JL. 1991. Fumigants and related chemicals in foods: review of residue findings, contamination sources, and analytical methods. *Sci Total Environ* 100:501-518. [http://doi.org/10.1016/0048-9697\(91\)90390-z](http://doi.org/10.1016/0048-9697(91)90390-z).
- Dai H, Jing S, Wang H, et al. 2017. VOC characteristics and inhalation health risks in newly renovated residences in Shanghai, China. *Sci Total Environ* 577:73-83. <http://doi.org/10.1016/j.scitotenv.2016.10.071>.
- Dang J, Chen J, Bi F, et al. 2019. The clinical and pathological features of toxic encephalopathy caused by occupational 1,2-dichloroethane exposure. *Medicine* 98(17):e15273. <http://doi.org/10.1097/MD.00000000000015273>.
- Daniel FB, Robinson M, Olson GR, et al. 1994. Ten and ninety-day toxicity studies of 1,2-dichloroethane in Sprague-Dawley rats. *Drug Chem Toxicol* 17(4):463-477. <http://doi.org/10.3109/01480549409014312>.
- Danni O, Aragno M, Tamagno E, et al. 1992. In vivo studies on halogen compound interactions. IV. Interaction among different halogen derivatives with and without synergistic action on liver toxicity. *Res Commun Chem Pathol Pharmacol* 76(3):355-366.
- Dawes VJ, Waldock MJ. 1994. Measurement of volatile organic compounds at UK national monitoring plan stations. *Mar Pollut Bull* 28(5):291-298. [http://doi.org/10.1016/0025-326x\(94\)90153-8](http://doi.org/10.1016/0025-326x(94)90153-8).
- Dawson BV, Johnson PD, Goldberg SJ, et al. 1993. Cardiac teratogenesis of halogenated hydrocarbon—Contaminated drinking water. *J Am Coll Cardiol* 21(6):1466-1472. [http://doi.org/10.1016/0735-1097\(93\)90325-u](http://doi.org/10.1016/0735-1097(93)90325-u).
- De Wildeman S, Nollet H, Van Langenhove H, et al. 2001. Reductive biodegradation of 1,2-dichloroethane by methanogenic granular sludge in lab-scale UASB reactors. *Adv Environ Res* 6(1):17-27.
- DeMarini DM, Brooks HG. 1992. Induction of prophase lambda by chlorinated organics: Detection of some single-species/single-site carcinogens. *Environ Mol Mutagen* 19:98-111.
- 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(4):405-409. <http://doi.org/10.1021/es60127a009>.
- Dilling WL, Tefertiller NB, Kallos GJ. 1975. Evaporation rates and reactivities of methylene chloride, chloroform, 1,1,1-trichloroethane, trichloroethylene, tetrachloroethylene, and other chlorinated compounds in dilute aqueous solutions. *Environ Sci Technol* 9(9):833-838. <http://doi.org/10.1021/es60107a008>.
- DOE. 2018a. Table 3: Protective action criteria (PAC) rev. 29a based on applicable 60-minute AEGs, ERPGs, or TEELs. The chemicals are listed by CASRN. June 2018. U.S. Department of Energy. https://edms3.energy.gov/pac/docs/Revision_29A_Table3.pdf. July 6, 2022.
- DOE. 2018b. Protective action criteria (PAC) with AEGs, ERPGs, & TEELs: Rev. 29A, June 2018. U.S. Department of Energy. <https://edms3.energy.gov/pac/>. July 6, 2022.
- Doherty AT, Ellard S, Parry EM, et al. 1996. An investigation into the activation and deactivation of chlorinated hydrocarbons to genotoxins in metabolically competent human cells. *Mutagenesis* 11(3):247-274. <http://doi.org/10.1093/mutage/11.3.247>.
- Dreher E, Beutel KK, Myers JD, et al. 2014. Chloroethanes and chloroethylenes. In: 'llmann's encyclopedia of industrial chemistry. Weinheim, Germany: Wiley-VCH, 1-81. http://doi.org/10.1002/14356007.o06_o01.pu'2.

8. REFERENCES

- D'Souza RW, Francis WR, Andersen ME. 1988. Physiological model for tissue glutathione depletion and increased resynthesis after ethylene dichloride exposure. *J Pharmacol Exp Ther* 245(2):563-578.
- D'Souza R, Francis WR, Bruce RD, et al. 1987. Physiologically based pharmacokinetic model for ethylene dichloride and its application in risk assessment. In: *Pharmacokinetics in risk assessment: Drinking water and health*. Vol. 8. Washington, DC: National Academy Press, 286-301.
- Easley DM, Kleopfer RD, Carasea AM. 1981. Gas chromatographic-mass spectrometric determination of volatile organic compounds in fish. *J Assoc Off Anal Chem* 64(3):653-656.
- Elbir T, Cetin B, Cetin E, et al. 2007. Characterization of volatile organic compounds (VOCs) and their sources in the air of Izmir, Turkey. *Environ Monit Assess* 133(1-3):149-160.
<http://doi.org/10.1007/s10661-006-9568-z>.
- EPA. 1977. Monitoring to detect previously unrecognized pollutants in surface water. Washington, DC U.S. Environmental Protection Agency. EPA560677015.
- EPA. 1980. Acquisition and chemical analysis of mother's milk for selected toxic substances. Washington, DC: U.S. Environmental Protection Agency. EPA5601380029.
- EPA. 1981. Engineering handbook for hazardous waste incineration. Cincinnati, OH: U.S. Environmental Protection Agency. PB81248163. SW889.
- EPA. 1982. Direct measurement of volatile organic compounds in breathing-zone air, drinking water, breath, blood, and urine. Research Triangle Park, NC: U.S. Environmental Protection Agency. PB82186545. EPA600482015.
- EPA. 1985. Health assessment document for 1,2-dichloroethane. Washington, DC: U.S. Environmental Protection Agency. EPA600884006F.
- EPA. 1987. Atmospheric persistence of eight air toxics: Project summary. Research Triangle Park, NC: U.S. Environmental Protection Agency. EPA6008387004.
- EPA. 1988. National ambient volatile organic compounds (VOCs) database update. Washington, DC: U.S. Environmental Protection Agency. PB88195631. EPA600388010.
- EPA. 1989. Interaction between water pollutants: Quantitative electron microscopy of hepatic morphological changes induced by 1,2-dichloroethane (DCE) and 1,1-dichloroethylene (VDC). Research Triangle Park, NC: U.S. Environmental Protection Agency. PB89214126. EPA600S189005.
- EPA. 1991. 1990 Urban air toxics monitoring program. Research Triangle Park, NC: U.S. Environmental Protection Agency. EPA450491024.
- EPA. 1992a. Superfund record of decision: Darling Hill Dump, VT. U.S. Environmental Protection Agency. PB93963702. EPARODR0192064.
- EPA. 1992b. Superfund record of decision: Pacific Coast Pipeline, CA. U.S. Environmental Protection Agency. PB93964502. EPARODR092078.
- EPA. 1992c. Superfund record of decision: Clare Water Supply, MI. U.S. Environmental Protection Agency. PB93964106. EPARODR0592209.
<https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=91001NOE.txt>. December 9, 2022.
- EPA. 1993. A literature review of atmospheric transformation products of clean air act title III hazardous air pollutants. Research Triangle Park, NC: U.S. Environmental Protection Agency. EPA600R94088.
- EPA. 1994a. Methods for derivation of inhalation reference concentrations and application of inhalation dosimetry. Washington DC: U.S. Environmental Protection Agency. EPA600890066F.
- EPA. 1994b. Method 8010B: Halogenated volatile organics by gas chromatography. U.S. Environmental Protection Agency.
- EPA. 1994c. Method 8240B: Halogenated volatile organics by gas chromatography. U.S. Environmental Protection Agency.
- EPA. 1996. Drinking water regulations and health advisories. Washington, DC: U.S. Environmental Protection Agency. EPA822B96002.
- 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

8. REFERENCES

- Superfund Amendments and Reauthorization Act of 1986). U.S. Environmental Protection Agency. EPA260B05001.
- EPA. 2009. National primary drinking water regulations. Washington, DC: U.S. Environmental Protection Agency. EPA816F09004. https://www.epa.gov/sites/production/files/2016-06/documents/npwdr_complete_table.pdf. August 2, 2019.
- EPA. 2010. Provisional peer-reviewed toxicity values for 1,2-dichloroethane (CASRN 107-06-2). Cincinnati, OH: U.S. Environmental Protection Agency. EPA690R10011F.
- EPA. 2011. Background indoor air concentrations of volatile organic compounds in North American residences (1990–2005): A compilation of statistics for assessing vapor intrusion. Washington, DC: U.S. Environmental Protection Agency. EPA530R10001.
- EPA. 2012a. 2012 Chemical data reporting data. U.S. Environmental Protection Agency.
- EPA. 2012b. Advances in inhalation gas dosimetry for derivation of a reference concentration (RfC) and use in risk assessment. Washington, DC: U.S. Environmental Protection Agency. EPA600R12044.
- EPA. 2016. 2016 Chemical data reporting data. U.S. Environmental Protection Agency.
- EPA. 2018a. Toxic chemical release inventory reporting forms and instructions: Revised 2017 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. EPA260B05001.
- EPA. 2018b. 2014 NATA: Assessment results. Pollutant specific results: 1,2-Dichloroethane. U.S. Environmental Protection Agency. <https://www.epa.gov/national-air-toxics-assessment/2014-nata-assessment-results>. April 30, 2021.
- EPA. 2018c. 2018 Edition of the drinking water standards and health advisories tables. U.S. Environmental Protection Agency.
- EPA. 2018d. Compiled AEGL values. U.S. Environmental Protection Agency. https://www.epa.gov/sites/production/files/2018-08/documents/compiled_aegls_update_27jul2018.pdf. April 12, 2020.
- EPA. 2020. Benchmark dose software (BMDS). Version 3.2 user guide. U.S. Environmental Protection Agency. EPA600R20216. <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P10103T2.txt>. November 14, 2023.
- EPA. 2021a. Designation, reportable quantities, and notification. U.S. Environmental Protection Agency. 40 CFR 302. <https://www.ecfr.gov/cgi-bin/text-idx?SID=e7ed463134bffdb475721c16d4bb391&mc=true&node=pt40.30.302&rgn=div5>. April 30, 2021.
- EPA. 2021b. Land disposal restrictions. U.S. Environmental Protection Agency. 40 CFR 268. <https://www.ecfr.gov/cgi-bin/text-idx?SID=aa1408f99084487a0f110ee4746e945f&mc=true&node=pt40.28.261&rgn=div5>. April 30, 2021.
- EPA. 2021c. Identification and listing of hazardous waste. U.S. Environmental Protection Agency. 40 CFR 261. <https://www.ecfr.gov/cgi-bin/text-idx?SID=aa1408f99084487a0f110ee4746e945f&mc=true&node=pt40.28.261&rgn=div5>. April 30, 2021.
- EPA. 2022. Annual summary data: 1,2-dichloroethane. Air quality system: Concentration by monitor. U.S. Environmental Protection Agency. <https://www.epa.gov/aqs>. February 13, 2023.
- Erve JC, Deinzer ML, Reed DJ. 1996. Reaction of human hemoglobin toward the alkylating agent S-(2-chloroethyl)glutathione. *J Toxicol Environ Health* 49(2):127-143.
- Farrington JW. 1991. Biogeochemical processes governing exposure and uptake of organic pollutant compounds in aquatic organisms. *Environ Health Perspect* 90:75-84. <http://doi.org/10.1289/ehp.90-1519506>.
- FDA. 2017. Sub-art B - Requirements for specific standardized beverages. Bottled water. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 165.110.

