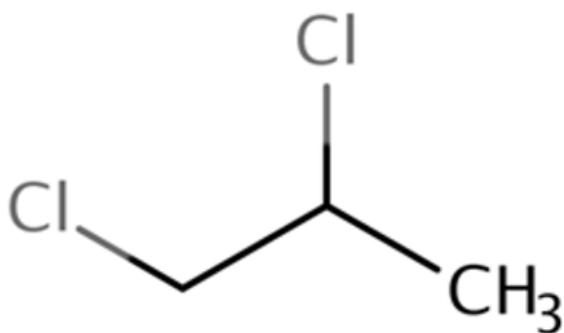

**Draft Data Quality Evaluation and Data Extraction Information for
Environmental Fate and Transport for
1,2-Dichloropropane**

Systematic Review Support Document for the Draft Risk Evaluation

CASRN: 78-87-5



May 2026

This supplemental file contains information regarding the data extraction and evaluation results for data sources that were considered for the *Draft Risk Evaluation for 1,2-Dichloropropane* that underwent systematic review. EPA used the TSCA systematic review process described in the *Draft Systematic Review Protocol Supporting TSCA Risk Evaluations for Chemical Substances* (also referred to as the '2021 Draft Systematic Review Protocol'). The systematic review steps are further described in the *Draft Systematic Review Protocol for 1,2-Dichloropropane*. EPA conducted data extractions and data quality evaluations based on author-reported descriptions and results; additional analyses (*e.g.*, statistical analyses) potentially conducted by EPA are not contained in this supplemental file. Additionally, the overall quality determination (OQD) for each reference represents the data as a whole for each study, and not for individual metric domains within a study.

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HERO ID	Reference	Page
Photolysis in Air		
660158	Klamt, A. (1993). Estimation of gas-phase hydroxyl radical rate constants of organic compounds from molecular orbital calculations. Chemosphere 26(7):1273-1289.	5
1733834	Mu, Y. J., Mellouki, A. (2001). Rate constants for the reactions of OH with chlorinated propanes. Physical Chemistry Chemical Physics 3(13):2614-2617.	7
Hydrolysis		
7681904	NCBI, (2020). PubChem Compound Summary for CID 6564, 1,2-Dichloropropane.	9
Photolysis in Water		
658815	Haag, W. R., Yao, C. C. D. (1992). Rate constants for reaction of hydroxyl radicals with several drinking water contaminants. Environmental Science & Technology 26(5):1005-1013.	11
2803618	Shell Oil, (1988). Photodegradation of organic halides.	13
Photolysis in Soil		
Biodegradation in Water		
5463450	Adam, A. M., Veenstra, J. N. (1993). Effects of selected environmental parameters on the biodegradation of 1,2-dichloropropane. 48:261-278.	15
2803606	Confidential, (1983). Biodegradability tests with chlorinated compounds with cover letter.	17
10610565	Dow Chemical, (2003). [Redacted] Evaluation of optimal electron donor and nutrients for the propagation and maintenance of a microbial culture that degrades nearly saturating concentrations of chlorinated ethenes.	19
10610566	Dow Chemical, (2003). [Redacted] Evaluation of the inherent biodegradability of 1,2-dichloropropane (propylene dichloride) under aerobic conditions.	21
6629413	NCBI, (2020). PubChem database: compound summary: 1,2-dichloropropane.	23
7681904	NCBI, (2020). PubChem Compound Summary for CID 6564, 1,2-Dichloropropane.	25
5160041	OECD, (2006). SIDS Initial Assessment Report: 1,2-Dichloropropane. :219.	27
2803599	Shell Research, (1984). 1,2-Dichloropropane: an assessment of ready biodegradability with cover letter dated 103086.	29
9861	Tabak, H. H., Quave, S. A., Mashni, C. I., Barth, E. F. (1981). Biodegradability studies with organic priority pollutant compounds. Journal of Water Pollution Control Federation 53(10):1503-1518.	31
Biodegradation in Sediment		
10609984	Dow Chemical, (2004). [Redacted] Twins Inn site remediation treatability study.	33
1172599	Hauck, R., Hegemann, W. (2000). Anaerobic degradation of 1,2-dichloropropane in batch and continuous culture. Water Science and Technology 41(12):7-13.	38
2300820	Löffler, F. E., Champine, J. E., Ritalahti, K. M., Sprague, S. J., Tiedje, J. M. (1997). Complete reductive dechlorination of 1,2-dichloropropane by anaerobic bacteria. Applied and Environmental Microbiology 63(7):2870-2875.	40
6629413	NCBI, (2020). PubChem database: compound summary: 1,2-dichloropropane.	42

1,2-Dichloropropane

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1333014	Roy F. Weston Inc, (1980). Characterization and fate of the discharge of priority pollutants from the Rohm and Haas Philadelphia plant into the Delaware low level collector of the Philadelphia sewer.	44
Biodegradation in Soil		
5431734	Boesten, J., Vanderpas, L. J. T., Leistra, M., Smelt, J. H., Houx, N. W. H. (1992). Transformation of 14C-labelled 1,2-dichloropropane in water-saturated subsoil materials. Chemosphere 24(8):993-1011.	46
6629413	NCBI, (2020). PubChem database: compound summary: 1,2-dichloropropane.	52
4840127	Roberts, T. R., Stoydin, G. (1976). The degradation of (Z)- and (E)-1,3-dichloropropenes and 1,2-dichloropropane in soil. Pest Management Science 7(4):325-335.	54
2797868	Tesoriero, A. J., Löffler, F. E., Liebscher, H. (2001). Fate and origin of 1,2-dichloropropane in an unconfined shallow aquifer. Environmental Science & Technology 35(3):455-461.	60
Aquatic Bioconcentration		
5160041	OECD, (2006). SIDS Initial Assessment Report: 1,2-Dichloropropane. :219.	64
Terrestrial Bioconcentration		
Adsorption and Desorption		
2799812	Ali, S. M., Bowes, G. W., Cohen, D. B. (1986). Occurrence and fate of 1,2-dichloropropane in California, USA ground water and soil samples. Abstracts of Papers of the American Chemical Society 191:14-ENVR.	66
18016	Chiou, C. T., Peters, L. J., Freed, V. H. (1979). A physical concept of soil-water equilibria for nonionic organic compounds. Science 206(4420):831-832.	68
645740	Poole, S. K., Poole, C. F. (1999). Chromatographic models for the sorption of neutral organic compounds by soil from water and air. Journal of Chromatography A 845(1-2):381-400.	70
2799279	Van Dijk, H. (1980). Dissipation rates in soil of 1,2-dichloropropane and 1,3- and 2,3-dichloropropenes. Pesticide Science 11(6):625-632.	72
Miscellaneous		
4912133	Buszka, P. M., Yeskis, D. J., Kolpin, D. W., Furlong, E. T., Zaugg, S. D., Meyer, M. T. (2009). Waste-indicator and pharmaceutical compounds in landfill-leachate-affected ground water near Elkhart, Indiana, 2000-2002. Bulletin of Environmental Contamination and Toxicology 82(6):653-659.	74
1009775	Kincannon, D. F., Stover, E. L., Nichols, V., Medley, D. (1983). Removal mechanisms for toxic priority pollutants. Journal of Water Pollution Control Federation 55(2):157-163.	76
4214180	Monsanto, (1987). Monsanto Pensacola plant ground water assessment feasibility study with 19 chemicals with attachments and cover letter dated 121887.	78
1265686	(1982). Fate of Priority Pollutants in Publicly Owned Treatment Works, Volume I.	80
1629033	Shell Oil, (1986). Fate of some specific compounds in the Norco chemical biotreater and their effect on the outcome of effluent bioassays.	82
2803579	Shell Oil, (1976). Residues of the major components of D-D* and primary metabolites in soil from Germany.	84
5468013	Stover, E. L., Fazel, A., Kincannon, D. F. (1985). Powdered activated carbon and ozone-assisted activated sludge treatment for removal of toxic organic compounds. Ozone: Science and Engineering 7(3):191-203.	86
647200	Washington, J. W. (1996). Gas partitioning of dissolved volatile organic compounds in the vadose zone: Principles, temperature effects and literature review. Groundwater 34(4):709-718.	91
Other Properties		
List of Abbreviations and Acronyms for Data Quality Evaluation and Extraction Tables		93

