

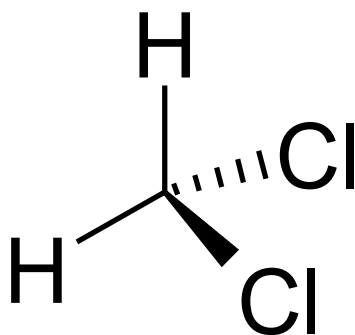


Final Risk Evaluation for Methylene Chloride

Systematic Review Supplemental File:

Data Extraction Tables for Environmental Fate and Transport Studies

CASRN: 75-09-2



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Table of Contents

Table 1. Biodegradation Study Summaries for Methylene Chloride	3
Table 2. Bioconcentration Study Summaries for Methylene Chloride.....	12
Table 3. Photolysis Study Summaries for Methylene Chloride.....	13
Table 4. Hydrolysis Study Summaries for Methylene Chloride.....	14
Table 5. Sorption Study Summaries for Methylene Chloride	16
Table 6. Study summaries for Other Fate Endpoints Related to Methylene Chloride.....	16
References.....	20

Table 1. Biodegradation Study Summaries for Methylene Chloride

Study Type (year)	Initial Concentration	Inoculum Source	(An)aerobic Status	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
Water								
Other; non-guideline	1 to 100 mg/L	Activated sludge, domestic (acclimated)	Aerobic	9-11 days	<u>Biodegradation parameter: CO₂ evolution, rate constants:</u> 1.42, 1.61 and 0.35h ⁻¹ at 1, 10 and 100 mg/L methylene chloride conc.	The reviewer agreed with this study's overall quality level.	(Dow Chem Co, 1982)	High
Other; similar to official Manometric respirometry test except for system material	50 mg/L	Activated sludge (adaptation not specified)	Aerobic	28 days	<u>Biodegradation parameter: chromatographic analyses and oxygen depletion:</u> 0%/28 d	The reviewer agreed with this study's overall quality level.	(Lapertot and Pulgarin, 2006)	High
OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test); Deviations: a) ammonium chloride was omitted from the medium to prevent oxygen consumption due to nitrification and b) activated sludge instead of an effluent/extract/mixture was used as inoculum.	5 mg/L	Activated sludge, domestic, non-adapted	Aerobic	28 days	<u>Biodegradation parameter: oxygen consumption:</u> 68%/28d; 10-day window passed; Readily biodegradable	The reviewer agreed with this study's overall quality level.	(ECHA, 2017b)	High
Other; Closed-Bottle Manometric Respirometry Test	10 mg/L; 100 mg/L; 1 mg/L	Activated sludge, domestic, adapted	Aerobic	50h	<u>Biodegradation parameter: CO₂ evolution:</u> 49%/50h; 65%/50h; 66%/50h	The reviewer agreed with this study's overall quality level.	(Klecka, 1982)	High
Other; non-guideline	90 µm	Other: Hanford soil microcosms	Aerobic	30h	<u>Biodegradation parameter: percent</u>	The reviewer agreed with	(Kim et al., 2000)	High

Study Type (year)	Initial Concentration	Inoculum Source	(An)aerobic Status	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
					dechlorination: 90-95%/30h; <u>Biodegradation parameter: test substance transformation rate:</u> 0.28 µmol/mg total suspended solids/hr; trend toward decreasing rates of transformation with increasing chlorine content was noted	this study's overall quality level.		
OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test); A "fast biodegradability test" was done initially, according to Polo et al. 2011. Compounds, including methylene dichloride, that were not determined to be biodegradable in adapted sludge according to that test underwent the OECD 302 B test.	100 mg/L	Activated sludge, domestic, adapted	Aerobic	28 days	<u>Biodegradation parameter: TOC reduction:</u> 2.4%/28d	The reviewer agreed with this study's overall quality level.	(Tobajas et al., 2016)	High
Other; Solid, liquid, and gas emissions from a municipal solid waste and sludge composting reactor were analyzed for methylene dichloride and other VOC. Based on		Activated sludge, domestic, adapted	Aerobic	5 days	<u>Biodegradation parameter: percent of total removal:</u> 4.5%/5d (the rest of the removal (95.5%) was due to volatilization)	The reviewer agreed with this study's overall quality level.	(Kim et al., 1995)	High