8. REFERENCES

- <https://www.gpo.gov/fdsys/pkg/CFR-2017-title21-vol2/pdf/CFR-2017-title21-vol2-sec165-110.pdf>.
September 7, 2017.
- FDA. 2018– Q3C - Tables and list guidance for industry. Food and Drug Administration.
<https://www.fda.gov/media/133650/download>. November 29, 2022.
- FDA. 2021a. Food additives permitted for direct addition to food for human consumption. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 172.
<https://www.govinfo.gov/content/pkg/CFR-2021-title21-vol3/pdf/CFR-2021-title21-vol3-part172.pdf>. November 29, 2022.
- FDA. 2021b. Secondary direct food additives permitted in food for human consumption. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 1973.
<https://www.govinfo.gov/content/pkg/CFR-2021-title21-vol3/pdf/CFR-2021-title21-vol3-part173.pdf>. November 29, 2022.
- FDA. 2021c. Food additives permitted in feed and drinking water of animals. Ethylene dichloride. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 573.440.
<https://www.govinfo.gov/content/pkg/CFR-2021-title21-vol6/pdf/CFR-2021-title21-vol6-sec573-440.pdf>. November 29, 2022.
- FDA. 2022. Ethylene dichloride. Substances added to food. U.S. Food and Drug Administration.
<https://www.cfsanappsexternal.fda.gov/scripts/fdcc/index.cfm?set=FoodSubstances&id=ETHYLENEDICHLORIDE>. November 28, 2022.
- Ferreri AM, Rocchi P, Capucci A, et al. 1983. Induction of diphtheria toxin-resistant mutants in human cells by halogenated compounds. *Cancer Res and Clin Oncol* 105:111-112.
- Först C, Stieglitz L, Roth W, et al. 1989. Quantitative analysis of volatile organic compounds in landfill leachates. *Int J Environ Anal Chem* 37(4):287-293. <http://doi.org/10.1080/03067318908026905>.
- Fossett NG, Byrne BJ, Tucker AB, et al. 1995. Mutation spectrum of 2-chloroethyl methanesulfonate in *Drosophila melanogaster* premeiotic germ cells. *Mutat Res* 331:213-224.
- Franken R, Kasiotis KM, Tsakirakis AN, et al. 2020. Experimental assessment of inhalation and dermal exposure to chemicals during industrial or professional activities in relation to the performance of ECETOC TRA. *Ann Work Expo Health* 64(9):944-958. <http://doi.org/10.1093/annweh/wxaa070>.
- Frasch HF, Barbero AM, Alachkar H, et al. 2007. Skin penetration and lag times of neat and aqueous diethyl phthalate, 1,2-dichloroethane and naphthalene. *Cutan Ocul Toxicol* 26(2):147-160.
<http://doi.org/10.1080/15569520701212274>.
- Fusillo TV, Hochreiter JJ, Lord DG. 1985. Distribution of volatile organic compounds in a New Jersey Coastal Plain aquifer system. *Groundwater* 23(3):354-360. <http://doi.org/10.1111/j.1745-6584.1985.tb00780.x>.
- Gajjar RM, Kasting GB. 2014. Absorption of ethanol, acetone, benzene and 1,2-dichloroethane through human skin in vitro: a test of diffusion model predictions. *Toxicol Appl Pharmacol* 281(1):109-117.
<http://doi.org/10.1016/j.taap.2014.09.013>.
- Gao J, Zhang J, Li H, et al. 2018. Comparative study of volatile organic compounds in ambient air using observed mixing ratios and initial mixing ratios taking chemical loss into account – A case study in a typical urban area in Beijing. *Sci Total Environ* 628-629:791-804.
- 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(1):87-99.
- Garrison SC, Leadingham RS. 1954. A fatal case of ethylene dichloride poisoning in an occupational therapy department of a neuropsychiatric hospital. *Am J Phys Med* 33(4):230-237.
- Giri AK, Que Hee SS. 1988. In vivo sister chromatid exchange induced by 1,2-dichloroethane on bone marrow cells of mice. *Environ Mol Mutagen* 12(3):331-334.
- Gocke E, Wild D, Eckhardt K, et al. 1983. Mutagenicity studies with the mouse spot test. *Mutat Res* 117(1-2):201-212.
- Gold LS. 1980. Human exposures to ethylene dichloride. In: Ames BN, Infante P, Reitz R, eds. *Ethylene dichloride: A potential health risk? Banbury report No. 5*. Cold Harbor Spring, NY: Cold Harbor Spring Laboratory, 209-225.

8. REFERENCES

- Goldberg SJ, Lebowitz MD, Graver EJ, et al. 1990. An association of human congenital cardiac malformations and drinking water contaminants. *J Am Coll Cardiol* 16(1):155-164. [http://doi.org/10.1016/0735-1097\(90\)90473-3](http://doi.org/10.1016/0735-1097(90)90473-3).
- Goldberg MS, Al-Homsi N, Goulet L, et al. 1995. Incidence of cancer among persons living near a municipal solid waste landfill site in Montreal, Quebec. *Arch Environ Health* 50:416-424.
- Gonzalez FJ, Gelboin HV. 1994. Role of human cytochromes P450 in the metabolic activation of chemical carcinogens and toxins. *Drug Metab Rev* 26(1-2):165-183. <http://doi.org/10.3109/03602539409029789>.
- Guengerich FP, Kim DH, Iwasaki M. 1991. Role of human cytochrome P-450 IIE1 in the oxidation of many low molecular weight cancer suspects. *Chem Res Toxicol* 4(2):168-179. <http://doi.org/10.1021/tx00020a008>.
- Guengerich FP, Crawford WM, Domoradzki JY, et al. 1980. In vitro activation of 1,2-dichloroethane by microsomal and cytosolic enzyme. *Toxicol Appl Pharmacol* 55:303-317.
- Guengerich FP, Peterson LA, Cmarik JL, et al. 1987. Activation of dihaloalkanes by glutathione conjugation and formation of DNA adducts. *Environ Health Perspect* 76:15-18. <http://doi.org/10.1289/ehp.877615>.
- Hachiya N, Motohashi Y. 2000. Examination of lacZ mutant induction in the liver and testis of Muta Mouse following injection of halogenated aliphatic hydrocarbons classified as human carcinogens. *Ind Health* 38(2):213-220. <http://doi.org/10.2486/indhealth.38.213>.
- Hamza M, Tohid H, Maibach H. 2015. Shaving effects on percutaneous penetration: clinical implications. *Cutan Ocul Toxicol* 34(4):335-343.
- Hansen J. 2000. Elevated risk for male breast cancer after occupational exposure to gasoline and vehicular combustion products. *Am J Ind Med* 37(4):349-352.
- Hayes FD, Short RD, Gibson JE. 1973. Differential toxicity of monochloroacetate, monofluoroacetate and monoiodoacetate in rats. *Toxicol Appl Pharmacol* 26(1):93-102.
- Haynes WM, Lide DR, Bruno TJ, eds. 2015. 1,2-Dichloroethane. In: *CRC handbook of chemistry and physics*. 95th ed. Boca Raton, FL: CRC Press, 5.166.
- Heavner DL, Morgan WT, Ogden MW. 1995. Determination of volatile organic compounds and ETS apportionment in 49 homes. *Environ Int* 21(1):3-21. [http://doi.org/10.1016/0160-4120\(94\)00018-3](http://doi.org/10.1016/0160-4120(94)00018-3).
- Heavner DL, Morgan WT, Ogden MW. 1996. Determination of volatile organic compounds and respirable suspended particulate matter in New Jersey and Pennsylvania homes and workplaces. *Environ Int* 22(2):159-183. [http://doi.org/10.1016/0160-4120\(96\)00003-7](http://doi.org/10.1016/0160-4120(96)00003-7).
- Heikes DL. 1987. Purge and trap method for determination of volatile halocarbons and carbon disulfide in table-ready foods. *J Assoc Off Anal Chem* 70(2):215-226.
- Heikes DL, Hopper ML. 1986. Purge and trap method for determination of fumigants in whole grains, milled grain products, and intermediate grain-based foods. *J Assoc Off Anal Chem* 69(6):990-998.
- Heikes DL, Jensen SR, Fleming-Jones ME. 1995. Purge and trap extraction with GC-MS determination of volatile organic compounds in table-ready foods. *J Agric Food Chem* 43(11):2869-2875. <http://doi.org/10.1021/jf00059a018>.
- Hellman B, Brandt I. 1986. Effects of carcinogenic halogenated aliphatic hydrocarbons on [3H]thymidine incorporation into various organs of the mouse: A comparison between 1,2-dibromoethane and 1,2-dichloroethane. *Mutat Res* 163:193-199.
- Hemminki K, Falck K, Vainio H. 1980. Comparison of alkylation rates and mutagenicity of directly acting industrial and laboratory chemicals: Epoxides, glycidyl ethers, methylating and ethylating agents, halogenated hydrocarbons, hydrazine derivatives, aldehydes, thiouram and dithiocarbamate derivatives. *Arch Toxicol* 46:277-285.
- Henderson JK, Falta RW, Freedman DL. 2009. Simulation of the effect of remediation on EDB and 1,2-DCA plumes at sites contaminated by leaded gasoline. *J Contam Hydrol* 108(1):29-45.
- Henson JM, Yates MV, Cochran JW, et al. 1988. Microbial removal of halogenated methanes, ethanes, and ethylenes in an aerobic soil exposed to methane. *FEMS Microbiol Ecol* 4(3-4):193-201. <http://doi.org/10.1111/j.1574-6968.1988.tb02664.x>.