Study Citation:	Klamt, A. (1993). Estimation of gas-phase hydroxyl radical rate constants of organic compounds from molecular orbital calculations. Chemosphere 26(7):1273-1289.
OECD Harmonized Template:	Photolysis in Air
HERO ID:	660158

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; Structural Estimation
Confidentiality, Type, Guideline	None; QSAR; other: Estimation of gas-phase hydroxyl radical rate constants using molecular orbital calculations
Solvent, Reactivity, Storage, Stability	NA; NA; NA; NA
Radiolabel, Source, State, Purity	NA; NA; NA; NA Notes: Estimation based on functional groups in chemical
Duration and Test Temperature	Not reported; Not reported
Light Source, Intensity, and additional light details	Not reported; Not reported; Not reported
Source Wavelength Lower and Upper	Not reported; Not reported
Test Details and Control	OH rate constants determined using quantitative relationships between MO-based descriptors for electronic properties of reaction sites and rate constants for OH-radical reaction mechanisms.; Not reported
Initial Concentration, Reference Compound	Not reported; Not reported; Experimental data for comparison
Substance Wavelength Lower and Upper	Not reported; Not reported
Direct Quantum Yield Results, Direct Half Life by Loss Lower and Upper	Not reported; Not reported; Not reported
Indirect Type Results, Indirect Rate Constant Lower and Upper	Hydroxyl radical rate constant; 0.72; Not reported
Method Details Results and Products	Overall rate constant for reaction with OH radical; Not reported
Details Results	
Parameter Value and Parameter Results	Not reported; Rate constant units: 10E-12 cm ³ /molecule/s
Reference Substance Results, Percent Degradation Results and Standard	0.44; Not reported; uncertainty factor = 1.57; r-squared >0.95
Deviation Results	
Results Remarks, Sample time Results, Results Details	Not reported; Not reported; Not reported

EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was definitively identified.
	Metric 2:	Test Substance Purity	N/A	The metric is not applicable to this study type.
Domain 2: Test Design	Metric 3:	Study Controls	N/A	The metric is not applicable to this study type.
	Metric 4:	Test Substance Stability	N/A	The metric is not applicable to this study type.

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Study Citation:	Klamt, A. (1993). Estimation of gas-phase hydroxyl radical rate constants of organic compounds from molecular orbital calculations. Chemosphere 26(7):1273-1289.			
OECD Harmonized Template:	Photolysis in Air			
HERO ID:	660158			
		EVALUATION		
Domain	Metric	Rating	Comments	
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	N/A	The metric is not applicable to this study type.
	Metric 6:	Testing Conditions	N/A	The metric is not applicable to this study type.
	Metric 7:	Testing Consistency	N/A	The metric is not applicable to this study type.
	Metric 8:	System Type and Design	High	This metric met the criteria for high confidence as expected for this type of study.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to this study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed or reported the intended outcome of interest.
	Metric 12:	Test Substance Purity	N/A	The metric is not applicable to this study type.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	The metric is not applicable to this study type.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	High	This metric met the criteria for high confidence as expected for this type of study.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	Statistical analysis reported and acceptable.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The study results were reasonable.
	Metric 18:	QSAR Models	High	The QSAR model had a defined, unambiguous endpoint and parameters of model performance were reported.
Overall Quality Determination			High	

Study Citation:	Mu, Y. J., Mellouki, A. (2001). Rate constants for the reactions of OH with chlorinated propanes. Physical Chemistry Chemical Physics 3(13):2614-2617.
OECD Harmonized Template:	Photolysis in Air
HERO ID:	1733834

EXTRACTION

Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, Type, Guideline	None; Experimental; other: Reaction with hydroxy radicals generated by laser-induced photolysis
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NR; Fluka; NR; >99% Notes: used without further purification but degassed by means of an ultrasonic bath
Duration and Test Temperature	10 µ-seconds to 10 m-seconds; 298 K
Light Source, Intensity, and additional light details	laser-induced fluorescence; 2-20 mJ/cm ² ; Not applicable
Source Wavelength Lower and Upper	282 nm; Not applicable
Test Details and Control	OH radicals were excited by using a Nd:YAG-pumped frequency doubled dye laser at 282 nm.; Not reported
Initial Concentration, Reference Compound	initial OH concentration was less than 2E+11 molecule/cm ³ ; initial organic reactant was in the range of 2E+14 to 1.3E+16 molecules/cm ³ Not reported; Not reported
Substance Wavelength Lower and Upper	Not reported; Not reported
Direct Quantum Yield Results, Direct Half Life by Loss Lower and Upper	Not reported; Not reported; Not reported
Indirect Type Results, Indirect Rate Constant Lower and Upper	Reaction with hydroxyl radicals produced by photolysis of H ₂ O ₂ at 248 nm (KrF excimer laser); k ₁ = 4.6x10 ⁻¹³ cm ³ /molecule.s; Not reported
Method Details Results and Products	Not reported; OH reactions with chloropropanes proceed by net H-atom abstraction from C-H bonds.
Details Results	
Parameter Value and Parameter Results	26 days; approximate tropospheric lifetime for 12-hour day and [OH] = 2E+6 molecules/cm ³
Reference Substance Results, Percent Degradation Results and Standard	Not reported; Not applicable; ±0.6 (for rate constant)
Deviation Results	
Results Remarks, Sample time Results, Results Details	Reactants concentrations were calculated from their mass flow rates, the temperature and the pressure in the reaction cell; Not reported; Not reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Test Substance			
Metric 1:	Test Substance Identity	High	The test substance was identified by chemical name.
Metric 2:	Test Substance Purity	High	The test substance purity was reported. The test substance source was not reported.
Domain 2: Test Design			
Metric 3:	Study Controls	N/A	The metric is not applicable to this study type.
Metric 4:	Test Substance Stability	High	The test substance stability, homogeneity, preparation or storage conditions were not reported; however, these factors were not likely to influence the test substance or were not likely to have a substantial impact on study results.

