CHAPTER 8. REFERENCES

- Abdelghani AA, Pramar TK. 1995. Levels and toxicities of selected inorganic and organic contaminants in a swamp environment. J Environ Sci Health B30(5):717-731.
- Atkinson R. 1987. A structure-activity relationship for the estimation of rate constants for the gas-phase reactions of OH radicals with organic compounds. Int J Chem Kinet 19:799-828.
- Atkinson R, Carter WP. 1984. Kinetics and mechanisms of the gas-phase reaction of ozone with organic compounds under atmospheric conditions. Chem Rev 84:437-470.
- ATSDR. 1989. Decision guide for identifying substance-specific data needs related to toxicological profiles. Agency for Toxic Substances and Disease Registry. Fed Regist 54(174):37618-37634. https://www.loc.gov/item/fr054174/. August 5, 2020.
- ATSDR. 2019. Hexachlorobutadiene. Full SPL data. Substance priority list (SPL) resource page. Agency for Toxic Substances and Disease Registry.
- Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessments. Regul Toxicol Pharmacol 8:471-486.
- Bart HL, Martinat PJ, Abdelghani A. 1998. Influence of taxonomy, ecology, and seasonality in river stage on fish contamination risks in floodplain swamps of the lower Mississippi River. Ecotoxicology 7(6):325-334.
- Birner G, Werner M, Ott MM, et al. 1995. Sex differences in hexachlorobutadiene biotransformation and nephrotoxicity. Toxicol Appl Pharmacol 132(2):203-212. http://doi.org/10.1006/taap.1995.1100.
- Birner G, Werner M, Rosner E, et al. 1998. Biotransformation, excretion, and nephrotoxicity of the hexachlorobutadiene metabolite (E)-N-acetyl-S-(1,2,3,4, 4-pentachlorobutadienyl)-L-cysteine sulfoxide. Chem Res Toxicol 11(7):750-757. http://doi.org/10.1021/tx970216n.
- Boroushaki MT. 2003. Development of resistance against hexachlorobutadiene in the proximal tubules of young male rat. Comp Biochem Physiol C Toxicol Pharmacol 136(4):367-375. http://doi.org/10.1016/j.cca.2003.10.010.
- Bristol DW, Crist HL, Lewis RG, et al. 1982. Chemical analysis of human blood for assessment of environmental exposure to semivolatile organochlorine chemical contaminants. J Anal Toxicol 6(6):269-275. http://doi.org/10.1093/jat/6.6.269.
- 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.
- Burkhard LP, Sheedy BR, McCauley DJ, et al. 1997. Bioaccumulation factors for chlorinated benzenes, chlorinated butadienes and hexachloroethane. Environ Toxicol Chem 16(8):1677-1686.
- Camanzo J, Rice CP, Jude DJ. 1987. Organic priority pollutants in nearshore fish from 14 Lake Michigan tributaries and embayments, 1983. J Great Lakes Res 13:296-309.
- CDC. 2018. Fourth national report on human exposure to environmental chemicals, updated tables. March 2018. Centers for Disease Control and Prevention. https://www.cdc.gov/exposurereport/. April 6, 2018.
- Chen W, Kan AT, Fu G, et al. 1999. Adsorption-desorption behaviors of hydrophobic organic compounds in sediments of Lake Charles, Louisiana, USA. Environ Toxicol Chem 18(8):1610-1616.
- Chiusolo A, Defazio R, Casartelli A, et al. 2008. Regucalcin down-regulation in rat kidney tissue after treatment with nephrotoxicants. Toxicol Lett 182(1-3):84-90. http://doi.org/10.1016/j.toxlet.2008.08.014.

Class T, Ballschmiter K. 1987. Global baseline pollution studies. Fresenius J Anal Chem 327:198-204.

- Clewell HJ, Andersen ME. 1985. Risk assessment extrapolations and physiological modeling. Toxicol Ind Health 1(4):111-131. http://doi.org/10.1177/074823378500100408.
- Cole RH, Frederick RE, Healy RE, et al. 1984. Preliminary findings of the priority pollutants monitoring project of the nationwide urban runoff program. J Water Pollut Control Fed 56:898-908.