8. REFERENCES

- Heppel LA, Porterfield VT, Sharpless NE. 1947. Toxicology of 1,2-dichloroethane (ethylene dichloride). IV. Its detoxication by L-cystine, DL-methionine and certain other sulfur containing compounds. *J Pharmacol Exp Ther* 91(4):385-394.
- Heppel LA, Neal PA, Perrin TL, et al. 1945. The toxicology of 1,2-dichloroethane (ethylene). III. Its acute toxicity and the effect of protective agents. *J Pharmacol Exp Ther* 84(1):53-63.
- Heppel LA, Neal PA, Perrin TL, et al. 1946. The toxicology of 1,2-dichloroethane (ethylene dichloride). V. The effects of daily inhalations. *J Ind Hyg Toxicol* 28(4):113-120.
- Hines RN. 2008. The ontogeny of drug metabolism enzymes and implications for adverse drug events. *Pharmacol Ther* 118(2):250-267. <http://doi.org/10.1016/j.pharmthera.2008.02.005>.
- Hirschorn SK, Dinglasan-Panlilio MJ, Edwards EA, et al. 2007. Isotope analysis as a natural reaction probe to determine mechanisms of biodegradation of 1,2-dichloroethane. *Environ Microbiol* 9(7):1651-1657. <http://doi.org/10.1111/j.1462-2920.2007.01282.x>.
- Hogstedt C, Rohlen O, Berndtsson BS, et al. 1979. A cohort study of mortality and cancer incidence in ethylene oxide production workers. *Br J Ind Med* 36(4):276-280. <http://doi.org/10.1136/oem.36.4.276>.
- Holliger C, Schraa G, Stams AJ, et al. 1990. Reductive dechlorination of 1,2-dichloroethane and chloroethane by cell suspensions of methanogenic bacteria. *Biodegradation* 1(4):253-261. <http://doi.org/10.1007/bf00119762>.
- Hotchkiss JA, Andrus AK, Johnson KA, et al. 2010. Acute toxicologic and neurotoxic effects of inhaled 1,2-dichloroethane in adult Fischer 344 rats. *Food Chem Toxicol* 48(2):470-481. <http://doi.org/10.1016/j.fct.2009.10.039>.
- Hsu CY, Chiang HC, Shie RH, et al. 2018. Ambient VOCs in residential areas near a large-scale petrochemical complex: Spatiotemporal variation, source apportionment and health risk. *Environ Pollut* 240:95-104. <http://doi.org/10.1016/j.envpol.2018.04.076>.
- Hu R, Liu G, Zhang H, et al. 2018. Levels, characteristics and health risk assessment of VOCs in different functional zones of Hefei. *Ecotoxicol Environ Saf* 160:301-307. <http://doi.org/10.1016/j.ecoenv.2018.05.056>.
- Huang M, Zhong Y, Lin L, et al. 2020. 1,2-Dichloroethane induces cerebellum granular cell apoptosis via mitochondrial pathway in vitro and in vivo. *Toxicol Lett* 322:87-97. <http://doi.org/10.1016/j.toxlet.2020.01.004>.
- Hubbs RS, Prusmack JJ. 1955. Ethylene dichloride poisoning. *J Am Med Assoc* 159(7):673-675.
- Hueper WC, Smith C. 1935. Fatal et178mbryogenechlorid [sic] poisoning. *Am J Med Sci* 189:778-784.
- Humphreys WG, Kim DH, Cmarik JL, et al. 1990. Comparison of the DNA-alkylating properties and mutagenic responses of a series of S-(2-haloethyl)-substituted cysteine and glutathione derivatives. *Biochemistry* 29(45):10342-10350. <http://doi.org/10.1021/bi00497a008>.
- IARC. 1999. 1,2-Dichloroethane. IARC Monographs on the evaluation of carcinogenic risks to humans. Volume 71. Re-evaluation of some organic chemicals, hydrazine and hydrogen peroxide. Lyon, France: International Agency for Research on Cancer. 501-529. <https://monographs.iarc.who.int/wp-content/uploads/2018/06/mono71.pdf>. November 28, 2022.
- IARC. 2016. Agents classified by the IARC monographs, Volumes 1–123. International Agency for Research on Cancer.
- Igwe OJ, Que Hee SS, Wagner WD. 1986a. Interaction between 1,2-dichloroethane and disulfiram. I. Toxicologic effects. *Fundam Appl Toxicol* 6(4):733-746.
- Igwe OJ, Que Hee SS, Wagner WD. 1986b. Interaction between 1,2-dichloroethane and tetraethylthiuram disulfide (disulfiram). II. Hepatotoxic manifestations with possible mechanism of action. *Toxicol Appl Pharmacol* 86(2):286-297.
- Igwe OJ, Que Hee SS, Wagner WD. 1988. Urinary thioether biological monitoring in the interaction between 1,2-dichloroethane and disulfiram in Sprague-Dawley rats. *Am Ind Hyg Assoc J* 49(1):10-16. <http://doi.org/10.1080/15298668891379297>.

8. REFERENCES

- Inskeep PB, Koga N, Cmarik JL, et al. 1986. Covalent binding of 1,2-dihaloalkanes to DNA and stability of the major DNA adduct, S-[2-(N7-guanyl)ethyl]glutathione. *Cancer Res* 46(6):2839-2844.
- Iowa DWA. 1985. Synthetic organic compound sampling survey of public water supplies. Iowa Department of Water, Air and Waste Management.
- IRIS. 1987. 1,2-Dichloroethane; CASRN 107-06-2. Integrated Risk Information System: Chemical assessment summary. Washington, DC: U.S. Environmental Protection Agency. https://iris.epa.gov/static/pdfs/0149_summary.pdf. November 23, 2022.
- Isacson P, Bean JA, Splinter R, et al. 1985. Drinking water and cancer incidence in Iowa. III. Association of cancer with indices of contamination. *Am J Epidemiol* 121(6):856-869. <http://doi.org/10.1093/oxfordjournals.aje.a114056>.
- Jafvert CT, Wolfe LN. 1987. Degradation of selected halogenated ethanes in anoxic sediment-water systems. *Environ Toxicol Chem* 6(11):827-837. <http://doi.org/10.1002/etc.5620061102>.
- Jakobson I, Wahlberg JE, Holmberg B, et al. 1982. Uptake via the blood and elimination of 10 organic solvents following epicutaneous exposure of anesthetized guinea pigs. *Toxicol Appl Pharmacol* 63(2):181-187. [http://doi.org/10.1016/0041-008x\(82\)90039-4](http://doi.org/10.1016/0041-008x(82)90039-4).
- Janssen DB, Scheper A, Witholt B. 1984. Biodegradation of 2-chloroethanol and 1,2-dichloroethane by pure bacterial culture. In: Houwink EH, van der Meer RR, eds. *Innovations in biotechnology*. Amsterdam, The Netherlands: Elsevier Science Publishers, 169-178.
- Jean PA, Reed DJ. 1989. In vitro dipeptide, nucleoside, and glutathione alkylation by S-(2-chloroethyl)glutathione and S-(2-chloroethyl)-L-cysteine. *Chem Res Toxicol* 2(6):455-460.
- Jean PA, Reed DJ. 1992. Utilization of glutathione during 1,2-dihaloethane metabolism in rat hepatocytes. *Chem Res Toxicol* 5(3):386-391. <https://doi.org/10.1021/tx00027a011>.
- Jeffers PM, Ward LM, Woytowitch LM, et al. 1989. Homogeneous hydrolysis rate constants for selected chlorinated methanes, ethanes, ethenes, and propanes. *Environ Sci Technol* 23(8):965-969. <http://doi.org/10.1021/es00066a006>.
- Jeng CY, Chen DH, Yaw CL. 1992. Data compilation for soil sorption coefficient. *Pollut Eng* 24:54-60.
- Jenssen D, Ramel C. 1980. The micronucleus test as part of a short-term mutagenicity test program for the prediction of carcinogenicity evaluated by 143 agents tested. *Mutat Res* 75:191-202.
- Jin X, Liao Y, Tan X, et al. 2018a. Involvement of CYP2E1 in the course of brain edema induced by subacute poisoning with 1,2-dichloroethane in mice. *Front Pharmacol* 9:article 1317. <http://doi.org/10.3389/fphar.2018.01317>.
- Jin X, Liao Y, Tan X, et al. 2018b. Involvement of the p38 MAPK signaling pathway in overexpression of matrix metalloproteinase-9 during the course of brain edema in 1,2-dichloroethane-intoxicated mice. *Neurotoxicology* 69:296-306. <http://doi.org/10.1016/j.neuro.2018.07.022>.
- Jin X, Wang T, Liao Y, et al. 2019. Neuroinflammatory reactions in the brain of 1,2-DCE-intoxicated mice during brain edema. *Cells* 8(9):987. <http://doi.org/10.3390/cells8090987>.
- Johansson I, Ekstrom G, Scholte B, et al. 1988. Ethanol-fasting- and acetone-inducible cytochromes P450 in rat liver: Regulation and characteristics of enzymes belonging to the IIB and IIE gene subfamilies. *Biochemistry* 27:1925-1934.
- Johnson MK. 1967. Metabolism of chloroethanol in the rat. *Biochem Pharmacol* 16(1):185-199. [http://doi.org/10.1016/0006-2952\(67\)90199-2](http://doi.org/10.1016/0006-2952(67)90199-2).
- Jury WA, Russo D, Streile G, et al. 1990. Evaluation of volatilization by organic chemicals residing below the soil surface. *Water Resour Res* 26(1):13-20. <http://doi.org/10.1029/WR026i001p00013>.
- Jüttner F. 1986. Analysis of organic compounds (VOC) in the forest air of the Southern Black Forest. *Chemosphere* 15(8):985-992. [http://doi.org/10.1016/0045-6535\(86\)90551-5](http://doi.org/10.1016/0045-6535(86)90551-5).
- Kaikiti C, Stylianou M, Agapiou A. 2022. TD-GC/MS analysis of indoor air pollutants (VOCs, PM) in hair salons. *Chemosphere* 294:133691. <http://doi.org/10.1016/j.chemosphere.2022.133691>.
- Kanada T, Uyeta M. 1978. Mutagenicity screening of organic solvents in microbial systems [abstract]. *Mutat Res* 54:215.