Study Type (year)	Initial Concentration	Inoculum Source	(An)aerobic Status	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
degradation rates from Howard 1991 and other system parameters, VOC concentrations were estimated in starting MSW.								
Other; non-guideline	33 kBq of [14C]methylene dichloride in study	Other: anaerobic, acetogenic mixed culture (methylene dichloride-degrading culture, with methylene dichloride as sole C source)	Anaerobic	approx. 32 hours (from figure)	<u>Biodegradation parameter: percent radiolabel in degradation products:</u> 58% ¹⁴ CO ₂ , 23% [14C]acetate, and 11% [14C]formate	The reviewer agreed with this study's overall quality level.	(Braus-Stromeyer et al., 1993)	High
Other; Static-culture flask-screening test	5 to 10 mg/L	Sewage, domestic, non-adapted	Aerobic	28 days (includes 7-day static incubation and 3 weekly subcultures)	<u>Biodegradation parameter: percent removal:</u> 100%/7 days; 100%/28 days; <u>Percent removal via volatilization:</u> 0% at 5°C ([methylene dichloride]: 5mg and 10mg); 25% at 25°C ([methylene dichloride]: 5mg); 6% at 25°C ([methylene dichloride]: 10 mg)	The reviewer agreed with this study's overall quality level.	(Tabak et al., 1981)	High
Other; Biodegradation in an estuarine environment	10 mmol/L	Natural water: marine	Aerobic	6 days	<u>Biodegradation parameter: mineralization:</u> 90%/6d	The reviewer agreed with this study's overall quality level.	(Krausova et al., 2006)	High

Study Type (year)	Initial Concentration	Inoculum Source	(An)aerobic Status	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
Other; Non-guideline repetitive addition of methylene dichloride	7.6 mg/L nominal; approx.. 7.1 mg/L after volatilization	Digested sludge	Anaerobic	93 days	<u>Biodegradation parameter: percent removal:</u> Variable (100%/10 days, 100%/20 days, 20%/60days for repeat additions)	The reviewer agreed with this study's overall quality level.	(Gossett, 1985)	High
Other; Non-guideline	6.3 to 9.5 mg/L	Other: mixed liquor samples from a laboratory reactor	Anaerobic	284d	<u>Biodegradation parameter: radiolabel detected in degradation products:</u> test material was consumed after lag period of about 10 days	The reviewer agreed with this study's overall quality level.	(Freedman and Gossett, 1991)	High
Other; non-guideline	1 mg/L	Other: ditch sludge mixed with sewage in Gifu South Korea culture, adapted to perchloro-ethylene	Anaerobic	7d	<u>Biodegradation parameter: percent removal:</u> 77%/7d	The reviewer agreed with this study's overall quality level.	(Chang et al., 1998)	High
Other; Anaerobic serum bottle test	Methylene dichloride is formed as a byproduct during the degradation of a mixture of chlorinated hydrocarbon.	Digested sludge	Anaerobic	60 days	<u>Biodegradation parameter: percent removal:</u> 100%/60d	The reviewer downgraded this study's overall quality rating. They noted: Methylene chloride is a byproduct and not the chemical being studied	(Long et al., 1993)	Medium

Study Type (year)	Initial Concentration	Inoculum Source	(An)aerobic Status	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
						in this report.		
Other; Aerobic batch fed reactor	Methylene dichloride is formed as a byproduct during the degradation of a mixture of chlorinated hydrocarbons.	Digested sludge	Aerobic	More than a year	<u>Biodegradation parameter: test reactor influent/effluent comparison:</u> Average reactor influent of methylene dichloride = 0 µg/L, effluent not detected.	The reviewer downgraded this study's overall quality rating. They noted: Methylene chloride is a byproduct and not the chemical being studied in this report.	(Long et al., 1993)	Medium
Other; Anaerobic batch fed reactor	Methylene dichloride is formed as a byproduct during the degradation of a mixture of chlorinated hydrocarbon.	Digested sludge	Anaerobic	More than a year	<u>Biodegradation parameter: test reactor influent/effluent comparison:</u> Average reactor influent of methylene dichloride = 0 µg/L, average reactor effluent of methylene dichloride = 2 µg/L.	The reviewer downgraded this study's overall quality rating. They noted: Methylene chloride is a byproduct and not the chemical being studied in this report.	(Long et al., 1993)	Medium
Other; Aerobic serum bottle test	Methylene dichloride is formed as a byproduct during the degradation of a mixture of chlorinated	Digested sludge	Aerobic	20 days	<u>Biodegradation parameter: percent removal:</u> <u>methane culture and phenol culture, respectively:</u> 100%/20d and	The reviewer downgraded this study's overall quality rating. They noted: Methylene	(Long et al., 1993)	Medium