- Cristofori P, Sauer AV, Trevisan A. 2015. Three common pathways of nephrotoxicity induced by halogenated alkenes. Cell Biol Toxicol 31(1):1-13. http://doi.org/10.1007/s10565-015-9293-x.
- Cristofori P, Defazio R, Chiusolo A, et al. 2013. Hyaline droplet accumulation in kidney of rats treated with hexachloro-1:3-butadiene: influence of age, dose and time-course. J Appl Toxicol 33(3):183-189. http://doi.org/10.1002/jat.1732.
- Davis ME. 1984. Changes of hexachlorobutadiene nephrotoxicity after piperonyl butoxide treatment. Toxicology 30(3):217-225. http://doi.org/10.1016/0300-483x(84)90093-3.
- Davis ME, Berndt WO, Mehendale HM. 1980. Disposition and nephrotoxicity of hexachloro-1,3butadiene. Toxicology 16(3):179-191. http://doi.org/10.1016/0300-483x(80)90115-8.
- de Ceaurriz J, Gagnaire F, Ban M, et al. 1988. Assessment of the relative hazard involved with airborne irritants with additional hepatotoxic or nephrotoxic properties in mice. J Appl Toxicol 8(6):417-422. http://doi.org/10.1002/jat.2550080606.
- de Meester C, Duverger-van Bogaert M, Lambotte-Vandepaer M, et al. 1980. Mutagenicity of vinyl chloride in the Ames test. Mutat Res Genet Toxicol 77(2):175-179. http://doi.org/10.1016/0165-1218(80)90135-4.
- Dekant W, Vamvakas S, Berthold K, et al. 1986. Bacterial ß-lyase mediated cleavage and mutagenicity of cysteine conjugates derived from the nephrocarcinogenic alkenes trichloroethylene, tetrachloroethylene and hexachlorobutadiene. Chem Biol Interact 60:31-45.
- Dekant W, Schrenk D, Vamvakas S, et al. 1988a. Metabolism of hexachloro-1,3-butadiene in mice: In vivo and in vitro evidence for activation by glutathione conjugation. Xenobiotica 18:803-816.
- Dekant W, Vamvakas S, Henschler D, et al. 1988b. Enzymatic conjugation of hexachloro-1,3- butadiene with glutathione. Formation of 1-(glutathion-S-yl)-1,2,3,4,4-pentachlorobuta-1,3- diene and 1,4-bis(glutathion-S-yl)-1,2,3,4-tetrachlorobuta-1,3-diene. Drug Metab Dispos 16:701-706.
- Dekant W, Vamvakas S, Koob M, et al. 1990. A mechanism of haloalkene-induced renal carcinogenesis. Environ Health Perspect 88:107-110. http://doi.org/10.1289/ehp.9088107.
- Dekant W, Urban G, Gorsman C, et al. 1991. Thioketene formation from alpha-haloalkenyl 2nitrophenyl disulfides: Models for biological reactive intermediates of cytotoxic S-conjugates. J Am Chem Soc 113(13):5120-5122. http://doi.org/10.1021/ja00013a090.
- DeVault DS. 1985. Contaminants in fish from Great Lakes harbors and tributary mouths. Arch Environ Contam Toxicol 14:587-594.
- DOE. 2018a. Table 3: Protective Action Criteria (PAC) Rev. 29a based on applicable 60-minute AEGLs, ERPGs, or TEELs. The chemicals are listed by CASRN. June 2018. Oak Ridge, TN: U.S. Department of Energy. https://edms.energy.gov/pac/docs/Revision_29A_Table3.pdf. April 12, 2020.
- DOE. 2018b. Protective Action Criteria (PAC) with AEGLs, ERPGs, & TEELs: Rev. 29A, June 2018. Oak Ridge, TN: U.S. Department of Energy. https://edms.energy.gov/pac/. April 12, 2020.
- Driscoll TR, Hamdan HH, Wang G, et al. 1992. Concentrations of individual serum or plasma bile acids in workers exposed to chlorinated aliphatic hydrocarbons. Br J Ind Med 49(10):700-705. http://doi.org/10.1136/oem.49.10.700.
- Duprat P, Gradiski D. 1978. Percutaneous toxicity of hexachlorobutadiene. Acta Pharmacol Toxicol (Copenh) 43(5):346-353. http://doi.org/10.1111/j.1600-0773.1978.tb02277.x.
- Elder V, Proctor B, Hites R. 1981. Organic compounds found near dump sites in Niagara Falls, New York. Environ Sci Technol 15:1237-1243.
- EPA. 1976a. An ecological study of hexachlorobutadiene (HCBD). Washington, DC: U.S. Environmental Protection Agency. PB252671. EPA560676010. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=91012GFE.txt. August 5, 2020.
- EPA. 1976b. Sampling and analysis of selected toxic substances. Task 1B. Hexachlorobutadiene. U.S. Environmental Protection Agency. PB253941. EPA560676015. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=9101344Y.txt. August 6, 2020.
- EPA. 1977. Monitoring to detect previously unrecognized pollutants in surface waters. Appendix: Organic analysis data. Washington, DC: U.S. Environmental Protection Agency.

EPA560677015A. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100WBYC.txt. August 6, 2020.