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Study Citation:		Mu, Y. J., Mellouki, A. (2001). Rate constants for the reactions of OH with chlorinated propanes. Physical Chemistry Chemical Physics 3(13):2614-2617.		
OECD Harmonized Template:		Photolysis in Air		
HERO ID:		1733834		
Domain		Metric	EVALUATION Rating	Comments
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	High	This metric met the criteria for high confidence as expected for this type of study.
	Metric 7:	Testing Consistency	High	This metric met the criteria for high confidence as expected for this type of study.
	Metric 8:	System Type and Design	High	This metric met the criteria for high confidence as expected for this type of study.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to this study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed or reported the intended outcome of interest.
	Metric 12:	Test Substance Purity	High	This metric met the criteria for high confidence as expected for this type of study.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	No confounding variables were noted.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Some data and half-life data was not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	This metric met the criteria for high confidence as expected for this type of study.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The study results were reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.
Overall Quality Determination			High	

Study Citation:	NCBI, (2020). PubChem Compound Summary for CID 6564, 1,2-Dichloropropane.			
OECD Harmonized Template:	Hydrolysis			
HERO ID:	7681904			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	78-87-5; Not Reported			
Confidentiality, Type, Guideline	Not Reported; Not Reported; Not Reported			
Solvent, Reactivity, Storage, Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Buffer, Test Temperature, Number of Replicates	Not Reported; Not Reported; Not Reported			
Positive Controls and Negative Controls	Positive: Not Reported; Negative: Not Reported			
pH and Duration	Not Reported; Not Reported			
Sampling Frequency and Test Setup	Not Reported; Not Reported			
Concentration	Not Reported			
Analytical Method, Analytical Details, and Statistics	Not Reported; Not Reported; Not Reported			
Transformation Products	Not Reported			
Reference Substance and Reference Substance Results	Not Reported; Not Reported			
Percent Recovery, Hydrolysis Rate Constant, and Half-life	Not Reported; Not Reported; 6 months to several years			
Results Remarks	Not Reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance				
	Metric 1:	Test Substance Identity	High	The test substance was identified.
	Metric 2:	Test Substance Purity	N/A	Rating of this metric is not applicable to this secondary source.
Domain 2: Test Design				
	Metric 3:	Study Controls	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 4:	Test Substance Stability	N/A	Rating of this metric is not applicable to this secondary source.
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 6:	Testing Conditions	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 7:	Testing Consistency	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 8:	System Type and Design	N/A	Rating of this metric is not applicable to this secondary source.
Domain 4: Test Organisms				
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Study Citation:	NCBI, (2020). PubChem Compound Summary for CID 6564, 1,2-Dichloropropane.			
OECD Harmonized Template:	Hydrolysis			
HERO ID:	7681904			
Domain		Metric	EVALUATION Rating	Comments
	Metric 9:	Outcome Assessment Methodology	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 10:	Sampling Methods	N/A	Rating of this metric is not applicable to this secondary source.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 12:	Test Substance Purity	N/A	Rating of this metric is not applicable to this secondary source.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	Rating of this metric is not applicable to this secondary source.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	Rating of this metric is not applicable to this secondary source.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Low	Very limited detail. However, data is from a publicly available, peer-reviewed database that provides references to a recognized data collection.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this data/source.

Overall Quality Determination**Medium**

* Related References: Primary source (not available at time of extraction): Callahan MA et al; Water-Related Environ Fate of 129 Priority Pollut Vol. II Washington, DC: USEPA-440/4-79-029B (1979). [Note: HERO ID 5926114 is HSDB duplicate which the pChem values are reported under]

Study Citation:	Haag, W. R., Yao, C. C. D. (1992). Rate constants for reaction of hydroxyl radicals with several drinking water contaminants. Environmental Science & Technology 26(5):1005-1013.
OECD Harmonized Template:	Photolysis in Water
HERO ID:	658815

EXTRACTION

Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, Type, Guideline	None; Experimental; EPA OTS 796.3700 (Direct Photolysis Rate in Water by Sunlight): Non-guideline
Solvent, Reactivity, Storage, Stability	Milli-Q water; NR; NR; Hydrolysis not considered a concern
Radiolabel, Source, State, Purity	No; NR; NR; reagent grade or better
Duration and Test Temperature	1-2 minutes; 24±1°C
Light Source, Intensity, and additional light details	Varian Eimac R300-3 (300 W) xenon lamp.; 700 W/m2 (about 4 times the intensity of spring, noon sunlight at 38O N); Light measured by LI-COR Model LI-1800/12 spectroradiometer
Source Wavelength Lower and Upper	300 nm; 500 nm
Test Details and Control	0.1M H2O2 added to Fe(CIO4)3 substrate and reference in aqueous solution in presence of air. Photolyzed in borosilicate glass tube 30 cm away from lamp for 1-2 min.; Not reported
Initial Concentration and Reference Compound	0.12 mM; 1,2-dibromo-3-chloropropane (DBCP)
Substance Wavelength Lower and Upper	Not reported; Not reported
Direct Quantum Yield Results, Direct Half Life by Loss Lower and Upper	Not reported; Not reported; Not reported
Indirect Rate Constant Lower and Upper	Not reported; 3.8E8 M-1sec-1
Method Details Results and Products	photo-Fenton; GC with Electron capture detector; Not reported
Details Results	
Parameter Value and Parameter Results	other; hydroxyl radical reaction rate (kHO.)
Reference Compound, Reference	1,2-dibromo-3-chloropropane (DBCP); 4.2E8 M-1s-1; Not reported; Not reported
Substance Results, Percent Degradation Results and Standard Deviation Results	
Results Remarks, Sample time Results, Results Details	Not reported; Not reported; Not Reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Test Substance			
	Metric 1: Test Substance Identity	High	The test substance was identified by name and CASRN.
	Metric 2: Test Substance Purity	High	The purity of the test substance was reported.
Domain 2: Test Design			
	Metric 3: Study Controls	N/A	The study did not require concurrent control groups.
	Metric 4: Test Substance Stability	High	The test substance stability was reported.
Domain 3: Test Conditions			
	Metric 5: Test Method Suitability	High	The test method was suitable for the test substance.