Study Type (year)	Initial Concentration	Inoculum Source	(An)aerobic Status	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
	hydrocarbon.				100%/20d	chloride is a byproduct and not the chemical being studied in this report..		
Other; Specific chemical analysis used instructions from Federal Register and EPA approved procedures.	281 to 287 mg/L	Activated sludge, domestic (adaptation not specified)		8-hour retention time in activated sludge reactors; samples collected over 60-day testing period	<u>Biodegradation parameter: BOD5</u> ; 98.9-99.6%; <u>Biodegradation parameter: TOC</u> ; 87.9-89.4%; <u>Biodegradation parameter: COD</u> : 90.8-95.8%	The reviewer agreed with this study's overall quality level.	(Stover and Kincannon, 1983)	Medium
Other; Non-guideline aerobic biodegradation study	50 to 100 mg/L	Other: industrial wastewater treatment composed of Acinetobacter, Alcaligenes, Flavobacterium, and Pseudomonas and one yeast (Rhodotorula)	Aerobic	data at 6h reported	<u>Biodegradation parameter: oxygen uptake</u> : 4 mg/L of 50 mg/L dose left at 6h	The reviewer agreed with this study's overall quality level.	(Davis et al., 1981)	Medium
Other; non-guideline	~3.33 µg/mL	Other: muck from the Everglades	Anaerobic	30d	<u>Biodegradation parameter: half-life of test material</u> : 11 days	The reviewer downgraded this study's overall quality rating. They noted: Methylene	(Wood et al., 1981)	Medium

Study Type (year)	Initial Concentration	Inoculum Source	(An)aerobic Status	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
						chloride was studied as a transformation product.		
Other; inhibition of gas production to anaerobic sludge from an operating municipal sludge digester	0 to 100 mg/L	Sewage, domestic (adaptation not specified)	Anaerobic	48h	<u>Parameter: inhibition of gas production:</u> 20% inhibition at 3 mg/L and 50% at 50 mg/L after 48h	The reviewer downgraded this study's overall quality rating. They noted: Study describes inhibition of gas production not biodegradation rates or transformation pathways.	(Dow Chem Co, 1977)	Low
Other; Suspended-growth experiments using a biofilm enrichment culture	23.8 mg/L	Sewage, predominantly domestic, adapted	Aerobic	5 weeks	<u>Biodegradation parameter: removal of test material:</u> Removal was observed reducing methylene dichloride from 23.8 mg/L to 1 mg/L and remained consistent over a 5-week period	The reviewer downgraded this study's overall quality rating. They noted: Quantitative results were not reported. The reported qualitative results are not representative of natural environmental conditions.	(Rittmann and McCarty, 1980)	Low

Study Type (year)	Initial Concentration	Inoculum Source	(An)aerobic Status	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
Other; Anaerobic biodegradation with municipal solid waste, biowaste, and/or compost	5 mg/kg	Other	Anaerobic	Not specified; likely >130 days	<u>Biodegradation parameter: average degradation rate: MSW/biowaste (acid-phase):</u> dichloromethane not detected; <u>MSW/biowaste: (methane-phase):</u> 0.6 mg/m ³ /hr; MSW: 0.6 mg/m ³ /hr	The study did not include or report control groups to validate the system used.	(Deipser and Stegmann, 1997)	Unacceptable
	≥166 µg	Surface water muck	Not specified	13 days	<u>Biodegradation parameter: unspecified:</u> 68% degradation; <u>Biodegradation parameter: half-life:</u> < 10.9 days, <21.7 days required for complete decay of 200 µg of test material	Testing conditions were not reported and data provided were insufficient to interpret results.	(Dow Chem Co, 1980)	Unacceptable
Other; Non-guideline radiolabeled study		Digested sludge	Anaerobic	29 days approx.	<u>Biodegradation parameter: quantity methylene dichloride in carbon of CO₂:</u> 86-92%	The test substance identity could not be verified from the information provided.	(Gossett, 1985)	Unacceptable
Sediment								
Other; degradation tests by the marine nitrifying enrichment culture were performed in the Fluidized-	ca.79 to ca.84 µmol/L	Natural sediment: marine	Aerobic	31 hours	<u>Biodegradation parameter: percent removal:</u> 65%/31h in the presence of 2.3	The reviewer agreed with this study's overall quality	(Melin et al., 1996)	High