8. REFERENCES

- Kanada M, Miyagawa M, Sato M, et al. 1994. Neurochemical profile of effects of 28 neurotoxic chemicals on the central nervous system in rats. (1) Effects of oral administration on brain contents of biogenic amines and metabolites. *Ind Health* 32(3):145-164. <http://doi.org/10.2486/indhealth.32.145>.
- Kavlock R, Chernoff N, Carver B, et al. 1979. Teratology studies in mice exposed to municipal drinking-water concentrates during organogenesis. *Food Cosmet Toxicol* 17(4):343-347. [http://doi.org/10.1016/0015-6264\(79\)90327-4](http://doi.org/10.1016/0015-6264(79)90327-4).
- Kellam RG, Dusetzina MG. 1980. Human exposure to ethylene dichloride: Potential for regulation 'ia EPA's proposed airborne carcinogen policy. In: Ames BN, Infante P, Reitz R, eds. *Ethylene dichloride: A potential health risk? Banbury report No. 5*. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory, 265-274.
- Kelley M, Magar VS, Hoeppe R, et al. 1998. Intrinsic remediation of chlorinated hydrocarbons in co-contaminated groundwater plumes at the Naval Air Station Fallon, Nevada. In: Wickramanayake GB, Hinchee RE, eds. *Natural attenuation: Chlorinated and recalcitrant compounds*. Columbus, OH: Battelle Press, 315-320.
- Kelly TJ, Mukund R, Spicer CW, et al. 1994. Concentrations and transformations of hazardous air pollutants. *Environ Sci Technol* 28(8):378A-387A. <http://doi.org/10.1021/es00057a003>.
- Kessels H, Hoogerwerf W, Lips J. 1992. The determination of volatile organic compounds from EPA Method 524.2 using purge-and-trap capillary gas chromatography, ECD, and FID. *J Chromatogr Sci* 30(7):247-255. <http://doi.org/10.1093/chromsci/30.7.247>.
- Kim DH, Guengerich FP. 1989. Excretion of the mercapturic acid S-[2-N7-guanyl] ethyl]-N-acetyl cysteine in urine following administration of ethylene dibromide to rats. *Cancer Res* 49:5843-5847.
- Kim DH, Guengerich FP. 1990. Formation of the DNA adduct S-[2-(N7-guanyl)ethyl]glutathione from ethylene dibromide: effects of modulation of glutathione and glutathione S-transferase levels and lack of a role for sulfation. *Carcinogenesis* 11(3):419-424. <http://doi.org/10.1093/carcin/11.3.419>.
- King MT, Beikirch H, Eckhardt K, et al. 1979. Mutagenicity studies with X-ray-contrast media, analgesics, antipyretics, antirheumatics and some other pharmaceutical drugs in bacterial, *Drosophila* and mammalian test systems. *Mutat Res Genet Toxicol* 66(1):33-43. [http://doi.org/10.1016/0165-1218\(79\)90005-3](http://doi.org/10.1016/0165-1218(79)90005-3).
- Kitchin KT, Brown JL. 1994. Dose-response relationship for rat liver DNA damage caused by 49 rodent carcinogens. *Toxicology* 88(1-3):31-49. [http://doi.org/10.1016/0300-483x\(94\)90109-0](http://doi.org/10.1016/0300-483x(94)90109-0).
- Klaunig JE, Ruch RJ, Pereira MA. 1986. Carcinogenicity of chlorinated methane and ethane compounds administered in drinking water to mice. *Environ Health Perspect* 69:89-95. <http://doi.org/10.1289/ehp.866989>.
- Kramer RA, Foureman G, Greene KE, et al. 1987. Nephrotoxicity of S-(2-chloroethyl)glutathione in the Fischer rat: evidence for γ -glutamyltranspeptidase-independent uptake by the kidney. *J Pharmacol Exp Ther* 242(2):741-748.
- Kramers PG, Mout HC, Bissumbar B, et al. 1991. Inhalation exposure in *Drosophila* mutagenesis assays: experiments with aliphatic halogenated hydrocarbons, with emphasis on the genetic activity profile of 1,2-dichloroethane. *Mutat Res* 252(1):17-33.
- Krill RM, Sonzogni WC. 1986. Chemical monitoring of Wi'consin's groundwater. *JAWWA* 78(9):70-75. <http://doi.org/10.1002/j.1551-8833.1986.tb05812.x>.
- Krishnan K, Andersen ME, Clewell H, et al. 1994. Physiologically based pharmacokinetic modeling of chemical mixtures. In: Yang R, ed. *Toxicology of chemical mixtures*. New York, NY: Academic Press, 399-437.
- Kronevi T, Wahlberg JE, Holmberg B. 1981. Skin pathology following epicutaneous exposure to seven organic solvents. *Int J Tissue React* 3(1):21-30.
- Kurtz JP, Wolfe EM, Woodland AK, et al. 2010. Evidence for increasing indoor sources of 1,2-dichloroethane since 2004 at two Colorado residential vapor intrusion sites. *Ground Water Monit Remediat* 30(3):107-112.

8. REFERENCES

- Kwok E, Atkinson R. 1995. Estimation of hydroxyl radical reaction rate constants for gas-phase organic compounds using a structure-reactivity relationship: An update. *Atmos Environ* 29(14):1685-1695. [http://doi.org/10.1016/1352-2310\(95\)00069-b](http://doi.org/10.1016/1352-2310(95)00069-b).
- Lam RHF, Brown JP, Fan AM. 1994. Chemicals in California drinking water: Source of contamination, risk assessment, and drinking water standards. In: Wang R, ed. *Water contamination and health: Integration of exposure assessment, toxicology, and risk assessment*. New York, NY: Marcel Dekker, Inc., 15-44.
- Lane RW, Riddle BL, Borzelleca JF. 1982. Effects of 1,2-dichloroethane and 1,1,1-trichloroethane in drinking water on reproduction and development in mice. *Toxicol Appl Pharmacol* 63(3):409-421. [http://doi.org/10.1016/0041-008x\(82\)90270-8](http://doi.org/10.1016/0041-008x(82)90270-8).
- Lanzarone NA, McCarty PL. 1990. Column studies on methanotrophic degradation of trichloroethene and 1,2-dichloroethane. *Groundwater* 28(6):910-919. <http://doi.org/10.1111/j.1745-6584.1990.tb01727.x>.
- LaRegina J, Bozzelli JW, Harkov R, et al. 1986. Volatile organic compounds at hazardous waste sites and a sanitary landfill in New Jersey. *Environ Prog* 5(1):18-27. <http://doi.org/10.1002/ep.670050109>.
- Larranaga MD, Lewis RJ, Lewis RA. 2016. 1,2-Dichloroethane. In: 'Hawley's Condensed chemical dictionary. 16th ed. Hoboken, NJ: John Wiley & Sons, 584.
- Lee MD, Mazierski PF, Buchanan RJ, et al. 1995. Intrinsic in situ anaerobic biodegradation of chlorinated solvents at an industrial landfill. In: Hinchee RE, Wilson JT, Downey DC, eds. *Intrinsic bioremediation*. Columbus, OH: Battelle Press, 205-222.
- Leeder JS, Kearns GL. 1997. Pharmacogenetics in pediatrics. Implications for practice. *Pediatr Clin North Am* 44(1):55-77.
- Lehtinen J, Veijanen A. 2011. Determination of odorous VOCs and the risk of occupational exposure to airborne compounds at the waste water treatment plants. *Water Sci Technol* 63(10):2183-2192.
- Lesage S, Jackson RE, Priddle MW, et al. 1990. Occurrence and fate of organic solvent residues in anoxic groundwater at the Gloucester landfill, Canada. *Environ Sci Technol* 24(4):559-566. <http://doi.org/10.1021/es00074a016>.
- Liang B, Zhong Y, Wang B, et al. 2021. 1,2-Dichloroethane induces apoptosis in the cerebral cortexes of NIH Swiss mice through microRNA-182-5p targeting phospholipase D1 via a mitochondria-dependent pathway. *Toxicol Appl Pharmacol* 430:115728. <http://doi.org/10.1016/j.taap.2021.115728>.
- Liu JR, Fang S, Ding MP, et al. 2010. Toxic encephalopathy caused by occupational exposure to 1, 2-Dichloroethane. *J Neurol Sci* 292(1-2):111-113. <http://doi.org/10.1016/j.jns.2010.01.022>.
- Liu G, Niu J, Zhang C, et al. 2016. Characterization and assessment of contaminated soil and groundwater at an organic chemical plant site in Chongqing, Southwest China. *Environ Geochem Health* 38(2):607-618. <http://doi.org/10.1007/s10653-015-9746-4>.
- Livesey JC, Anders MW. 1979. In vitro metabolism of 1,2-dihaloethanes to ethylene. *Drug Metab Dispos* 7(4):199-203.
- Lochhead HB, Close HP. 1951. Ethylene dichloride plastic cement: a case of fatal poisoning. *J Am Med Assoc* 146(14):1323-1324.
- Lock EA. 1989. Mechanism of nephrotoxic action due to organohalogenated compounds. *Toxicol Lett* 46(1-3):93-106. [http://doi.org/10.1016/0378-4274\(89\)90120-3](http://doi.org/10.1016/0378-4274(89)90120-3).
- Loffler FE, Champine JE, Ritalahti KM, et al. 1997. Complete reductive dechlorination of 1,2-dichloropropane by anaerobic bacteria. *Appl Environ Microbiol* 63(7):2870-2875.
- Lone MI, Nazam N, Hussain A, et al. 2016. Genotoxicity and immunotoxic effects of 1,2-dichloroethane in Wistar rats. *J Environ Sci Health C Environ Carcinog Ecotoxicol Rev* 34(3):169-186. <http://doi.org/10.1080/10590501.2016.1193924>.
- Lorah MM, Olsen LD. 1999. Degradation of 1,1,2,2-tetrachloroethane in a freshwater tidal wetland: Field and laboratory evidence. *Environ Sci Technol* 33(2):227-234. <http://doi.org/10.1021/es980503t>.