- EPA. 1978. Quantification of chlorinated hydrocarbons in previously collected air samples. Research Triangle Park, NC: U.S. Environmental Protection Agency. EPA450378112. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=9100IDU1.txt. August 6, 2020.
- EPA. 1979. Sources of toxic pollutants found in influents to sewage treatment plants VI. Integrated interpresentation. U.S. Environmental Protection Agency. PB81219685. https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB81219685.xhtml. August 6, 2020.
- EPA. 1980. Ambient water quality criteria document for hexachlorobutadiene. Washington, DC: U.S. Environmental Protection Agency. EPA440580053. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=2000LMQH.txt. August 5, 2020.
- EPA. 1982a. Chemical information rules; manufacturers reporting; preliminary assessment information. U.S. Environmental Protection Agency. Fed Regist 47(120):26992-27008. https://www.loc.gov/item/fr047120/. August 6, 2020.
- EPA. 1982b. Hexachloro-1,3-butadiene; response to the Interagency Testing Committee. U.S. Environmental Protection Agency. Fed Regist 47(250):58029-58030. https://www.loc.gov/item/fr047250/. August 6, 2020.
- EPA. 1982c. Aquatic fate process data for organic priority pollutants. Washington, DC: U.S. Environmental Protection Agency. EPA440481014. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=9100012M.txt. August 6, 2020.
- EPA. 1984. GC/MS (gas chromatography-mass spectrometry) analysis of organics in drinking water concentrates and advanced waste treatment concentrates. Research Triangle Park, NC: U.S. Environmental Protection Agency. PB85128221. EPA600S184020. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=20016T4I.txt. August 6, 2020.
- EPA. 1988a. National ambient volatile organic compounds (VOCs) data base update. Research Triangle Park, NC: U.S. Environmental Protection Agency. PB88195631. EPA600338010a. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100SS3R.txt. August 6, 2020.
- EPA. 1989. Ambient water quality criteria document addendum for hexachlorobutadiene. Cincinnati, OH: U.S. Environmental Protection Agency. PB91161455. ECAOCIN652. https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB91161455.xhtml#. August 6, 2020.
- EPA. 1990. National sewage sludge survey: Availability of information and data, and anticipated impacts on proposed regulations . U.S. Environmental Protection Agency. Fed Regist 55(218):47209-47283. https://tile.loc.gov/storage-services/service/ll/fedreg/fr055/fr055218/fr055218.pdf. August 6, 2020.
- EPA. 1992. Method 524.2: Measurement of purgeable organic compounds in water by capillary column gas chromatography/mass spectrometry. Cincinnati, OH: U.S. Environmental Protection Agency. https://www.epa.gov/sites/production/files/2015-06/documents/epa-524.2.pdf. October 5, 2020.
- 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. EPA260B05001. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100EI4V.txt. August 4, 2020.
- EPA. 2006. Method 8260D: Volatile organic compounds by gas chromatography/mass spectrometry. U.S. Environmental Protection Agency. SW846. https://www.epa.gov/sites/production/files/2017-04/documents/method_8260d_update_vi_final_03-13-2017.pdf. October 5, 2020.
- EPA. 2007. Provisional peer-reviewed toxicity values for hexachlorobutadiene. Washington, DC: U.S. Environmental Protection Agency. EPA690R07019F.

https://cfpub.epa.gov/ncea/pprtv/documents/Hexachlorobutadiene.pdf. August 5, 2020.

EPA. 2009. National primary drinking water regulations. Washington, DC: U.S. Environmental Protection Agency. EPA816F090004. https://www.epa.gov/sites/production/files/2016-06/documents/npwdr_complete_table.pdf. September 7, 2017.

- EPA. 2018a. 2018 Edition of the drinking water standards and health advisories. Washington, DC: Office of Water, U.S. Environmental Protection Agency. EPA822S12001. https://www.epa.gov/sites/production/files/2018-03/documents/dwtable2018.pdf. July 25, 2018.
- EPA. 2018b. Acute Exposure Guideline Levels (AEGLs) values. U.S. Environmental Protection Agency. https://www.epa.gov/sites/production/files/2018-

08/documents/compiled_aegls_update_27jul2018.pdf. April 12, 2020. FDA. 2020. Substances added to food. Washington, DC: U.S. Food and Drug Administration.