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Study Citation:	Haag, W. R., Yao, C. C. D. (1992). Rate constants for reaction of hydroxyl radicals with several drinking water contaminants. Environmental Science & Technology 26(5):1005-1013.			
OECD Harmonized Template:	Photolysis in Water			
HERO ID:	658815			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 6:	Testing Conditions	High	Testing conditions were monitored, reported, and appropriate for the method.
	Metric 7:	Testing Consistency	High	Test conditions were consistent.
	Metric 8:	System Type and Design	High	The system type and design was appropriate.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to this study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed or reported the intended outcome of interest.
	Metric 12:	Test Substance Purity	Medium	Minor limitations were identified in sampling methods of the outcome of interest were reported; however, the limitations were not likely to have a substantial impact on results.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	High	Sources of variability and uncertainty were considered and accounted for in data evaluation.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	The target chemical concentrations, extraction efficiency, percent recovery, or mass balance were not reported; however, these omissions were not likely to have a substantial impact on study results.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	Statistical methods or kinetic calculations were clearly described and address the dataset.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	Reported values were within expected range.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.
Overall Quality Determination		High		

Study Citation:	Shell Oil, (1988). Photodegradation of organic halides.
OECD Harmonized Template:	Photolysis in Water
HERO ID:	2803618

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-dichloropropane
Confidentiality, Type, Guideline	none; experimental; EPA OTS 796.3700 (Direct Photolysis Rate in Water by Sunlight)
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NR; NR; NR; NR Notes: NR
Duration and Test Temperature	up to 2 hours; not reported
Light Source, Intensity, and additional light details	low pressure mercury lamps; 2 watts; not reported
Source Wavelength Lower and Upper	254 nm; not reported
Test Details and Control	Irradiation in 50 mL capped glass bottles with stirring.; not reported
Initial Concentration and Reference Compound	6 and 23 mg/L; not reported
Substance Wavelength Lower and Upper	not reported; not reported
Direct Quantum Yield Results, Direct Half Life by Loss Lower and Upper	not reported; not reported; not reported
Indirect Rate Constant Lower and Upper	not reported; not reported
Method Details Results and Products	GC-FID detection limit for 1,2-DCP = 0.2 mg/L; total organic chlorides analysis via EPA method 9020; chloride ion
Details Results	
Parameter Value and Parameter Results	ca. 100%/25-90 minutes; disappearance of test substance
Reference Compound, Reference	not reported; not reported; At 23 mg/L: > 1 mg/L test substance remained after 60 minutes; nearly 100% degradation after 90 minutes (based on inorganic chloride release). At 6.0 mg/L: 95% removal observed after 25 minutes; nearly 100% of chlorine was inorganic chloride.; not reported
Substance Results, Percent Degradation Results and Standard Deviation Results	
Results Remarks, Sample time Results, Results Details	not reported; 60 and 90 minutes; not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified definitively.
	Metric 2:	Test Substance Purity	Medium	The test substance source was not reported; however, this was not likely to have a substantial impact on the study results.
Domain 2: Test Design	Metric 3:	Study Controls	Low	Concurrent control groups were not included.
	Metric 4:	Test Substance Stability	Medium	The test substance stability, homogeneity, preparation or storage conditions were not reported; however, these factors were not likely to influence the test substance or were not likely to have a substantial impact on study results.
Domain 3: Test Conditions				

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Study Citation:		Shell Oil, (1988). Photodegradation of organic halides.		
OECD Harmonized Template:		Photolysis in Water		
HERO ID:		2803618		
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	Medium	There were omissions in testing conditions.
	Metric 7:	Testing Consistency	N/A	The metric is not applicable to this study.
	Metric 8:	System Type and Design	High	The system was appropriate.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to this study.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed the intended outcome of interest.
	Metric 12:	Test Substance Purity	Low	Limited detail regarding sampling methods.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Low	Sources of variability and uncertainty in the measurements were not evaluated.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	The target chemical and transformation product concentrations, extraction efficiency, percent recovery, or mass balance were not reported; however, these omissions were not likely to have a substantial impact on study results.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	The metric is not applicable to this study.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Medium	The study results were reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study.

Overall Quality Determination**Medium**

Study Citation:	Adam, A. M., Veenstra, J. N. (1993). Effects of selected environmental parameters on the biodegradation of 1,2-dichloropropane. 48:261-278.		
OECD Harmonized Template:	Biodegradation in Water		
HERO ID:	5463450		
EXTRACTION			
Parameter	Data		
CASRN and Test Material	78-87-5; 1,2-DCP		
Confidentiality, EndPoint, Type, Guideline	None; screening test; Experimental; other: Non-guideline biodegradation study		
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR		
Radiolabel, Source, State, Purity	NR; NR; NR; NR		
Blank and Control	Phosphate buffer controls; Not applicable		
Oxygen and Inoculum	aerobic; natural water: groundwater aquifer material from the OSU Agronomy Station		
Duration, Parameter, System, and Sampling Frequency	0 to 4 hours; test mat.: 15 mL glass microcosms; Not reported		
pH Adjusted and pH	Not Reported; 7.4		
Concentration	732 - 4907 µg/L		
Composition and Test Temperature	0.1 M phosphate buffer; 25°C		
CEC, Water Aeration Dilution, Continuous Dark-ness, and Other Design	Not reported; DO at 6.0, 8.2, and 16.0 mg/L; Assessed in preliminary experiments; no abiotic loss was noted in experiment		
Results Details Method, Results per Degradation Parameter, and	GC-ECD 63Ni; Loss of test substance; Not Reported		
Direct Quantum Yield Results			
Results Value, Results Standard Deviation, Re-sults Sample Time, and Results Reference Sub-stance Compartments	11 to 98% removal of test substance in 4 hours; 0 to 13; 4 hours; Not reported		
Results Remarks and Results Details	It is not clear if all studies contained resting cells of a pure culture; Kinetic constants determined for pure culture experiments		
Results Mean Total Recovery and Results per Re-covery	Yes; 82-99%		
EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Test Substance			
Metric 1:	Test Substance Identity	High	The test substance was identified by chemical name.
Metric 2:	Test Substance Purity	Medium	The test substance source and purity were not reported but were verified by analytical means.
Domain 2: Test Design			
Metric 3:	Study Controls	Medium	Some concurrent control group details were not included; however, the lack of data was not likely to have a substantial impact on study results.
Metric 4:	Test Substance Stability	Medium	The test substance stability, homogeneity, preparation or storage conditions were not reported; however, these factors were not likely to influence the test substance or were not likely to have a substantial impact on study results.
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Study Citation:	Adam, A. M., Veenstra, J. N. (1993). Effects of selected environmental parameters on the biodegradation of 1,2-dichloropropane. 48:261-278.			
OECD Harmonized Template:	Biodegradation in Water			
HERO ID:	5463450			
Domain	Metric	EVALUATION		Comments
		Rating		
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	Medium	The test method was suitable for the test substance with minor deviations.
	Metric 6:	Testing Conditions	High	Testing conditions were monitored, reported, and appropriate for the method.
	Metric 7:	Testing Consistency	Low	There were inconsistencies in test conditions across samples or study groups that are likely to have a substantial impact on results.
	Metric 8:	System Type and Design	High	The system type and design were capable of appropriately maintaining substance concentrations based on preliminary tests.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	Low	The test organism, species, or inoculum source were not clearly reported for all replicates.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Low	Deficiencies in the outcome assessment reporting were likely to have a substantial impact on results.
	Metric 12:	Test Substance Purity	Low	Details regarding sampling methods of the outcomes were not fully reported, and the omissions were likely to have a substantial impact on study results.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	Sources of variability and uncertainty in the measurements, and statistical techniques were considered and accounted for in data evaluation.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	High	The target chemical concentrations and extraction efficiency were reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	Statistical methods or kinetic calculations were clearly described and address the datasets.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Low	Due to limited information, evaluation of the reasonableness of the study results was not possible.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.
Overall Quality Determination			Low	