8. REFERENCES

- Luster MI, Munson AE, Thomas PT, et al. 1988. Development of a testing battery to assess chemical-induced immunotoxicity: National Toxicology Program's guidelines for immunotoxicity evaluation in mice. *Fundam Appl Toxicol* 10(1):2-19. [http://doi.org/10.1016/0272-0590\(88\)90247-3](http://doi.org/10.1016/0272-0590(88)90247-3).
- Ma J, Li H, Spiess R, et al. 2016. Vapor intrusion risk of lead scavengers 1,2-dibromoethane (EDB) and 1,2-dichloroethane (DCA). *Environ Pollut* 213:825-832. <http://doi.org/10.1016/j.envpol.2016.03.032>.
- Maltoni C, Valgimigli L, Scarnato C. 1980. Long-term carcinogenic bioassays on ethylene dichloride administered by inhalation to rats and mice. In: *Ethylene dichloride: A potential health risk?* Cold Spring Harbor, NY: Cold Spring Harbor Laboratory, 3-33.
- Martin G, Knorrp K, Huth K, et al. 1969. Clinical features, pathogenesis and management of dichloroethane poisoning. *Ger Med Mon* 14(2):62-67.
- McCann J, Simmon V, Streitwieser D, et al. 1975. Mutagenicity of chloroacetaldehyde, a possible metabolic product of 1,2-dichloroethane (ethylene dichloride), chloroethanol (ethylene chlorohydrin), vinyl chloride, and cyclophosphamide. *Proc Natl Acad Sci U S A* 72(8):3190-3193. <http://doi.org/10.1073/pnas.72.8.3190>.
- McCollister DD, Hollingsworth RL, Oyen F, et al. 1956. Comparative inhalation toxicity of fumigant mixtures: Individual and joint effect of ethylene dichloride, carbon tetrachloride, and ethylene dibromide. *Arch Ind Health* 13:1-7.
- McDonald TJ, Kennicutt MC, Brooks JM. 1988. Volatile organic compounds at a coastal Gulf of Mexico site. *Chemosphere* 17(1):123-136. [http://doi.org/10.1016/0045-6535\(88\)90050-1](http://doi.org/10.1016/0045-6535(88)90050-1).
- McNally WD, Fostvedt G. 1941. Ethylene dichloride poisoning. *Ind Med* 10(9):373-374.
- Milman HA, Story DL, Riccio ES, et al. 1988. Rat liver foci and in-vitro assays to detect initiating and promoting effects of chlorinated ethanes and ethylenes. *Ann N Y Acad Sci* 534:521-530. <http://doi.org/10.1111/j.1749-6632.1988.tb30143.x>.
- Mitoma C, Steeger T, Jackson SE, et al. 1985. Metabolic disposition study of chlorinated hydrocarbons in rats and mice. *Drug Chem Toxicol* 8(3):183-194. <http://doi.org/10.3109/01480548508999169>.
- Miyahara M, Toyoda M, Saito Y. 1995. Volatile halogenated hydrocarbons in foods. *J Agric Food Chem* 43(2):320-326. <http://doi.org/10.1021/jf00050a011>.
- Miyamoto K, Urano K. 1996. Reaction rates and intermediates of chlorinated organic compounds in water and soil. *Chemosphere* 32(12):2399-2408. [http://doi.org/10.1016/0045-6535\(96\)00142-7](http://doi.org/10.1016/0045-6535(96)00142-7).
- Monster AC. 1986. Biological monitoring of chlorinated hydrocarbon solvents. *J Occup Med* 28(8):583-588. <http://doi.org/10.1097/00043764-198608000-00012>.
- Morgan DL, Bucher JR, Elwell MR, et al. 1990. Comparative toxicity of ethylene dichloride in F344/N, Sprague-Dawley and Osborne-Mendel rats. *Food Chem Toxicol* 28(12):839-845. [https://doi.org/10.1016/0278-6915\(90\)90057-t](https://doi.org/10.1016/0278-6915(90)90057-t).
- 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(1):51-63. [http://doi.org/10.1016/s0013-9351\(05\)80140-9](http://doi.org/10.1016/s0013-9351(05)80140-9).
- Moriya M, Ohta T, Watanabe K, et al. 1983. Further mutagenicity studies on pesticides in bacterial reversion assay systems. *Mutat Res* 116(3-4):185-216.
- Munson AE, Sanders VM, Douglas KA, et al. 1982. In vivo assessment of immunotoxicity. *Environ Health Perspect* 43:41-52. <http://doi.org/10.1289/ehp.824341>.
- Nachtomi E, Alumot E, Bondi A. 1966. The metabolism of ethylene dibromide in the rat: I. Identification of detoxification of products in urine. *Isr J Chem* 4:239-246.
- Nagano K, Umeda Y, Senoh H, et al. 2006. Carcinogenicity and chronic toxicity in rats and mice exposed by inhalation to 1,2-dichloroethane for two years. *J Occup Health* 48(6):424-436. <http://doi.org/10.1539/joh.48.424>.
- Nakajima T, Sato A. 1979. Enhanced activity of liver drug-metabolizing enzymes for aromatic and chlorinated hydrocarbons following food deprivation. *Toxicol Appl Pharmacol* 50(3):549-556.
- NAS/NRC. 1989. Report of the oversight committee. In: *Biological markers in reproductive toxicology*. Washington, DC: National Academies of Science, National Research Council, 15-35.

8. REFERENCES

- NCI. 1978. Bioassay of 1,2-dichloroethane for possible carcinogenicity. *Natl Cancer Inst Carcinog Tech Rep Ser* 55:1-103.
- NCI. 2021. NCI term browser: Ethylene dichloride (code C44383). National Cancer Institute. https://ncit.nci.nih.gov/ncitbrowser/ConceptReport.jsp?dictionary=NCI_Thesaurus&ns=NCI_Thesaurus&code=C44383. April 30, 2021.
- Nestmann ER, Lee EG, Matula TI, et al. 1980. Mutagenicity of constituents identified in pulp and paper mill effluents using the Salmonella/mammalian-microsome assay. *Mutat Res* 79(3):203-212.
- NIOSH. 1976. National occupational hazard survey (1972-74). Cincinnati, OH: National Institute for Occupational Safety and Health. PB82229881.
- NIOSH. 1978. Revised recommended standard: Occupational exposure to ethylene dichloride (1,2-dichloroethane). Cincinnati, OH: National Institute for Occupational Safety and Health. PB80176092. NIOSH-78-211.
- NIOSH. 1994. Method 1003: Hydrocarbons, halogenated. NIOSH manual of analytical methods, 4th edition. Cincinnati, OH: National Institute for Occupational Safety and Health. PB95154191.
- NIOSH. 2019. Ethylene dichloride. NIOSH pocket guide to chemical hazards. Cincinnati, OH: National Institute for Occupational Safety and Health. <https://www.cdc.gov/niosh/npg/npgd0271.html>. November 28, 2022.
- Niu Q, Zhang Q, Li L, et al. 2009. 1,2-Dichloroethane induced toxic encephalopathy. *Neurosci Res* 65:S249.
- NLM. 2021. PubChem compound summary: 1,2-Dichloroethane. National Library of Medicine. <https://pubchem.ncbi.nlm.nih.gov/compound/11>. April 30, 2021.
- Nouchi T, Miura H, Kanayama M, et al. 1984. Fatal intoxication by 1,2-dichloroethane-a case report. *Int Arch Occup Environ Health* 54(2):111-113. <http://doi.org/10.1007/bf00378513>.
- NTP. 1991. NTP technical report on the toxicity studies of 1,2-dichloroethane (ethylene dichloride) in F344/N rats, Sprague Dawley rats, Osborne-Mendel rats, and B6C3F1 mice (drinking water and gavage studies) (CAS No. 107-06-2). Research Triangle Park, NC: National Toxicology Program. NTP Tox 4. NIH Publication No. 91-3123.
- NTP. 2021. 1,2-Dichloroethane, CAS No. 107-06-2. Report on carcinogens, fifteenth edition. National Toxicology Program. <https://ntp.niehs.nih.gov/ntp/roc/content/profiles/dichloroethane.pdf>. November 28, 2022.
- Nylander P, Olofsson H, Rasmuson B, et al. 1978. Mutagenic effects of petrol in *Drosophila melanogaster*: I. Effects of benzene and 1,2-dichloroethane. *Mutat Res* 57:163-167.
- OECD. 2002. SIDS initial assessment report for 14th SIAM: 1,2-dichloroethane. Organisation for Economic Co-operation and Development.
- Oldenhuis R, Vink RL, Janssen DB, et al. 1989. Degradation of chlorinated aliphatic hydrocarbons by *Methylosinus trichosporium* OB3b expressing soluble methane monooxygenase. *Appl Environ Microbiol* 55(11):2819-2826. <http://doi.org/10.1128/aem.55.11.2819-2826.1989>.
- Oliver BG, Pugsley CW. 1986. Chlorinated contaminants in St. Clair River sediments. *Water Pollut Res J Can* 21(3):368-379. <http://doi.org/10.2166/wqrj.1986.032>.
- OSHA. 2021a. Occupational safety and health standards. Sub-art Z - Toxic and hazardous substances. Air contaminants. Table Z-2. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.1000. <https://www.govinfo.gov/content/pkg/CFR-2021-title29-vol6/pdf/CFR-2021-title29-vol6-sec1910-1000.pdf>. August 28, 2022.
- OSHA. 2021b. Occupational safety and health standards for shipyard employment. Sub-art Z - Toxic and hazardous substances. Air contaminants. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1915.1000. <https://www.govinfo.gov/content/pkg/CFR-2021-title29-vol7/pdf/CFR-2021-title29-vol7-sec1915-1000.pdf>. August 28, 2022.
- OSHA. 2021c. Safety and health regulations for construction. Sub-art D - Occupational health and environment controls. Gases, vapors, fumes, dusts, and mists. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1926.55.