Study Type (year)	Initial Concentration	Inoculum Source	(An)aerobic Status	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
bed enrichment system					mM ammonia; 84%/31h in the absence of ammonia	level.		
Other; non-guideline study		Natural water/sediment: freshwater	Anaerobic	22d	<u>Biodegradation parameter: kinetics:</u> zero order kinetics, 0.58 (+/-0.04) mmol.L-1.day-1	The reviewer agreed with this study's overall quality level.	(Peijnenburg et al., 1998)	High

Table 2. Bioconcentration Study Summaries for Methylene Chloride

Study Type (year)	Initial Concentration	Species	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
OECD Guideline 305 (Bioconcentration: Flow-through Fish Test) - [before 2 Oct 2012]	25 to 250 µg/L	Cyprinus carpio	6 week (uptake)	<u>Bioconcentration parameter: BCF:</u> 2-5.4 (high), <6-40 (low) (carp)	The reviewer agreed with this study's overall quality level.	(ECHA, 2017a)	High
Other		Lemna minor (colonies), Groenlandia densa, Elodea canadensis, Fontinalis antipyretica, Physa fontinalis, Daphnia magna, Periphyton, Microphytes, Bacteria, Sediments, Hoagland medium, Quicksafe-N, Activated charcoal and oxyfluor.	15 days	<u>Bioconcentration parameter: [14C] radioactivity balance:</u> <0.1% remaining after 12-15 days (macrophytes, mollusks).	The reviewer agreed with this study's overall quality level.	(Thiébaud et al., 1994)	High

Table 3. Photolysis Study Summaries for Methylene Chloride

Study Type (year)	Wavelength Range	Duration	Result	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
Air						
QSAR; Photochemical Reaction with OH Radicals	Not applicable	Not applicable	<u>Photodegradation parameter: Indirect photolysis half-life (reaction with OH radicals):</u> 13.291 Days; <u>Photodegradation parameter: Dissipation half-life of parent compound:</u> 79.31 days	The reviewer agreed with this study's overall quality level.	(ECHA, 2017c)	High
Water						
EPA OTS 796.3700 (Direct Photolysis Rate in Water by Sunlight)	Sunlight	1 year	<u>Photodegradation parameter: DT50:</u> 21.1 months	The reviewer agreed with this study's overall quality level.	(Dilling et al., 1975)	High
Other: non-guideline	300 nm to 500 nm	1-2 min	<u>Photodegradation parameter: Indirect photolysis: hydroxyl radical reaction rate (kHO₂):</u> 2.2E7 M ⁻¹ s ⁻¹ to 5.8E7 M ⁻¹ s ⁻¹ ; <u>Photodegradation parameter: ozone decomposition rate:</u> 9(+/-6)E7 M ⁻¹ s ⁻¹	The reviewer agreed with this study's overall quality level.	(Haag and Yao, 1992)	High

Table 4. Hydrolysis Study Summaries for Methylene Chloride

Study Type (year)	pH	Temperature	Duration	Results	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
Nonguideline lab study in Pyrex tubes with light-proof container, shaken every 2-weeks		Approx. 25°C	1 year	<u>Hydrolysis parameter: half-life:</u> approx. 18 months; <u>Hydrolysis parameter: decomposition rate constant (in aerated water in the dark);</u> 0.039±0.008 mo ⁻¹ ; part of the reaction may have occurred in the vapor phase	The reviewer agreed with this study's overall quality level.	(Dilling et al., 1975)	High
Hydrolysis of methylene chloride under sub and super critical conditions	Not reported	450-600°C (246 bar)	Residence times ≥22sec	<u>Hydrolysis parameter: hydrolysis products:</u> formaldehyde, hydrochloric acid, carbon monoxide, hydrogen, and methanol; small amounts of methane (temps ≥ 562C); trace amounts of chloromethane, chloroform, trichloroethylene and isomers of dichloroethylene detected in vapor phase; reaction network	The reviewer downgraded this study's overall quality rating. Limited supporting data were included for the detection and identification of the transformation products, analytical methods were not detailed and neither a rate constant nor half-life were determined.	(Marrone et al., 1998)	Low