- https://www.accessdata.fda.gov/scripts/fdcc/?set=FoodSubstances. April 12, 2020.
- Gage JC. 1970. The subacute inhalation toxicity of 109 individual chemicals. Br J Ind Med 27:1-3.
- Garle MJ, Fry JR. 1989. Detection of reactive metabolites in vitro. Toxicology 54(1):101-110. http://doi.org/10.1016/0300-483x(89)90082-6.
- Gietl YS, Anders MW. 1991. Biosynthesis and biliary excretion of S-conjugates of hexachlorobuta-1,3diene in the perfused rat liver. Drug Metab Dispos 19(1):274-277.
- Gietl Y, Vamvakas S, Anders MW. 1991. Intestinal absorption of S-(pentachlorobutadienyl)glutathione and S-(pentachlorobutadienyl)-L-cysteine, the glutathione and cysteine S-conjugates of hexachlorobuta-1,3-diene. Drug Metab Dispos 19(3):703-707.
- Govind R, Flaherty PA, Dobbs RA. 1991. Fate and effects of semivolatile organic pollutants during anaerobic digestion of sludge. Water Res 25:547-556.
- Green T, Lee R, Farrar D, et al. 2003. Assessing the health risks following environmental exposure to hexachlorobutadiene. Toxicol Lett 138(1-2):63-73. http://doi.org/10.1016/s0378-4274(02)00372-7.
- Harleman JH, Seinen W. 1979. Short-term toxicity and reproduction studies in rats with hexachloro-(1,3)-butadiene. Toxicol Appl Pharmacol 47(1):1-14. http://doi.org/10.1016/0041-008x(79)90065-6.
- Hauser TR, Bromberg SM. 1982. EPA's monitoring program at Love Canal 1980. Environ Monit Assess 2:249-271.
- Haworth S, Lawlor T, Mortelmans K, et al. 1983. Salmonella mutagenicity test results for 250 chemicals. Environ Mutagen 5(Suppl 1):3-142.
- Henschler D, Dekant W. 1990. Nephrocarcinogenic xenobiotics. Toxicol Lett 53(1-2):105-110. http://doi.org/10.1016/0378-4274(90)90102-r.
- Hewitt WR, Brown EM. 1984. Nephrotoxic interactions between ketonic solvents and halogenated aliphatic chemicals. Fundam Appl Toxicol 4:902-908.
- Hook JB, Rose MS, Lock EA. 1982. The nephrotoxicity of hexachloro-1:3-butadiene in the rat: Studies of organic anion and cation transport in renal slices and the effect of monooxygenase inducers. Toxicol Appl Pharmacol 65(3):373-382. http://doi.org/10.1016/0041-008x(82)90383-0.
- IARC. 1979. IARC monographs on the evaluation of the carcinogenic risk of chemicals to humans. Volume 20: Some halogenated hydrocarbons. Lyon, France: International Agency for Research on Cancer. FR38. https://publications.iarc.fr/38. August 6, 2020.
- IARC. 1999. Hexachlorobutadiene. IARC Monographs on the evaluation of carcinogenic risks to humans. Volume 73: Some chemicals that cause tumours of the kidney or urinary bladder in rodents and some other substances. Lyon, France: International Agency for Research on Cancer. https://publications.iarc.fr/91. October 23, 2017.
- IRIS. 1993. Hexachlorobutadiene. CASRN 87-68-3. Integrated Risk Information System. Chemical assessment summary. Washington, DC: U.S. Environmental Protection Agency. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0058_summary.pdf. September 12, 2017.
- Jaffe DR, Hassall CD, Brendel K, et al. 1983. In vivo and in vitro nephrotoxicity of the cysteine conjugate of hexachlorobutadiene. J Toxicol Environ Health 11(4-6):857-867. http://doi.org/10.1080/15287398309530389.
- Johnson LD, Young JC. 1983. Inhibition of anaerobic digestion by organic priority pollutants. J Water Pollut Control Fed 55:1141-1149.