8. REFERENCES

- <https://www.govinfo.gov/content/pkg/CFR-2021-title29-vol8/pdf/CFR-2021-title29-vol8-sec1926-55.pdf>. August 28, 2022.
- Ott MG, Teta J, Greenberg HL. 1989. Lymphatic and hematopoietic tissue cancer in a chemical manufacturing environment. *Am J Ind Med* 16:631-644.
- Pang Y, Qi G, Jiang S, et al. 2018. 1,2-Dichloroethane-induced hepatotoxicity and apoptosis by inhibition $\frac{1}{2}$ ERK $\frac{1}{2}$ pathways. *Can J Physiol Pharmacol* 96(11):1119-1126. <http://doi.org/10.1139/cjpp-2017-0677>.
- Parkinson A. 1996. Biotransformation of xenobiotics. In: Klaassen C, Amdur M, Doull J, eds. *Casarett and Doull's toxicology: The basic science of poisons*. New York, NY: McGraw-Hill Companies, Inc., 133-224.
- Payan JP, Beydon D, Fabry JP, et al. 1993. Urinary thiodiglycolic acid and thioether excretion in male rats dosed with 1,2-dichloroethane. *J Appl Toxicol* 13(6):417-422.
- Payan JP, Saillenfait AM, Bonnet P, et al. 1995. Assessment of the developmental toxicity and placental transfer of 1,2-dichloroethane in rats. *Fundam Appl Toxicol* 28(2):187-198. <https://doi.org/10.1006/faat.1995.1159>.
- Pearson CR, McConnell G. 1975. Chlorinated C1 and C2 hydrocarbons in the marine environment. *Proc R Soc Lond B Biol Sci* 189(1096):305-332. <http://doi.org/10.1098/rspb.1975.0059>.
- Peijnenburg W, Eriksson L, de Groot A, et al. 1998. The kinetics of reductive dehalogenation of a set of halogenated aliphatic hydrocarbons in anaerobic sediment slurries. *Environ Sci Pollut Res Int* 5(1):12-16. <http://doi.org/10.1007/bf02986368>.
- Pellizzari ED, Hartwell TD, Perritt RL, et al. 1986. Comparison of indoor and outdoor residential levels of volatile organic chemicals in five U.S. geographical areas. *Environ Int* 12(6):619-623. [http://doi.org/10.1016/0160-4120\(86\)90104-2](http://doi.org/10.1016/0160-4120(86)90104-2).
- Perocco P, Prodi G. 1981. DNA damage by haloalkanes in human lymphocytes cultured in vitro. *Cancer Lett* 13(3):213-218.
- Plumb RH. 1987. A comparison of ground water monitoring data from CERCLA and RCRA sites. *Ground Water Monit Remediat* 7(4):94-100. <http://doi.org/10.1111/j.1745-6592.1987.tb00968.x>.
- Pohl HR, Scinicariello F. 2011. The impact of CYP2E1 genetic variability on risk assessment of VOC mixtures. *Regul Toxicol Pharmacol* 59(3):364-374.
- Pott WA, Benjamin SA, Yang RS. 1998. Antagonistic interactions of an arsenic-containing mixture in a multiple organ carcinogenicity bioassay. *Cancer Lett* 133:185-190.
- Prodi G, Arfellini G, Colacci A, et al. 1986. Interaction of halocompounds with nucleic acids. *Toxicol Pathol* 14:438-444.
- Przedziak J, Bakula S. 1975. [Acute poisoning with 1,2-dichloroethane]. *Wiad Lek* 28(11):983-987. (Polish)
- Raisbeck MF, Brown EM, Kanchanapangka S, et al. 1990. Ketonic potentiation of haloalkane-induced nephrotoxicity. In: Goldstein RS, Hewitt WR, Hook JB, eds. *Toxic interactions*. San Diego, CA: Academic Press, Inc., 321-366.
- Rannug U, Beije B. 1979. The mutagenic effect of 1,2-dichloroethane on *Salmonella typhimurium*: II. Activation by the isolated perfused rat liver. *Chem Biol Interaction* 24:265-285.
- Rannug U, Sundvall A, Ramel C. 1978. The mutagenic effect of 1, 2-dichloroethane on *Salmonella typhimurium*. I. Activation through conjugatio184mbryogenestathion in vitro. *Chem Biol Interact* 20(1):1-16.
- Rao KS, Murray JS, Deacon MM, et al. 1980. Teratogenicity and reproduction studies in animals inhaling ethylene dichloride. In: Ames B, Infante P, Reitz R, eds. *Ethylene dichloride: A potential health risk?* Cold Spring Harbor, NY Cold Spring Harbor Laboratory 149-166.
- Reeve GR, Bond GG, Lloyd JW, et al. 1983. An investigation of brain tumors among chemical plant employees using a sample-based cohort method. *J Occup Med* 25:387-393.
- Regno V, Arulgnanendran J, Nirmalakhandan N. 1998. Microbial toxicity in soil medium. *Ecotoxicol Environ Saf* 39(1):48-56. <http://doi.org/10.1006/eesa.1997.1609>.

8. REFERENCES

- Reitz RH, Fox TR, Domoradzki JY, et al. 1980. Pharmacokinetics and macromolecular interactions of ethylene dichloride: Comparison of oral and inhalation exposures. In: Ames BN, Infante P, Reitz R, eds. Ethylene dichloride: A potential health risk? Cold Spring Harbor, NY: Cold Spring Harbor Laboratory, 135-148.
- Reitz RH, Fox TR, Ramsey JC, et al. 1982. Pharmacokinetics and macromolecular interactions of ethylene dichloride in rats after inhalation or gavage. *Toxicol Appl Pharmacol* 62(2):190-204. [http://doi.org/10.1016/0041-008X\(82\)90117-X](http://doi.org/10.1016/0041-008X(82)90117-X).
- Rembold H, Wallner P, Nitz S, et al. 1989. Volatile components of chickpea (*Cicer arietinum* L.) seed. *J Agric Food Chem* 37(3):659-662. <http://doi.org/10.1021/jf00087a018>.
- RePORTER. 2024. 1,2-Dichloroethane. Research Portfolio Online Reporting Tools. National Institutes of Health. <https://reporter.nih.gov/>. February 12, 2024.
- Rodgman A, Perfetti T. 2013. Alphabetical index to chemical components in tobacco, tobacco smoke, and tobacco substitute smoke. In: The chemical components of tobacco smoke. 2nd ed. Boca Raton, FL: CRC Press, 1851. <http://doi.org/10.1201/b13973>.
- Rodriguez-Arnaiz R. 1998. Biotransformation of several structurally related 2B compounds to reactive metabolites in the somatic w/w+ assay of *Drosophila melanogaster*. *Environ Mol Mutagen* 31:390-401.
- Roldan-Arjona T, Garchia-Pedraja MD, Luque-Romero FL, et al. 1991. An association between mutagenicity of the Ara test of *Salmonella typhimurium* and carcinogenicity in rodents for 16 halogenated aliphatic hydrocarbons. *Mutagenesis* 6(3):199-205.
- Romert L, Magnusson J, Ramel C. 1990. The importance of glutathione and glutathione transferase for somatic mutations in *Drosophila melanogaster* induced by in vivo by 1,2-dichloroethane. *Carcinogenesis* 11:1399-1402.
- Roose P, Dewulf J, Brinkman UA, et al. 2001. Measurement of volatile organic compounds in sediments of the Scheldt Estuary and the Southern North Sea. *Water Res* 35(6):1478-1488.
- Ruffalo CA, Gouvier WD, Pinkston JB, et al. 2000. Ethylene dichloride: Neuropsychological effects of chronic exposure. *Arch Clin Neuropsychol* 15:653-850.
- Sabljić A, Güsten H, Verhaar H, et al. 1995. QSAR modelling of soil sorption. Improvements and systematics of log K_{oc} v185mbrlog K_{ow} correlations. *Chemosphere* 31(11):4489-4514. [http://doi.org/10.1016/0045-6535\(95\)00327-5](http://doi.org/10.1016/0045-6535(95)00327-5).
- Saghir SA, Clark AJ, Gilles MM, et al. 2006. 1,2-Dichloroethane (EDC): Limited pharmacokinetics and metabolism study in Fischer 344 rats. HAP Task Force. Submitted to the U.S. Environmental Protection Agency. Study ID: 041093. <https://www.regulations.gov/document/EPA-HQ-OPPT-2003-0010-0082>. April 30, 2021.
- Salovsky P, Shopova V, Dancheva V, et al. 2002. Early pneumotoxic effects after oral administration of 1,2-dichloroethane. *J Occup Environ Med* 44(5):475-480. <http://doi.org/10.1097/00043764-200205000-00016>.
- Sano M, Tappel AL. 1990. Halogenated hydrocarbon and hydroperoxide-induced lipid peroxidation in rat tissue slices. *J Agric Food Chem* 38(2):437-441. <http://doi.org/10.1021/jf00092a022>.
- Sasaki YF, Saga A, Akasaka M, et al. 1998. Detection of in vivo genotoxicity of haloalkanes and haloalkenes carcinogenic to rodents by the alkaline single cell gel electrophoresis (comet) assay in multiple mouse organs. *Mutat Res* 419(1-3):13-20.
- Sato A, Nakajima T, Koyama Y. 1981. Dose-related effects of a single dose of ethanol on the metabolism in rat liver of some aromatic and chlorinated hydrocarbons. *Toxicol Appl Pharmacol* 60:8-15.
- Schenk L, Rauma M, Fransson MN, et al. 2018. Percutaneous absorption of thirty-eight organic solvents in vitro using pig skin. *PLoS ONE* 13(10):e0205458. <http://doi.org/10.1371/journal.pone.0205458>.
- Schlacter MM, Crawford AA, John JA, et al. 1979. The effects of inhaled ethylene dichloride on embryonal and fetal development in rats and rabbits. Dow Chemical Company. Submitted to the U.S. Environmental Protection Agency under TSCA Section 8D. OTS0515988. 86870002198.

8. REFERENCES

- Schönborn H, Prellwitz W, Baum P. 1970. [Consumption coagulation pathology of 1,2-dichloroethane poisoning]. *Klin Wochenschr* 48:822-824. (German)
- Sherwoo' RL, O'Shea W, Thomas PT, et al. 1987. Effects of inhalation of ethylene dichloride on pulmonary defenses of mice and rats. *Toxicol Appl Pharmacol* 91(3):491-496. [http://doi.org/10.1016/0041-008x\(87\)90071-8](http://doi.org/10.1016/0041-008x(87)90071-8).
- Sigma-Aldrich. 2020. Safety data sheet: 1,2-Dichloroethane. Millipore Sigma. Version 6.4. <https://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=US&language=en&productNumber=284505&brand=SIAL&PageToGoToURL=%2Fsafety-center.html>. April 30, 2021.
- Simula TP, Glancey MJ, Wolf CR. 1993. Human glutathione S-transferase-expressing *Salmonella typhimurium* tester strains to study the activation/detoxification of mutagenic compounds: Studies with halogenated compounds, aromatic amines and aflatoxin B1. *Carcinogenesis* 14:1371-1376.
- Singh HB, Salas LJ, Stiles RE. 1982. Distribution of selected gaseous organic mutagens and suspect carcinogens in ambient air. *Environ Sci Technol* 16(12):872-880. <http://doi.org/10.1021/es00106a010>.
- Singh B, Salas L, Viezee W, et al. 1992. Measurement of volatile organic chemicals at selected sites in California. *Atmos Environ* 26(16):2929-2946. [http://doi.org/10.1016/0960-1686\(92\)90285-S](http://doi.org/10.1016/0960-1686(92)90285-S).
- Sipes IG, Gandolfi AJ. 1980. In vitro comparative bioactivation of aliphatic halogenated hydrocarbons. In: Holmstedt B, Lauwerys R, Mercier M, et al., eds. *Developments in toxicology and environmental science. Vol. 8: Mechanisms of toxicity and hazard evaluation. Proceedings of the Second Congress on Toxicology held in Brussels, Belgium, July 6-11, 1980.* Amsterdam, The Netherlands: Elsevier/North Holland Biomedical Press, 501-506.
- Snedecor G. 2004. Chloroethylenes. In: Kirk-Othmer encyclopedia of chemical technology. New York, NY: John Wiley & Sons, 253-278.
- Speitel GE, Closmann FB. 1991. Chlorinated solvent biodegradation by methanotrophs in unsaturated soils. *J Environ Eng (New York)* 117(5):541-558. [http://doi.org/10.1061/\(ASCE\)0733-9372\(1991\)117:5\(541\)](http://doi.org/10.1061/(ASCE)0733-9372(1991)117:5(541)).
- Spencer HC, Rowe VK, Adams EM, et al. 1951. Vapor toxicity of ethylene dichloride determined by experiments on laboratory animals. *AMA Arch Ind Hyg Occup Med* 4(5):482-493.
- Spreatico F, Zuccato E, Marcucci M, et al. 1980. Pharmacokinetics of ethylene dichloride in rats treated by different routes and its long-term inhalatory toxicity. In: Ames B, Infante P, Reitz R, eds. *Ethylene dichloride: A potential health risk?* Cold Spring Harbor, NY: Cold Spring Harbor Laboratory, 107-133.
- Squillace PJ, Moran MJ, Price CV. 2004. VOCs in shallow groundwater in new residential/commercial areas of the United States. *Environ Sci Technol* 38(20):5327-5338.
- Stangroom SJ, Collins CD, Lester JN. 1998. Sources of organic micropollutants to lowland rivers. *Environ Technol* 19(7):643-666. <http://doi.org/10.1080/09593331908616722>.
- Steichen J, Koelliker J, Grosh D, et al. 1988. Contamination of farmstead wells by pesticides, volatile organics, and inorganic chemicals in Kansas. *Ground Water Monit Remediat* 8(3):153-160. <http://doi.org/10.1111/j.1745-6592.1988.tb01092.x>.
- Stoner GD. 1991. Lung tumors in strain A mice as a bioassay for carcinogenicity of environmental chemicals. *Exp Lung Res* 17(2):405-423. <http://doi.org/10.3109/01902149109064428>.
- Storer RD, Conolly RB. 1983. Comparative in vivo genotoxicity and acute hepatotoxicity of three 1,2-dihaloethanes. *Carcinogenesis* 4(11):1491-1494. <http://doi.org/10.1093/carcin/4.11.1491>.
- Storer RD, Conolly RB. 1985. An investigation of the role of microsomal oxidative metabolism in the in vivo genotoxicity of 1,2-dichloroethane. *Toxicol Appl Pharmacol* 77:36-46.
- Storer RD, Jackson NM, Conolly RB. 1984. In vivo genotoxicity and acute hepatotoxicity of 1,2-dichloroethane in mice: Comparison of oral, intraperitoneal, and inhalation routes of exposure. *Cancer Res* 44:4267-4271.
- Stucki G, Thuer M. 1994. Increased removal capacity for 1,2-dichloroethane by biological modification of the granular activated carbon process. *Appl Microbiol Biotechnol* 42(1):167-172.