Study Type (year)	pH	Temperature	Duration	Results	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
				proposed for sub and supercritical conditions			
Other	Not reported	250-450°C	Not applicable	Hydrolysis parameter: rate constant: $k = 2.62 \pm 1.27 \times 10^{-2} \text{ s}^{-1}$ at 250°C; results at higher temps, in presence of oxygen and NaCl also reported. rate constant increased monotonically with temperature increase but dropped above the critical temperature in NaCl under 360°C small increase demonstrated	The temperature range is too high to be relevant to typical environmental conditions.	(Oshima et al., 2001)	Unacceptable

Table 5. Sorption Study Summaries for Methylene Chloride

Study Type (year)	Sorbent Source	Sorbent Qualities (clay/silt/sand, OC, pH)	Duration	Results	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
Migration through ground water	Subsoil: sandy clay or clayey sand till; 4-8 ft of sand at a depth of ca. 14 ft. Thinner sand seams in the upper zones of the underlying clay till. The uppermost sand aquifer is confined by sandy clay deposits.	Undisturbed samples of the clayey till were obtained 3-4 and 4-5 feet into that deposit and below the uppermost aquifer.		<u>Sorption parameter: ground water migration rate:</u> Methylene chloride was not detected in the upper sample, but was seen at 0.398 ppm in the lower sample; results were inconclusive and appreciable vertical migration is unsubstantiated by analytical results	The reviewer agreed with this study's overall quality level.	(AT&T, 1986)	Medium

Table 6. Study summaries for Other Fate Endpoints Related to Methylene Chloride

System	Study Type (year)	Results	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
WWTP	Other; Influxes and effluents of 27 Korean WWTPs screened for 22 chemicals.	<u>Parameter: WWTP Removal:</u> Average (estimate from graph): 88%	The reviewer agreed with this study's overall quality level.	(Lee et al., 2015)	High
>90% of the wastewater is composed of residential and commercial domestic sewage with <5% from industrial sources; most plants also receive runoff (18-40%) from the surrounding urban watershed	Analysis of NYC municipal wastewaters from 1989-1993	<u>Parameter: WWTP influent/effluent comparison:</u> Methylene chloride was detected in 39% of influent samples and 31% of effluent samples; the concentration range detected in influent was 6-	The reviewer agreed with this study's overall quality level.	(Stubin et al., 1996)	High

System	Study Type (year)	Results	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
		160 µg/L and effluent was 2-29 µg/L. Methylene chloride was one of five commonly observed volatiles detected; present in at least a third or more of all the samples analyzed.			
WWTP	Other; The influent and effluent concentrations of several VOCs were measured at two WWTPs and compared to a model developed by the authors that estimated VOC removal by volatilization, adsorption, and biodegradation based on the WWTP operational conditions.	<u>Parameter: WWTP removal:</u> _WWTP #1 predicted methylene dichloride biodeg. removal = 96.0%. WWTP #2 predicted biodeg. removal = 96.3%. activated sludge, industrial, adapted	The reviewer agreed with this study's overall quality level.	(Namkung and Rittmann, 1987)	Medium
Chemicals extracted from air by the trap were desorbed at 100C into the GC; relative concentrations in liquid were determined by withdrawing 5mL aliquots and stripping dissolved volatiles into the concentrator trap of the apparatus	Determination of air-water distribution coefficients as a function of temperature	<u>Parameter: air-water distribution coefficients:</u> were 61.4, 111.5, 121.5, 141.6, 157.1, and 161.9 at 1.9°C, 13.5°C, 15.7°C, 17.1°C, 22°, and 24.9°C respectively (overall estimated % error = ±4.8)	The reviewer agreed with this study's overall quality level.	(Leighton and Calo, 1981)	Medium
Glovebox with a 90%N2/10%H2 atmosphere in 250 mL glass bottles, with water or pH 7 buffer, iron powder and substrate (purged with N2)	Non-guideline	<u>Parameter: abiotic dechlorination:</u> methylene dichloride did not react with iron, manganese or in leachate	The reviewer agreed with this study's overall quality level.	(Schreier and Reinhard, 1994)	Medium
Processes governing solute transport	Volatilization rates and	<u>Parameter: mass flux to</u>	The reviewer	(Keefe et al.,	High