- Jones TW, Gerdes RG, Ormstad K, et al. 1985. The formation of both a mono- and bis-substituted glutathione conjugate of hexachlorobutadiene by isolated hepatocytes and following in vivo administration to the rat. Chem Biol Interact 56:251-267.
- Jones TW, Chen Q, Schaeffer V, et al. 1988. Immunohistochemical localization of glutamine transaminase K, a rat kidney cysteine conjugate ß-lyase, and the relationship to the segment specificity of cysteine conjugate nephrotoxicity. Mol Pharmacol 341:621-627.
- Jonker D, Woutersen RA, Feron VJ. 1996. Toxicity of mixtures of nephrotoxicants with similar or dissimilar mode of action. Food Chem Toxicol 34(11-12):1075-1082. http://doi.org/10.1016/s0278-6915(97)00077-x.
- Jonker D, Jones MA, van Bladeren PJ, et al. 1993a. Acute (24 hr) toxicity of a combination of four nephrotoxicants in rats compared with the toxicity of the individual compounds. Food Chem Toxicol 31(1):45-52. http://doi.org/10.1016/0278-6915(93)90178-2.
- Jonker D, Woutersen RA, van Bladeren PJ, et al. 1993b. Subacute (4-wk) oral toxicity of a combination of four nephrotoxins in rats: comparison with the toxicity of the individual compounds. Food Chem Toxicol 31(2):125-136. http://doi.org/10.1016/0278-6915(93)90126-j.
- Junk GA, Ford CS. 1980. A review of organic emissions from selected combustion processes. Chemosphere 9(4):187-230. http://doi.org/10.1016/0045-6535(80)90079-x.
- Kastl PE, Hermann EA. 1983. Quantitative gas chromatographic determination of hexachloro-1,3butadiene in whole rat blood at part per trillion levels. J Chromatogr 280:390-393.
- Kirby GM, Bach PH. 1995. Enhanced hexachloro-1:3-butadiene nephrotoxicity in rats with a preexisting adriamycin-induced nephrotic syndrome. Toxicol Pathol 23(3):303-312. http://doi.org/10.1177/019262339502300307.
- Kirkland D, Aardema M, Henderson L, et al. 2005. Evaluation of the ability of a battery of three in vitro genotoxicity tests to discriminate rodent carcinogens and non-carcinogens I. Sensitivity, specificity and relative predictivity. Mutat Res 584(1-2):1-256. http://doi.org/10.1016/j.mrgentox.2005.02.004.
- Kociba RJ, Gehring PJ, Humiston CG, et al. 1971. Toxicologic study of female rats administered hexachlorobutadiene or hexachlorobenzene for thirty days. E.I. Dupont de Nemours & Company Inc. Submitted to the U.S. Environmental Protection Agency under TSCA Section 8D. OTS0205867. https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/OTS0205867.xhtml. August 6, 2020.
- Kociba RJ, Keyes DG, Jersey GC, et al. 1977. Results of a two year chronic toxicity study with hexachlorobutadiene in rats. Am Ind Hyg Assoc J 38(11):589-602. http://doi.org/10.1080/00028897708984403.
- Kommalapati RR, Valsaraj KT, Constant WD. 2002. Soil-water partitioning and desorption hysteresis of volatile organic compounds from a Louisiana Superfund site soil. Environ Monit Assess 73(3):275-290. http://doi.org/10.1023/a:1013190302163.
- Koob M, Dekant W. 1992. Biotransformation of the hexachlorobutadiene metabolites 1-(glutathion-Syl)-pentachlorobutadiene and 1-(cystein-S-yl)-pentachlorobutadiene in the isolated perfused rat liver. Xenobiotica 22(1):125-138. http://doi.org/10.3109/00498259209053109.
- Kotzias D, Klein W, Korte F. 1975. Beiträge zur ökologischen Chemie CVI: Vorkommen von Xenobiotika im Sickerwasser von Mülldeponien. Chemosphere 4(5):301-306. http://doi.org/10.1016/0045-6535(75)90058-2.
- Krishnan K, Anderson ME, Clewell HJ, et al. 1994. Physiologically based pharmacokinetic modeling of chemical mixtures. In: Yang RSH, ed. Toxicology of chemical mixtures. Case studies, mechanisms, and novel approaches. San Diego, CA: Academic Press, 399-437.
- Kubo T, Urano K, Utsumi H. 2002. Mutagenicity characteristics of 255 environmental chemicals. J Health Sci 48(6):545-554.
- Lehner K, Santarelli F, Vasold R, et al. 2011. Black tattoo inks are a source of problematic substances such as dibutyl phthalate. Contact Dermatitis 65(4):231-236.