Study Citation:	Confidential, (1983). Biodegradability tests with chlorinated compounds with cover letter.
OECD Harmonized Template:	Biodegradation in Water
HERO ID:	2803606

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; other; Experimental; other: OECD Biodegradation Confirmatory Test
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NR; NR; NR; NR
Blank and Control	Not reported; Not reported
Oxygen and Inoculum	aerobic; activated sludge (adaptation not specified): Activated sludge suspended by continuous agitation instead of aeration to reduce stripping loss
Duration, Parameter, System, and Sampling Frequency	10 weeks; test mat.: Not reported; 3, 24 hr, 10 wk
pH Adjusted and pH	Not Reported; Not reported
Concentration	25 mg/L
Composition and Test Temperature	Chloride free synthetic wastewater, BOD5=300 mg/L; Not reported
CEC, Water Aeration Dilution, Continuous Dark-ness, and Other Design	Not reported; Not reported; Not Reported; Chloride free synthetic wastewater prepared with demineralized water with propylene glycol as substrate and other chlorides replaced with sulfates. Nitrate added for aerobic metabolism instead of system aeration, to prevent volatile loss.
Results Details Method, Results per Degradation Parameter, and Direct Quantum Yield Results	Aqueous samples concentrated by rotary evaporator, chloride concentration determined potentiographically.; Chloride release; Not Reported
Results Value, Results Standard Deviation, Re-sults Sample Time, and Results Reference Sub-stance Compartments	0%; Not Reported; 10 week; Not reported
Results Remarks and Results Details	Essentially no chloride release and therefore no biodegradation.; Not reported
Results Mean Total Recovery and Results per Re-covery	Not reported; Not reported

EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified by name and CASRN.
	Metric 2:	Test Substance Purity	Medium	The source and purity of the test substance was not reported.
Domain 2: Test Design	Metric 3:	Study Controls	Medium	Controls were not explicitly included.
	Metric 4:	Test Substance Stability	Medium	Test substance starting concentration was reported, storage or other details were not included.
Domain 3: Test Conditions				

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Study Citation:	Confidential, (1983). Biodegradability tests with chlorinated compounds with cover letter.			
OECD Harmonized Template:	Biodegradation in Water			
HERO ID:	2803606			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance and followed OECD guidelines.
	Metric 6:	Testing Conditions	Medium	Many testing conditions were not reported (temperature, pH, inoculum source).
	Metric 7:	Testing Consistency	High	Test set up was consistent across samples.
	Metric 8:	System Type and Design	N/A	Not applicable.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	Medium	The inoculum was reported very generally.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to the study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology was appropriate for determining biodegradation.
	Metric 12:	Test Substance Purity	High	Sampling methods were appropriate, the sampling frequency was acceptable.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Limit study details were reported.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	The analytical method was reported generally, no details on precision or accuracy. Raw data not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	Statistical or kinetic calculations were not conducted.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Medium	Limited study details were reported, it's not clear which OECD guideline the study is following, the plausibility of the results cannot be well supported.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.
Overall Quality Determination		Medium		

Study Citation:	Dow Chemical, (2003). [Redacted] Evaluation of optimal electron donor and nutrients for the propagation and maintenance of a microbial culture that degrades nearly saturating concentrations of chlorinated ethenes.
OECD Harmonized Template:	Biodegradation in Water
HERO ID:	10610565

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; other; experimental; other: Non-guideline study: microbial reductive dechlorination
Solvent, Reactivity, Storage, Stability	autoclaved Milli-Q water (oxygen free); NR; NR; NR
Radiolabel, Source, State, Purity	NR; Sigma-Aldrich, St Louis, Missouri; liquid; >99.9% Notes: 1,2-DCP
Blank and Control	Sterile control (4% HgCl ₂); not reported
Oxygen and Inoculum	anaerobic; anaerobic microorganisms: Mixed microbial culture isolated from landfill soil at the Kelly Air Force Base. Inoculum was prepared using 160 mL Revised Anaerobic Mineral Medium (RAMM) inoculated with 5 mL mixed microbial culture and amended with 650 mg/L sodium acetate, 250 mg/L methanol and 1.6 g/L yeast extract, and spiked with 10 µL TCE in a sealed vessel under anaerobic conditions.
Duration, Parameter, System, and Sampling Frequency	36 weeks; test mat.: anaerobic glove box; 0, 14, 28, 56, 84, 140, and 252 days
pH Adjusted and pH Concentration	not reported; not reported = 10 mg/L
Composition and Test Temperature	Revised Anaerobic Mineral Medium (RAMM); room temperature 20-25C
CEC, Water Aeration Dilution, Continuous Darkness, and Other Design	not reported; not reported; not reported; likely yes; Mixed TCE, PCE, and 1,2-DCP spike solutions in Milli-Q water were added to the RAMM, electron donor (lactate, glutamate, or propylene glycol) and yeast extract test vials and inoculated with microbial culture.
Results Details Method, Results per Degradation Parameter, and Direct Quantum Yield Results	GC-FID; Loss of test material; Not applicable
Results Value, Results Standard Deviation, Results Sample Time, and Results Reference Substance Compartments	Not applicable; Not applicable; Not applicable; Not applicable
Results Remarks and Results Details	No statistically significant loss of 1,2-DCP could be attributed to reductive dechlorination; the minimal loss observed was attributed to abiotic processes such as volatilization and/or adsorption.; At the 95% confidence level the rate of biodegradation was not greater than the rate of loss in the abiotic control; amendments with ED and YE did not enhance microbial degradation of the test material
Results Mean Total Recovery and Results per Recovery	Not reported; Not reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High The test substance was identified definitively.
	Metric 2:	Test Substance Purity	High The source and purity of the test substance were reported.
Domain 2: Test Design	Metric 3:	Study Controls	High Appropriate controls were included.