System	Study Type (year)	Results	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
and volatilization were quantified using measured field data and the OTIS (one-dimensional transport with inflow and storage)	half-lives for VOCs in constructed wastewater treatment wetlands	<u>the atmosphere:</u> 0.78g/d/hectare	agreed with this study's overall quality level.	(2004)	
Reactors were fed by actual wastewater from unnamed facilities that were spiked with various VOCs.	Field study	<u>Parameter: test reactor influent/effluent comparison:</u> influent: 225000-252000 (mean 238000) mg/L (SD 7770); effluent: 2-2100 (mean 940) mg/L (SD 664)	The reviewer downgraded this study's overall quality rating. They noted: Modeling study that did not report the related experimental details well.	(Soltanali and Hagani, 2008)	Low
Two to five compounds were run simultaneously in the same solution	N/A	<u>Parameter: evaporation half-life:</u> 25.2 min	The reviewer agreed with this study's overall quality level.	(Dilling, 1977)	High
Wastewater flow: 41.5, 21, 852, 2390, 499, 110 and 30.5 L/min. Volatile organic loading rate: 14.6, 4.6, 292, 286, 19, 5.29, 0.395 kg/L. Feed ratio: 9.6, 10.5, 28.8, NA, 14.7, 7.1, 1.4 kg/kg for plants A-G respectively	7 steam stripper operations are reported	<u>Parameter: percent removal from steam stripper operations:</u> >99.1 to >99.99% from plants A, B and C.	The reviewer agreed with this study's overall quality level.	(Blaney, 1989)	Medium
Amber covered bottles, N2 gas passed over, in a Forma model 1024 anaerobic work station	Nonbiological Reductive Dehalogenation Experiments	<u>Parameter: concentration after abiotic dechlorination (initial concentration: 1 mg/L):</u> after 0, 14, 27 and 43 days: reaction in redox buffer: 0.42, 0.39, 0.33 and 0.35 mg/L; reaction	The reviewer agreed with this study's overall quality level.	(Dow Chem Co, 1983)	High

System	Study Type (year)	Results	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
		in redox buffer + hematin: 0.36, 0.40, 0.33 and 0.35 mg/L			
Bottles were completely filled and capped to avoid loss of volatiles with solids and test compound; Primary sludge: 7 data points in isotherm test, primary slope = 1.08 and r ² = 0.75; Digested sludge: 6 data points in isotherm test, slope = 0.8 and r ² = 0.94	Sorption study	<u>Parameter, sorption coefficient K: Primary sludge and digested sludge:</u> 0.19 and 0.08, respectively	The reviewer agreed with this study's overall quality level.	(Dobbs et al., 1989)	High
Modified EPA method 624	Stripping of volatile organics from wastewater	<u>Parameter: WWTP influent/effluent comparison:</u> avg. influent and effluent: 13.2 and 9.0 µg/L in water and 1158 and 1038 µg/m ³ in off gas at skyway. influent and effluent: 7.2 and 9.5 µg/L in water and 449 and 333 µg/m ³ in off gas at highland creek; 1350 and 1499 µg/m ³ max off gas samples	The reviewer agreed with this study's overall quality level.	(Bell et al., 1993)	High
Samples taken from WWTP to evaluate air stripping and removal of methylene dichloride Highland Creek WWTP in Toronto, Ontario (pilot plant study also reported in the study)	Partitioning in activated sludge plant	<u>Parameter: test reactor gas-liquid phase partition coefficient:</u> avg. 142 (+/- 31) and 127 (+/-27) (ng/L)/(µg/L); 95% removal of methylene dichloride by full scale aeration basin	Study evaluates removal of methylene dichloride based on air stripping. The extent of air stripping is a function of the compound pchem properties and a	(Parker et al., 1993)	Unacceptable

System	Study Type (year)	Results	Comments	Affiliated Reference	Data Quality Evaluation Results of Full Study Report
			function of WWTP design and operation.		

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