- Lock EA, Ishmael J. 1981. Hepatic and renal nonprotein sulfhydryl concentration following toxic doses of hexachloro-1,3-butadiene in the rat: the effect of Aroclor 1254, phenobarbitone, or SKF 525A treatment. Toxicol Appl Pharmacol 57(1):79-87. http://doi.org/10.1016/0041-008x(81)90027-2.
- MacFarlane M, Foster JR, Gibson GG, et al. 1989. Cysteine conjugate ß-lyase of rat kidney cytosol: Characterization, immunocytochemical localization, and correlation with hexachlorobutadiene nephrotoxicity. Toxicol Appl Pharmacol 98:185-197.
- Macgregor K, Oliver IW, Harris L, et al. 2010. Persistent organic pollutants (PCB, DDT, HCH, HCB & BDE) in eels (Anguilla anguilla) in Scotland: current levels and temporal trends. Environ Pollut 158(7):2402-2411. http://doi.org/10.1016/j.envpol.2010.04.005.
- Maguire DP, Turton JA, Scudamore CL, et al. 2013. Correlation of histopathology, urinary biomarkers, and gene expression responses following hexachloro-1:3-butadiene-induced acute nephrotoxicity in male Hanover Wistar rats: a 28-day time course study. Toxicol Pathol 41(5):779-794. http://doi.org/10.1177/0192623312464306.
- Matsushima T, Hayashi M, Matsuoka A, et al. 1999. Validation study of the in vitro micronucleus test in a Chinese hamster lung cell line (CHL/IU). Mutagenesis 14(6):569-580. http://doi.org/10.1093/mutage/14.6.569.
- McConnell G, Ferguson DM, Pearson CR. 1975. Chlorinated hydrocarbons and the environment. Endeavour 34(121):13-18. http://doi.org/10.1016/0160-9327(75)90062-9.
- Mes J, Davies DJ, Turton D. 1982. Polychlorinated biphenyl and other chlorinated hydrocarbon residues in adipose tissue of Canadians. Bull Environ Contam Toxicol 28(1):97-104. http://doi.org/10.1007/BF01608420.
- Mes J, Davies DJ, Turton D. 1985. Environmental contaminants in human fat: A comparison between accidental and nonaccidental causes of death. Ecotoxicol Environ Saf 10:70-74.
- Montgomery JH, Welkom LM. 1990. Hexachlorobutadiene. In: Groundwater chemicals desk reference. Chelsea, MI: Lewis Publications, Inc, 334-336.
- Nakagawa Y, Kitahori Y, Cho M, et al. 1998. Effect of hexachloro-1,3-butadiene on renal carcinogenesis in male rats pretreated with N-ethyl-N-hydroxyethylnitrosamine. Toxicol Pathol 26(3):361-366. http://doi.org/10.1177/019262339802600309.
- NAS/NRC. 1989. Report of the oversight committee. In: Biologic markers in reproductive toxicology. Washington, DC: National Academy of Sciences, National Research Council, 15-35. https://www.ncbi.nlm.nih.gov/books/NBK218931/. August 6, 2020.
- Nash JA, King LJ, Lock EA, et al. 1984. The metabolism and disposition of hexachloro-1:3-butadiene in the rat and its relevance to nephrotoxicity. Toxicol Appl Pharmacol 73(1):124-137. http://doi.org/10.1016/0041-008x(84)90061-9.
- NIOSH. 1981. Tier II mutagenic screening of 13 NIOSH priority compounds. Individual compound report: hexachloro-1,3-butadiene. National Institute for Occupational Safety and Health. PB83152397. https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB83152397.xhtml. October 3, 2017.
- NIOSH. 1994. Method 2543: Hexachlorobutadiene. National Institute of Occupational Safety and Health. EJ0700000. https://www.cdc.gov/niosh/docs/2003-154/pdfs/2543.pdf. October 5, 2020.
- NIOSH. 2016. Hexachlorobutadiene. NIOSH pocket guide to chemical hazards. Atlanta, GA: National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention. https://www.cdc.gov/niosh/npg/npgd0314.html. September 12, 2017.
- NLM. 2020. PubChem compound summary: Hexachlorobutadiene. National Library of Medicine. https://pubchem.ncbi.nlm.nih.gov/compound/6901. August 6, 2020.
- NSF. 1975. Research program on hazard priority ranking of manufactured chemicals (Chemicals 1-20) 9-A-1. National Science Foundation. PB263161.
- NTP. 1991. Toxicity studies of hexachloro-1,3-butadiene in B6C3F1 mice (feed studies). Research Triangle Park, NC: National Toxicology Program. NIH Publication No. 91-3120. https://ntp.niehs.nih.gov/ntp/htdocs/st_rpts/tox001.pdf. August 5, 2020.