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Study Citation:	Dow Chemical, (2003). [Redacted] Evaluation of optimal electron donor and nutrients for the propagation and maintenance of a microbial culture that degrades nearly saturating concentrations of chlorinated ethenes.			
OECD Harmonized Template:	Biodegradation in Water			
HERO ID:	10610565			
Domain		Metric	EVALUATION Rating	Comments
	Metric 4:	Test Substance Stability	Medium	The test substance stability, homogeneity, preparation or storage conditions were not reported; however, these factors were not likely to influence the test substance or were not likely to have a substantial impact on study results.
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	Medium	The test method was suitable for the test substance with minor deviations; target chemical was assessed as a mixture.
	Metric 6:	Testing Conditions	High	Testing conditions were reported.
	Metric 7:	Testing Consistency	N/A	This metric is not applicable to the study.
	Metric 8:	System Type and Design	High	The system type and design were appropriate.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	The inoculum source was reported.
	Metric 10:	Sampling Methods	N/A	This metric is not applicable to the study.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed or reported the intended outcome(s) of interest.
	Metric 12:	Test Substance Purity	High	he study reported the use of sampling methods that address the outcome(s) of interest.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	High	Sources of variability and uncertainty in the measurements were addressed.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	This metric is not applicable to the study.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Data reporting was appropriate; however, detection limits were not specified.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	Statistical methods or kinetic calculations were clearly described and address the dataset(s).
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	Reported values were within expected range as defined by reference substance(s).
	Metric 18:	QSAR Models	N/A	This metric is not applicable to the study.

Overall Quality Determination**High**

Study Citation:	Dow Chemical, (2003). [Redacted] Evaluation of the inherent biodegradability of 1,2-dichloropropane (propylene dichloride) under aerobic conditions.
OECD Harmonized Template:	Biodegradation in Water
HERO ID:	10610566

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; inherent biodegradability; experimental; OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test): Modified OECD 302B using sealed vessels supplemented with oxygen to prevent volatilization. Conducted according to GLP.
Solvent, Reactivity, Storage, Stability	NR; NR; NR; Volatilization was minimized through noted modification in methodology
Radiolabel, Source, State, Purity	NA; Aldrich Chemical Company (Milwaukee, Wisconsin); liquid; 99.6% as reported; >99% confirmed by GC-FID Notes: PDC
Blank and Control	sterile control (mercuric chloride); 1,2-dipropylene in the presence of aniline (reference substance) showed no microbial inhibition (98% degradation of aniline/14 days)
Oxygen and Inoculum	aerobic; activated sludge, non-adapted: Activated sludge mixed liquor from a municipal wastewater treatment plant. Plant treats >90% domestic wastewater. Mixed liquor suspended solids (MLSS) 2080±40 mg/L.
Duration, Parameter, System, and Sampling Frequency	28 days; test mat., DOC: closed glass vessels; 0 (3 hours after addition of test material), 1, 2, 7, 14, 21, and 28 days+
pH Adjusted and pH	adjusted using 1N NaOH; Activated sludge pH = 7.0-7.4. Test reaction pH ranged from 7.3 at the start to 6.4 at the end of the test. Control and blank test pH values ranged from 7.3 to 6.3.
Concentration	>= 106-136 (measured) - = 150 (nominal) mg/L
Composition and Test Temperature	standard mineral medium in MilliQ water; 22±1°C
CEC, Water Aeration Dilution, Continuous Darkness, and Other Design	Not Reported; activated sludge was aerated overnight; yes; Test substance concentration equivalent to ca. 50 mg/L DOC; tests run in duplicate
Results Details Method, Results per Degradation Parameter, and	GC-FID;; DOC; Not reported
Direct Quantum Yield Results	
Results Value, Results Standard Deviation, Results Sample Time, and Results Reference Substance Compartments	No measurable degradation; Not Reported; 28 days; Aniline; 96%/14 days
Results Remarks and Results Details	No measurable degradation (loss of test material compared to controls) was observed by day 28.; Not Reported
Results Mean Total Recovery and Results per Recovery	85-111% recovery; Minimal variation in loss compared to controls indicating loss in viable samples were likely due to volatilization.

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High
	Metric 2:	Test Substance Purity	High
			The test substance was identified definitively. The source and purity of the test substance were reported.
Domain 2: Test Design	Metric 3:	Study Controls	High
			Appropriate controls were included and tested valid.

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Study Citation:	Dow Chemical, (2003). [Redacted] Evaluation of the inherent biodegradability of 1,2-dichloropropane (propylene dichloride) under aerobic conditions.			
OECD Harmonized Template:	Biodegradation in Water			
HERO ID:	10610566			
Domain		Metric	EVALUATION Rating	Comments
	Metric 4:	Test Substance Stability	Medium	The test substance stability, homogeneity, preparation or storage conditions were not reported; however, these factors were not likely to influence the test substance or were not likely to have a substantial impact on study results.
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	High	Testing conditions were monitored and reported.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across samples and study groups.
	Metric 8:	System Type and Design	High	The system type and design were appropriate.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	The inoculum source was reported.
	Metric 10:	Sampling Methods	N/A	This metric is not applicable to the study.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed or reported the intended outcome(s) of interest.
	Metric 12:	Test Substance Purity	High	The study reported the use appropriate of sampling methods.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	High	Sources of variability and uncertainty were considered and accounted for in data evaluation.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	This metric is not applicable to the study.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Data reporting was appropriate; detection limits were not specified.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	Calculations were clearly described and address the datasets.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	Reported values were within expected range as defined by reference substance(s).
	Metric 18:	QSAR Models	N/A	This metric is not applicable to the study.
Overall Quality Determination			High	