8. REFERENCES

- Stucki G, Krebsler U, Leisinger T. 1983. Bacterial growth on 1,2-dichloroethane. *Experientia* 39(11):1271-1273. <http://doi.org/10.1007/BF01990365>.
- Suffet IH, Brenner L, Cairo PR. 1980. GC/MS identification of trace organics in Philadelphia drinking waters during a 2-year period. *Water Res* 14(7):853-867. [http://doi.org/10.1016/0043-1354\(80\)90266-3](http://doi.org/10.1016/0043-1354(80)90266-3).
- Suguro M, Numano T, Kawabe M, et al. 2017. Lung tumor induction by 26-week dermal application of 1,2-dichloroethane in CB6F1-Tg rasH2 mice. *Toxicol Pathol* 45(3):427-434. <http://doi.org/10.1177/0192623317701003>.
- Sun Q, Wang G, Gao L, et al. 2016. Roles of CYP2E1 in 1,2-dichloroethane-induced liver damage in mice. *Environ Toxicol* 31(11):1430-1438. <http://doi.org/10.1002/tox.22148>.
- Sweeney LM, Gargas ML. 2016. Route-to-route extrapolation of 1,2-dichloroethane studies from the oral route to inhalation using physiologically based pharmacokinetic models. *Regul Toxicol Pharmacol* 81:468-479. <http://doi.org/10.1016/j.yrtph.2016.10.005>.
- Sweeney LM, Saghir SA, Gargas ML. 2008. Physiologically based pharmacokinetic model development and simulations for ethylene dichloride (1,2-dichloroethane) in rats. *Regul Toxicol Pharmacol* 51(3):311-323. <http://doi.org/10.1016/j.yrtph.2008.05.002>.
- Tabak HH, Quave SA, Mashni CI, et al. 1981. Biodegradability studies with organic priority pollutant compounds. *J Water Pollut Control Fed* 53(10):1503-1518.
- Tafazoli M, Baeten A, Geerlings P, et al. 1998. In vitro mutagenicity and genotoxicity study of a number of short-chain chlorinated hydrocarbons using the micronucleus test and the alkaline single cell gel electrophoresis technique (Comet assay) in human lymphocytes: a structure-activity relationship (QSAR) analysis of the genotoxic and cytotoxic potential. *Mutagenesis* 13(2):115-126. <http://doi.org/10.1093/mutage/13.2.115>.
- Take M, Takano K, Takeuchi T, et al. 2013. Distribution of blood and tissue concentrations in rats by inhalation exposure to 1,2-dichloroethane. *J Environ Sci Health A Tox Hazard Subst Environ Eng* 48(9):1031-1036. <http://doi.org/10.1080/10934529.2014.928193>.
- Tan EL, Hsie AW. 1981. Mutagenicity and cytotoxicity of haloethanes as studied in the CHO/HGPRT system. *Mutation Research* 90:183-191.
- Taningher M, Parodi S, Grilli S, et al. 1991. Lack of correlation between alkaline DNA fragmentation and DNA covalent binding induced by polychloroethanes after in vivo administration. Problems related to the assessment of a carcinogenic hazard. *Cancer Detect Prev* 15(1):35-39.
- Teta MJ, Ott MG, Schnatter AR. 1989. An update of mortality due to brain neoplasms and other causes among employees of petrochemical facility. *J Occup Med* 33:45-51.
- Theiss JC, Stoner GD, Shimkin MB, et al. 1977. Test for carcinogenicity of organic contaminants of United States drinking waters by pulmonary tumor response in strain A mice. *Cancer Res* 37:2717-2720.
- Thier R, Taylor JB, Pemble SE, et al. 1993. Expression of mammalian glutathione S-transferase 5-5 in *Salmonella typhimurium* TA1535 leads to base-pair mutations upon exposure to dihalomethanes. *Proc Natl Acad Sci U S A* 90:8576-8580.
- Tilley SK, Reif DM, Fry RC. 2017. Incorporating ToxCast and Tox21 datasets to rank biological activity of chemicals at Superfund sites in North Carolina. *Environ Int* 101:19-26. <http://doi.org/10.1016/j.envint.2016.10.006>.
- Torkelson TR, Rowe VK. 1981. Halogenated aliphatic hydrocarbons. In: Patty's industrial hygiene and toxicology. Vol. 2B: Toxicology. New York, NY: John Wiley & Sons, 3491-3497.
- TRI21. 2022. TRI explorer: Providing access to EPA's toxics release inventory data. Washington, DC: U.S. Environmental Protection Agency. <https://www.epa.gov/enviro/tri-search>. December 8, 2022.
- Tsuruta H. 1975. Percutaneous absorption of organic solvents: 1. Comparative study of the in vivo percutaneous absorption of chlorinated solvents in mice. *Ind Health* 13:227-236.
- U.S. Census. 2018. Trade definitions. U.S. Census Bureau. https://www.census.gov/foreign-trade/reference/definitions/index.html#general_imports. April 30, 2021.

8. REFERENCES

- Urusova TP. 1953. [The possible presence of dichloroethane in human milk with exposure in industrial conditions]. *Gig Sanit* 18:36-37. (Russian)
- USITC. 2019. 1,2-Dichloroethane import and export data. U.S. International Trade Commission. <https://dataweb.usitc.gov/>. April 30, 2021.
- Vamvakas S, Dekant W, Henschler D. 1989. Assessment of unscheduled DNA synthesis in a cultured line of renal epithelial cells exposed to cysteine-S-conjugates of haloalkenes and haloalkanes. *Mutat Res* 222:329-335.
- Vamvakas S, Dekant W, Schiffmann D, et al. 1988. Induction of unscheduled DNA synthesis and micronucleus formation in Syrian hamster embryo fibroblasts treated with cysteine S-conjugates of chlorinated hydrocarbons. *Cell Biol Toxicol* 4:393-404.
- van Bladeren PJ. 1983. Metabolic activation of xenobiotics: Ethylene dibromide and structural analogs. *J Am Coll Toxicol* 2:73-83.
- van Bladeren PJ, van der Gen A, Breimer DD, et al. 1979. Stereoselective activation of vicinal dihalogen compounds to mutagens by glutathione conjugation. *Biochem Pharmacol* 28(16):2521-2524.
- van Bladeren PJ, Breimer DD, Rotteveel-Smijs GM, et al. 1981. The relation between the structure of vicinal dihalogen compounds and their mutagenic activation via conjugation to glutathione. *Carcinogenesis* 2(6):499-505. <http://doi.org/10.1093/carcin/2.6.499>.
- Van Duuren BL, Goldschmidt BM, Loewengart G, et al. 1979. Carcinogenicity of halogenated olefinic and aliphatic hydrocarbons in mice. *J Natl Cancer Inst* 63:1433-1439.
- van Esch GJ, Kroes R, van Logten MJ, et al. 1977. Ninety-day toxicity study with 1,2-dichloroethane (DCE) in rats. Bilthoven, Netherlands: National Institute of Public Health and Environmental Hygiene.
- Vandenbergh PA, Kunka BS. 1988. Metabolism of volatile chlorinated aliphatic hydrocarbons by *Pseudomonas fluorescens*. *Appl Environ Microbiol* 54(10):2578-2579.
- Ventura F, Romero J, Parés J. 1997. Determination of dicyclopentadiene and its derivatives as compounds causing odors in groundwater supplies. *Environ Sci Technol* 31(8):2368-2374. <http://doi.org/10.1021/es960987y>.
- Verschueren K. 1996. 1,2-Dichloroethane. In: *Handbook of environmental data on organic chemicals*. 3rd ed. New York, NY: Van Nostrand Reinhold Company, 963-965.
- Vieira I, Pasanen M, Raunio H, et al. 1998. Expression of CYP2E1 in human lung and kidney during development and in full-term placenta: a differential methylation of the gene is involved in the regulation process. *Pharmacol Toxicol* 83(5):183-187.
- Vogel EW, Nivard MJM. 1993. Performance of 181 chemicals in a *Drosophila* assay predominantly monitoring interchromosomal mitotic recombination. *Mutagenesis* 8(1):57-81.
- Vozovaya MA. 1974. [Development of the progeny of 2 generations obtained from females exposed to the effects of dichloroethane]. *Gig Sanit* (7):25-28. (Russian)
- Vozovaya MA. 1977. [The effect of dichloroethane on the sexual cycle and embryogenesis of experimental animals]. *Akusk Ginekol (Moscow)* 2:57-59. (Russian)
- Wallace LA. 1991. Comparison of risks from outdoor and indoor exposure to toxic chemicals. *Environ Health Perspect* 95:7-13. <http://doi.org/10.1289/ehp.91957>.
- Wallace L, Pellizzari E, Hartwell T, et al. 1984. Personal exposure to volatile organic compounds: I. Direct measurements in breathing-zone air, drinking water, food and exhaled breath. *Environ Research* 35:293-319.
- Wallace L, Pellizzari E, Hartwell T, et al. 1986. Concentrations of 20 volatile organic compounds in the air and drinking water of 350 residents of New Jersey compared with concentrations in their exhaled breath. *J Occup Med* 28(8):603-608.
- Wallace LA, Pellizzari E, Leaderer B, et al. 1987. Emissions of volatile organic compounds from building materials and consumer products. *Atmos Environ* 21(2):385-393. [http://doi.org/10.1016/0004-6981\(87\)90017-5](http://doi.org/10.1016/0004-6981(87)90017-5).