- NTP. 2016. CASRN index. In: Report on carcinogens. 14th ed. Research Triangle Park, NC: National Toxicology Program, https://ntp.niehs.nih.gov/pubhealth/roc/index-1.html#P. March 1, 2017.
- Olea N, Olea-Serrano F, Lardelli-Claret P, et al. 1999. Inadvertent exposure to xenoestrogens in children. Toxicol Ind Health 15(1-2):151-158. http://doi.org/10.1191/074823399678846682.
- Oliver BG, Niimi AJ. 1983. Bioconcentrations of chlorobenzenes from water by rainbow trout: Correlations with partition coefficients and environmental residues. Environ Sci Technol 10:148-152.
- Oliver BG, Charlton MN. 1984. Chlorinated organic contaminants on settling particulates in the Niagara River vicinity of Lake Ontario. Environ Sci Technol 18:903-908.
- OSHA. 2019a. Occupational safety and health standards. Subpart Z Toxic and hazardous substances. Air contaminants. Table Z-1: Limits for air contaminants. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.1000. https://www.osha.gov/lawsregs/regulations/standardnumber/1910/1910.1000TABLEZ1. October 25, 2019.
- OSHA. 2019b. Safety and health regulations for construction. Subpart 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 Appendix A. https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.55AppA. October 25, 2019.
- OSHA. 2019c. Occupational safety and health standards for shipyard employment. Subpart Z Toxic and hazardous substances. Air contaminants. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1915.1000. https://www.osha.gov/laws-regs/regulations/standardnumber/1915/1915.1000. October 25, 2019.
- Pankow JF, Isabelle LM, Asher WE. 1984. Trace organic compounds in rain. 1. Sampler design and analysis by adsorption/thermal desorption (ATD). Environ Sci Technol 18(5):310-318. http://doi.org/10.1021/es00123a005.
- Payan JP, Fabry JP, Beydon D, et al. 1991. Biliary excretion of hexachloro-1,3-butadiene and its relevance to tissue uptake and renal excretion in male rats. J Appl Toxicol 11(6):437-442. http://doi.org/10.1002/jat.2550110610.
- Pearson CR, McConnell G. 1975. Chlorinated C₁ and C₃ hydrocarbons in the marine environment. Proc R Soc Lond B Biol Sci 189(1096):305-332. http://doi.org/10.1098/rspb.1975.0059.
- Pellizzari ED. 1982. Analysis for organic vapor emissions near industrial and chemical waste disposal sites. Environ Sci Technol 16(11):781-785. http://doi.org/10.1021/es00105a010.
- Piet GJ, Zoeteman BC. 1980. Organic water quality changes during sand bank and dune filtration of surface waters in the Netherlands. J Am Water Works Assoc 72:400-404.
- Reichert D, Schutz S. 1986. Mercapturic acid formation is an activation and intermediary step in the metabolism of hexachlorobutadiene. Biochem Pharmacol 35:1271-1275.
- Reichert D, Neudecker T, Schutz S. 1984. Mutagenicity of hexachlorobutadiene, perchlorobutenoic acid and perchlorobutenoic acid chloride. Mutat Res 137(2-3):89-93. http://doi.org/10.1016/0165-1218(84)90096-x.
- Reichert D, Schutz S, Metzler M. 1985. Excretion pattern and metabolism of hexachlorobutadiene in rats. Evidence for metabolic activation by conjugation reactions. Biochem Pharmacol 34(4):499-505. http://doi.org/10.1016/0006-2952(85)90180-7.
- Reichert D, Neudecker T, Spengler U, et al. 1983. Mutagenicity of dichloroacetylene and its degradation products trichloroacetyl chloride, trichloroacryloyl chloride and hexachlorobutadiene. Mutat Res 117(1-2):21-29. http://doi.org/10.1016/0165-1218(83)90149-0.
- RePORTER. 2020. Hexachlorobutadiene. Research Portfolio Online Reporting Tools, National Institutes of Health. http://projectreporter.nih.gov/reporter.cfm. August 4, 2020.
- Roldan-Arjona T, Garcia-Pedrajas 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 6:199-205.
- Ruth JH. 1986. Odor thresholds and irritation levels of several chemical substances: A review. J Am Ind Hyg Assoc 47:A-142-A151.

- Saillenfait AM, Bonnet P, Guenier JP, et al. 1989. Inhalation teratology study on hexachloro-1,3butadiene in rats. Toxicol Lett 47(3):235-240. http://doi.org/10.1016/0378-4274(89)90141-0.
- Sakazaki H, Ueno H, Umetani K, et al. 2001. Immunotoxicological evaluation of environmental chemicals utilizing mouse lymphocyte mitogenesis test. J Health Sci 3:258-271.
- Sauer TC. 1981. Volatile organic compounds in open ocean and coastal surface waters. Org Geochem 3:91-101.
- Schiffmann D, Reichert D, Henschler D. 1984. Induction of morphological transformation and unscheduled DNA synthesis in Syrian hamster embryo fibroblasts by hexachlorobutadiene and its putative metabolite pentachlorobutenoic acid. Cancer Lett 23(3):297-305. http://doi.org/10.1016/0304-3835(84)90097-1.
- Schnellmann RG, Lock EA, Mandel LJ. 1987. A mechanism of S-(1,2,3,4,4-pentachloro-1,3butadienyl)-L-cysteine toxicity to rabbit renal proximal tubules. Toxicol Appl Pharmacol 90(3):513-521. http://doi.org/10.1016/0041-008x(87)90143-8.
- Schwetz BA, Smith FA, Humiston CG, et al. 1977. Results of a reproduction study in rats fed diets containing hexachlorobutadiene. Toxicol Appl Pharmacol 42(2):387-398. http://doi.org/10.1016/0041-008x(77)90016-3.
- Shah JJ, Singh HB. 1988. Distribution of volatile organic chemicals in outdoor and indoor air: A national VOCs data base. Environ Sci Technol 22(12):1381-1388. http://doi.org/10.1021/es00177a001.
- 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 HB, Sales LJ, Smith A, et al. 1980. Atmospheric measurements of selected hazardous organic chemicals. Menlo Park, CA: RI International. Project No. 7774:6.
- Staples CA, Werner AF, Hoogheem TJ. 1985. Assessment of priority pollutant concentrations in the United States using STORET database. Environ Toxicol Chem 4:131-142.
- Staples B, Howse ML, Mason H, et al. 2003. Land contamination and urinary abnormalities: Cause for concern? Occup Environ Med 60(7):463-467. http://doi.org/10.1136/oem.60.7.463.
- Stott WT, Quast JF, Watanabe PG. 1981. Differentiation of the mechanisms of oncogenicity of 1,4dioxane and 1,3-hexachlorobutadiene in the rat. Toxicol Appl Pharmacol 60(2):287-300. http://doi.org/10.1016/0041-008x(91)90232-4.
- Swain A, Turton J, Scudamore CL, et al. 2011. Urinary biomarkers in hexachloro-1:3-butadiene-induced acute kidney injury in the female Hanover Wistar rat; correlation of alpha-glutathione S-transferase, albumin and kidney injury molecule-1 with histopathology and gene expression. J Appl Toxicol 31(4):366-377. http://doi.org/10.1002/jat.1624.
- Swain A, Turton J, Scudamore C, et al. 2012. Nephrotoxicity of hexachloro-1:3-butadiene in the male Hanover Wistar rat; correlation of minimal histopathological changes with biomarkers of renal injury. J Appl Toxicol 32(6):417-428. http://doi.org/10.1002/jat.1727.
- Tabak HH, Quave SA, Mashni CI, et al. 1981. Biodegradability studies with organic priority pollutant compounds. J Water Pollut Control Fed 53:1503-1518.
- TRI18. 2020. TRI explorer: Providing access to EPA's toxics release inventory data. Washington, DC: Toxics Release Inventory, U.S. Environmental Protection Agency. http://www.epa.gov/triexplorer/. May 22, 2020.
- Vamvakas S, Kordowich FJ, Dekant W, et al. 1988. Mutagenicity of hexachloro-1,3-butadiene and its Sconjugates in the Ames test--role of activation by the mercapturic acid pathway in its nephrocarcinogenicity. Carcinogenesis 9(6):907-910. http://doi.org/10.1093/carcin/9.6.907.
- Van Duuren BL, Goldschmidt BM, Loewengart G, et al. 1979. Carcinogenicity of halogenated olefinic and aliphatic hydrocarbons in mice. J Natl Cancer Inst 63(6):1433-1439.
- Verschueren K. 1983. Hexachlorobutadiene. In: Handbook of environmental data on organic chemicals. New York, NY: Van Nostrand Reinhold Company, 717-718.