Study Citation:	NCBI, (2020). PubChem database: compound summary: 1,2-dichloropropane.			
OECD Harmonized Template:	Biodegradation in Water			
HERO ID:	6629413			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	78-87-5; 1,2-Dichloropropane			
Confidentiality, EndPoint, Type, Guideline	None; ready biodegradability; Experimental; other: Japanese MITI test			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	Not Reported; NR; NR; NR			
Blank and Control	Not reported; Not reported			
Oxygen and Inoculum	aerobic; activated sludge (adaptation not specified): Not reported			
Duration, Parameter, System, and Sampling Frequency	2 weeks; Not Reported: Not reported; Not reported			
pH Adjusted and pH	Not Reported; Not reported			
Concentration	100 mg/L			
Composition and Test Temperature	Not reported; Not reported			
CEC, Water Aeration Dilution, Continuous Darkness, and Other Design	Not reported; Not reported; Not Reported; Not reported			
Results Details Method, Results per Degradation Parameter, and	theoretical BOD; 0%; Not Reported			
Direct Quantum Yield Results				
Results Value, Results Standard Deviation, Results Sample Time, and Results Reference Substance Compartments	Not reported; Not reported; Not reported; Not reported			
Results Remarks and Results Details	Not reported; Not reported			
Results Mean Total Recovery and Results per Recovery	Not reported; Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance				
	Metric 1:	Test Substance Identity	High	The test substance was identified by name.
	Metric 2:	Test Substance Purity	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 2: Test Design				
	Metric 3:	Study Controls	Medium	Details regarding this metric were not reported; however, additional information may be included in the primary source.
	Metric 4:	Test Substance Stability	Medium	Details regarding this metric were not reported; however, additional information may be included in the primary source.
Domain 3: Test Conditions				
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Study Citation:	NCBI, (2020). PubChem database: compound summary: 1,2-dichloropropane.			
OECD Harmonized Template:	Biodegradation in Water			
HERO ID:	6629413			
Domain	Metric	EVALUATION		Comments
		Rating		
	Metric 5:	Test Method Suitability	Medium	Details regarding this metric were not reported; however, additional information may be included in the primary source.
	Metric 6:	Testing Conditions	Medium	Details regarding this metric were not reported; however, additional information may be included in the primary source.
	Metric 7:	Testing Consistency	Medium	Details regarding this metric were not reported; however, additional information may be included in the primary source.
	Metric 8:	System Type and Design	Medium	Details regarding this metric were not reported; however, additional information may be included in the primary source.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	Medium	Details regarding this metric were limited; however, additional information may be included in the primary source.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to the study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 12:	Test Substance Purity	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	High	The outcome of interest was reported clearly.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Medium	Due to limited information in the secondary source, the plausibility of the study results cannot be determined.
	Metric 18:	QSAR Models	N/A	This metric is not applicable to this type of study.

Overall Quality Determination**Medium**

* Related References: Chemicals Inspection and Testing Institute; Biodegradation and bioaccumulation data of existing chemicals based on the CSCL Japan. Japan Chemical Industry Ecology - Toxicology and Information Center. ISBN 4-89074-101-1 p. 2-18 (1992); HSDB

Study Citation:	NCBI, (2020). PubChem Compound Summary for CID 6564, 1,2-Dichloropropane.			
OECD Harmonized Template:	Biodegradation in Water			
HERO ID:	7681904			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	78-87-5; Not Reported			
Confidentiality, EndPoint, Type, Guideline	Not Reported; ready biodegradability; experimental; OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))			
Solvent, Reactivity, Storage, Stability	1,2-dichloropropane; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Blank and Control	Not Reported; Not Reported			
Oxygen and Inoculum	Not Reported; activated sludge, non-adapted			
Duration, Parameter, System, and Sampling Frequency	Not Reported; Not Reported: Not Reported; Not Reported			
pH Adjusted and pH	Not Reported; Not Reported			
Concentration	100 - mg/L			
Composition and Test Temperature	Not Reported; Not Reported			
CEC, Water Aeration Dilution, Continuous Darkness, and Other Design	Not Reported; Not Reported; Not Reported; Not Reported			
Results Details Method, Results per Degradation Parameter, and	Not Reported; ThBOD; Not Reported			
Direct Quantum Yield Results				
Results Value, Results Standard Deviation, Results Sample Time, and Results Reference Substance Compartments	0%; Not Reported; 2 weeks; Not Reported			
Results Remarks and Results Details	not readily biodegradable; Not Reported			
Results Mean Total Recovery and Results per Recovery	Not Reported; Not Reported			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified.
	Metric 2:	Test Substance Purity	N/A	Rating of this metric is not applicable to this secondary source.
Domain 2: Test Design	Metric 3:	Study Controls	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 4:	Test Substance Stability	N/A	Rating of this metric is not applicable to this secondary source.
Domain 3: Test Conditions	Metric 5:	Test Method Suitability	N/A	Rating of this metric is not applicable to this secondary source.
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Study Citation:		NCBI, (2020). PubChem Compound Summary for CID 6564, 1,2-Dichloropropane.		
OECD Harmonized Template:		Biodegradation in Water		
HERO ID:		7681904		
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 6:	Testing Conditions	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 7:	Testing Consistency	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 8:	System Type and Design	N/A	Rating of this metric is not applicable to this secondary source.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 10:	Sampling Methods	N/A	Rating of this metric is not applicable to this secondary source.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 12:	Test Substance Purity	N/A	Rating of this metric is not applicable to this secondary source.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	Rating of this metric is not applicable to this secondary source.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	N/A	Rating of this metric is not applicable to this secondary source.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	Rating of this metric is not applicable to this secondary source.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	Data is from a publicly available, peer-reviewed database that provides references to a recognized data collection.
	Metric 18:	QSAR Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Primary source: Chemicals Inspection and Testing Institute; Biodegradation and bioaccumulation data of existing chemicals based on the CSCL Japan. Japan Chemical Industry Ecology[Note: HERO ID 5926114 is HSDB duplicate which the pChem values are reported under]

Study Citation:	OECD, (2006). SIDS Initial Assessment Report: 1,2-Dichloropropane. :219.
OECD Harmonized Template:	Biodegradation in Water
HERO ID:	5160041

EXTRACTION

Parameter	Data
CASRN and Test Material	78-87-5; 1,2-dichloropropane
Confidentiality, EndPoint, Type, Guideline	none; inherent biodegradability; experimental; OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test): modified EMPA Zahn-Wellens test according to GLP
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NR; NR; NR; NR Notes: NR
Blank and Control	not reported; not reported
Oxygen and Inoculum	aerobic; activated sludge (adaptation not specified): municipal activated sludge; 1000 mg/L mixed liquor suspended solids
Duration, Parameter, System, and Sampling Frequency	28 days; not specified: not reported; not reported
pH Adjusted and pH	not reported; not reported
Concentration	= 150 - mg/L
Composition and Test Temperature	not reported; not reported
CEC, Water Aeration Dilution, Continuous Darkness, and Other Design	not reported; not reported; not reported; not reported
Results Details Method, Results per Degradation Parameter, and Direct Quantum Yield Results	not reported; not reported; not reported
Results Value, Results Standard Deviation, Results Sample Time, and Results Reference Substance Compartments	not reported; not reported; not reported; not reported
Results Remarks and Results Details	No biodegradation was observed.; not reported
Results Mean Total Recovery and Results per Recovery	not reported; not reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Test Substance			
Metric 1:	Test Substance Identity	High	The test substance was identified.
Metric 2:	Test Substance Purity	N/A	The metric is not applicable this source.
Domain 2: Test Design			
Metric 3:	Study Controls	N/A	The metric is not applicable this source.
Metric 4:	Test Substance Stability	N/A	The metric is not applicable this source.
Domain 3: Test Conditions			
Metric 5:	Test Method Suitability	N/A	The metric is not applicable this source.