8. REFERENCES

- Wang G, Qi Y, Gao L, et al. 2013. Effects of subacute exposure to 1,2-dichloroethane on mouse behavior and the related mechanisms. *Hum Exp Toxicol* 32(9):983-991. <http://doi.org/10.1177/0960327112470270>.
- Wang G, Yuan Y, Zhang J, et al. 2014. Roles of aquaporins and matrix metalloproteinases in mouse brain edema formation induced by subacute exposure to 1,2-dichloroethane. *Neurotoxicol Teratol* 44:105-112. <http://doi.org/10.1016/j.ntt.2014.06.005>.
- Wang T, Xu D, Fan Q, et al. 2017. 1,2-Dichloroethane impairs glucose and lipid homeostasis in the livers of NIH Swiss mice. *Toxicology* 380:38-49. <http://doi.org/10.1016/j.tox.2017.02.005>.
- Wang G, Yuan Y, Gao L, et al. 2018. Disruption of intracellular ATP generation and tight junction protein expression during the course of brain edema induced by subacute poisoning of 1,2-dichloroethane. *Front Neurosci* 12:article 12. <http://doi.org/10.3389/fnins.2018.00012>.
- Watanabe K, Liberman RG, Skipper PL, et al. 2007. Analysis of DNA adducts formed in vivo in rats and mice from 1,2-dibromoethane, 1,2-dichloroethane, dibromomethane, and dichloromethane using HPLC/accelerator mass spectrometry and relevance to risk estimates. *Chem Res Toxicol* 20(11):1594-1600. <http://doi.org/10.1021/tx700125p>.
- Watwood ME, White CS, Dahm CN. 1991. Methodological modifications for accurate and efficient determination of contaminant biodegradation in unsaturated calcareous soils. *Appl Environ Microbiol* 57(3):717-720.
- Waxweiler RJ, Alexander V, Leffingwell SS, et al. 1983. Mortality from brain tumor and other causes in a cohort of petrochemical workers. *J Natl Cancer Inst* 70:75-81.
- Weiss G. 1980. Ethylene dichloride. In: Hazardous chemicals data book. Vol. 4. Park Ridge, NJ: Noyes Data Corporation, 433.
- Westrick JJ, Mello JW, Thomas RF. 1984. The groundwater supply survey. *J Am Water Works Assoc* 76(5):52-59.
- WHO. 1995. International program on chemical safety. Geneva, Switzerland: World Health Organization. Environmental Health Criteria 176.
- WHO. 2000. Air quality guidelines for Europe. World Health Organization. <https://apps.who.int/iris/handle/10665/107335>. November 23, 2022.
- WHO. 2022. Guidelines for drinking-water quality. Fourth edition incorporating the first and second addenda. World Health Organization. <https://www.who.int/publications/i/item/9789240045064>. June 22, 2022.
- Williams GM, Mori H, McQueen CA. 1989. Structure-activity relationships in the rat hepatocyte DNA-repair test for 300 chemicals. *Mutat Res* 221(3):263-286. [http://doi.org/10.1016/0165-1110\(89\)90039-0](http://doi.org/10.1016/0165-1110(89)90039-0).
- Wilson JT, Enfield CG, Dunlap WJ, et al. 1981. Transport and fate of selected organic pollutants in a sandy soil. *J Environ Qual* 10(4):501-506. <http://doi.org/10.2134/jeq1981.00472425001000040016x>.
- Wilson JT, McNabb JF, Balkwill DL, et al. 1983. Enumeration and characterization of bacteria indigenous to a shallow water-table aquifer. *Groundwater* 21(2):134-142. <http://doi.org/10.1111/j.1745-6584.1983.tb00710.x>.
- Wirtschafter ZT, Schwartz ED. 1939. Acute ethylene dichloride poisoning. *J Ind Hyg Toxicol* 21:126-131.
- Withey JR, Collins BT. 1980. Chlorinated aliphatic hydrocarbons used in the foods industry: The comparative pharmacokinetics of methylene chloride, 1,2-dichloroethane, chloroform and trichloroethylene after i.v. administration in the rat. *J Environ Pathol Toxicol* 3:313-332.
- Withey JR, Karpinski K. 1985. The fetal distribution of some aliphatic chlorinated hydrocarbons in the rat after vapor phase exposure. *Biol Res Pregnancy Perinatol* 6(2):79-88.
- Withey JR, Collins BT, Collins PG. 1983. Effect of vehicle on the pharmacokinetics and uptake of four halogenated hydrocarbons from the gastrointestinal tract of the rat. *J Appl Toxicol* 3(5):249-253. <http://doi.org/10.1002/jat.2550030506>.

8. REFERENCES

- Witt KL, Knapton A, Wehr CM, et al. 2000. Micronucleated erythrocyte frequency in peripheral blood of B6C3F1 mice from short-term, prechronic, and chronic studies of the NTP carcinogenesis bioassay program. *Environ Mol Mutagen* 36(3):163-194.
- WQP. 2020. Water quality portal data: 1,2-Dichloroethane. National Water Quality Monitoring Council. <https://www.waterqualitydata.us/portal/>. August 18, 2020.
- Yamamoto K, Fukushima M, Kakutani N, et al. 1997. Volatile organic compounds in urban rivers and their estuaries in Osaka, Japan. *Environ Pollut* 95(1):135-143.
- Yang J, Wang T, Jin X, et al. 2021. Roles of crosstalk between astrocytes and microglia in triggering neuroinflammation and brain edema formation in 1,2-dichloroethane-intoxicated mice. *Cells* 10(10):2647. <http://doi.org/10.3390/cells10102647>.
- Yao S, Wang Q, Zhang J, et al. 2021. Ambient volatile organic compounds in a heavy industrial city: Concentration, ozone formation potential, sources, and health risk assessment. *Atmos Pollut Res* 12(5):101053. <http://doi.org/10.1016/j.apr.2021.101053>.
- Yllner S. 1971. Metabolism of 1,2-dichloroethane-14C in the mouse. *Acta Pharmacol Toxicol* 30:257-265.
- Yodaiken RE, Babcock JR. 1973. 1,2-Dichloroethane poisoning. *Arch Environ Health* 26(5):281-284. <http://doi.org/10.1080/00039896.1973.10666277>.
- Zeng N, Jiang H, Fan Q, et al. 2018. Aberrant expression of miR-451a contributes to 1,2-dichloroethane-induced hepatic glycerol gluconeogenesis disorder by inhibiting glycerol kinase expression in NIH Swiss mice. *J Appl Toxicol* 38(2):292-303. <http://doi.org/10.1002/jat.3526>.
- Zeng N, Zhang Z, Jiang H, et al. 2019. LncRNA-241 inhibits 1,2-dichloroethane-induced hepatic apoptosis. *Toxicol in Vitro* 61:104650.
- Zhan F, Zheng W, Liu L, et al. 2011. Diagnosis and prognosis evaluation of 1,2-dichloroethane encephalopathy - magnetic resonance imaging combined with diffusion tensor imaging and magnetic resonance spectroscopy study. *Neurol India* 59(1):108-110. <http://doi.org/10.4103/0028-3886.76884>.
- Zhang LH, Jenssen D. 1994. Studies on intrachromosomal recombination in SP5/V79 Chinese hamster cells upon exposure to different agents related to carcinogenesis. *Carcinogenesis* 15:2303-2310.
- Zhang L, Jin YP. 2019. Toxic effects of combined treatment of 1,2-dichloroethane and ethanol on mouse brain and the related mechanisms. *J Biochem Mol Toxicol* 33(5):e22294. <http://doi.org/10.1002/jbt.22294>.
- Zhang Q, Niu Q, Li L, et al. 2011. Establishment of a poisoned animal model of toxic encephalopathy induced by 1,2-dichloroethane. *Int J Immunopathol Pharmacol* 24(1 Suppl):79s-83s.
- Zhang Y, Li G, Zhong Y, et al. 2017. 1,2-Dichloroethane induces reproductive toxicity mediated by the CREM/CREB signaling pathway in male NIH Swiss mice. *Toxicol Sci* 160(2):299-314. <http://doi.org/10.1093/toxsci/kfx182>.
- Zhao SF, Zhang XC, Bao YS. 1984. The study on the effects of 1,2-dichloroethane on the development of mice. *Chinese J Ind Hyg Occup Dis* 2:343-346.
- Zhao SF, Zhang XC, Bao YS. 1989. The study on the effects of 1,2-dichloroethane on reproductive function. *Chinese J Prevent Med* 23:199-202.
- Zhong Y, Liang B, Hu M, et al. 2020. MicroRNA-29b-3p aggravates 1,2-dichloroethane-induced brain edema by targeting aquaporin 4 in Sprague-Dawley rats and CD-1 mice. *Toxicol Lett* 319:160-167. <http://doi.org/10.1016/j.toxlet.2019.11.011>.
- Zhong Y, Liang B, Meng H, et al. 2022. 1,2-Dichloroethane induces cortex demyelination by depressing myelin basic protein via inhibiting aquaporin 4 in mice. *Ecotoxicol Environ Saf* 231:113180. <http://doi.org/10.1016/j.ecoenv.2022.113180>.
- Zhou X, Zhou W, Zhou J, et al. 2015. 1,2-Dichloroethane-induced toxic leukoencephalopathy with a brain biopsy. *Neurol Sci* 36(5):817-819. <http://doi.org/10.1007/s10072-014-1949-4>.
- Zhou X, Cao Y, Leuze C, et al. 2016. Early non-invasive detection of acute 1,2-dichloroethane-induced toxic encephalopathy in rats. *In Vivo* 30(6):787-793. <http://doi.org/10.21873/invivo.10995>.