- WHO. 2010. Guidelines for indoor air quality: Selected pollutants. Geneva, Switzerland: World Health Organization. http://www.euro.who.int/__data/assets/pdf_file/0009/128169/e94535.pdf. April 25, 2012.
- WHO. 2017. Guidelines for drinking-water quality. Fourth edition incorporating the first addendum. Geneva, Switzerland: World Health Organization. http://apps.who.int/iris/bitstream/10665/254637/1/9789241549950-eng.pdf?ua=1. February 28, 2017.
- Wild D, Schutz S, Reichert D. 1986. Mutagenicity of the mercapturic acid and other S-containing derivatives of hexachloro-1,3-butadiene. Carcinogenesis 7(3):431-434. http://doi.org/10.1093/carcin/7.3.431.
- Wolf CR, Berry PN, Nash JA, et al. 1984. Role of microsomal and cytosolic glutathione S-transferases in the conjugation of hexachloro-1:3-butadiene and its possible relevance to toxicity. J Pharmacol Exp Ther 228(1):202-208.
- WQP. 2020. Water Quality Portal data: hexachlorobutadiene. National Water Quality Monitoring Council. https://www.waterqualitydata.us/portal/. August 4, 2020.
- Yang RS. 1988. Hexachloro-1,3-butadiene: Toxicology, metabolism, and mechanisms of toxicity. Rev Environ Contam Toxicol 101:121-137. http://doi.org/10.1007/978-1-4612-3770-9_4.
- Yang RS, Abdo KM, Elwell MR, et al. 1989. Subchronic toxicology studies of hexachloro-1,3-butadiene (HCBD) in B6C3F1 mice by dietary incorporation. J Environ Pathol Toxicol Oncol 9(4):323-332.
- Yip G. 1976. Survey of hexachloro-1,3-butadiene in fish, eggs, milk, and vegetables. J Assoc Off Anal Chem 59:559-561.
- Yurawecz MP, Dreifuss PA, Kamps LR. 1976. Determination of hexachloro-1,3-butadiene in spinach, eggs, fish, and milk by electron capture gas-liquid chromatography. J Assoc Off Anal Chem 59(3):552-561.
- Zanetti E, Chiusolo A, Defazio R, et al. 2010. Evaluation of aging influence on renal toxicity caused by segment-specific nephrotoxicants of the proximal tubule in rat. J Appl Toxicol 30(2):142-150. http://doi.org/10.1002/jat.1480.
- Zoeteman BCJ, Harmsen K, Linders JBHJ, et al. 1980. Persistent organic pollutants in river water and ground water of the Netherlands. Chemosphere 9(4):231-249. http://doi.org/10.1016/0045-6535(80)90080-6.