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Study Citation:	OECD, (2006). SIDS Initial Assessment Report: 1,2-Dichloropropane. :219.			
OECD Harmonized Template:	Biodegradation in Water			
HERO ID:	5160041			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 6:	Testing Conditions	N/A	The metric is not applicable this source.
	Metric 7:	Testing Consistency	N/A	The metric is not applicable this source.
	Metric 8:	System Type and Design	N/A	The metric is not applicable this source.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable this source.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable this source.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	N/A	The metric is not applicable this source.
	Metric 12:	Test Substance Purity	N/A	The metric is not applicable this source.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	The metric is not applicable this source.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable this source.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	N/A	The metric is not applicable this source.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	The metric is not applicable this source.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	Guideline study in acceptable secondary source.
	Metric 18:	QSAR Models	N/A	The metric is not applicable this source.

Overall Quality Determination

High

* Related References: Source cited: Gonsior, SJ, Marty, GT and Sosinski, M (2002) Evaluation of the inherent biodegradability of propylene dichloride under aerobic conditions. Unpublished Report, The Dow Chemical Company, Midland, MI.

Study Citation:	Shell Research, (1984). 1,2-Dichloropropane: an assessment of ready biodegradability with cover letter dated 103086.
OECD Harmonized Template:	Biodegradation in Water
HERO ID:	2803599

EXTRACTION

Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; ready biodegradability; Experimental; OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test); EEC Directive amendment 6, annex V (79/931/EEC)
Solvent, Reactivity, Storage, Stability	NR; NR; Stored in the dark at ambient temperature; NR
Radiolabel, Source, State, Purity	NA; Shell Nederland Chemie, Rotterdam; NR; 65%
Blank and Control	Medium only and microbial inoculum only; Sodium benzoate and the test substance
Oxygen and Inoculum	aerobic; not specified: Obtained from Sittingbourne Sewage Works
Duration, Parameter, System, and Sampling Frequency	28 days; O2 consumption: Closed bottle system; days 5, 15, and 28
pH Adjusted and pH	Not Reported; Not reported
Concentration	3.0 mg/L
Composition and Test Temperature	Mineral salts; 21±1°C
CEC, Water Aeration Dilution, Continuous Darkness, and Other Design	Not applicable; Not reported; Not Reported; Not Reported
Results Details Method, Results per Degradation Parameter, and Direct Quantum Yield Results	Not reported; % ThOD; Not Reported
Results Value, Results Standard Deviation, Results Sample Time, and Results Reference Substance Compartments	0; Not reported; 28 days; 100% ThOD, high value may be due to more nitrification occurring than in the blank
Results Remarks and Results Details	Not readily biodegradable. Microorganism inhibition not observed.; Not Reported
Results Mean Total Recovery and Results per Recovery	Not reported; Not reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Test Substance	Metric 1: Test Substance Identity	High	The test substance was identified by name and CAS.
	Metric 2: Test Substance Purity	High	Purity and source of the test substance was adequately reported.
Domain 2: Test Design	Metric 3: Study Controls	High	Blank controls were included and were within an acceptable range.
	Metric 4: Test Substance Stability	High	The test substance was added directly to the test system, which was appropriate.
Domain 3: Test Conditions	Metric 5: Test Method Suitability	High	The test method followed OECD Guidelines.

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Study Citation:	Shell Research, (1984). 1,2-Dichloropropane: an assessment of ready biodegradability with cover letter dated 103086.			
OECD Harmonized Template:	Biodegradation in Water			
HERO ID:	2803599			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 6:	Testing Conditions	Medium	Most appropriate test conditions (duration, temperature) were reported, pH and mineral medium composition were not reported.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across all study groups.
	Metric 8:	System Type and Design	N/A	Not applicable.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	The inoculum source was reported and is commonly used for similar study types.
	Metric 10:	Sampling Methods	N/A	Not applicable.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology was appropriate for determining biodegradation.
	Metric 12:	Test Substance Purity	Medium	Sampling methods were not reported, but sampling frequency was acceptable.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	High	No notable sources of uncertainty were identified.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	Not applicable.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Raw data was reported, however analytical methods were not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	Statistical and kinetic calculations were not performed.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The results were reasonable based on the method, the reference substance met OECD validity criteria.
	Metric 18:	QSAR Models	N/A	Not applicable.
Overall Quality Determination		High		

Study Citation:	Tabak, H. H., Quave, S. A., Mashni, C. I., Barth, E. F. (1981). Biodegradability studies with organic priority pollutant compounds. Journal of Water Pollution Control Federation 53(10):1503-1518.
OECD Harmonized Template:	Biodegradation in Water
HERO ID:	9861

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; screening test; Experimental; other: Biodegradation in domestic wastewater, static-culture flask-screening
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	Not Reported; NR; NR; NR
Blank and Control	Synthetic medium containing 5mg yeast extract; Not reported
Oxygen and Inoculum	aerobic; sewage, domestic, non-adapted: Weekly "subcultures" involved adding fresh test samples to existing cultures to test for inoculum adaptation.
Duration, Parameter, System, and Sampling Frequency	28 days (includes 7 day static incubation and 3 weekly subcultures); test mat.: Static-culture in 250 mL Erlenmeyer flask.; Days 7, 14, 21, and 28
pH Adjusted and pH	Not Reported; Not reported
Concentration	5 - 10 mg/L
Composition and Test Temperature	BOD dilution water with 5 mg/L yeast extract; 25°C
CEC, Water Aeration Dilution, Continuous Darkness, and Other Design	Not reported; Not reported; yes; Homogenous suspensions of the test substance in the chilled synthetic medium were prepared in a heavy duty blender for 2 minutes. Replicate studies with 5 mg/L and 10 mg/L substrate.
Results Details Method, Results per Degradation Parameter, and Direct Quantum Yield Results	GC and TOC determinations. GC LOD: 0.1 mg/L; Average loss of test substance after 7 days; Not Reported
Results Value, Results Standard Deviation, Results Sample Time, and Results Reference Substance Compartments	42-89% (at 5 mg/L); 36-81% (at 10 mg/L); Not reported; 7 days; Not reported
Results Remarks and Results Details	Significant degradation with gradual adaptation; 3% volatilization loss (at 5mg/l) and 0% volatilization loss (at 10mg/l) at 25°C
Results Mean Total Recovery and Results per Recovery	Not Reported; Not Reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified using common nomenclature.
	Metric 2:	Test Substance Purity	N/A	The test substance purity was not reported; however, the omission is unlikely to have an impact on the study results.
Domain 2: Test Design	Metric 3:	Study Controls	High	Appropriate blanks were used without inoculum and without substrate.
	Metric 4:	Test Substance Stability	High	The test substance preparation and storage conditions were reported and appropriate.

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Study Citation:	Tabak, H. H., Quave, S. A., Mashni, C. I., Barth, E. F. (1981). Biodegradability studies with organic priority pollutant compounds. Journal of Water Pollution Control Federation 53(10):1503-1518.			
OECD Harmonized Template:	Biodegradation in Water			
HERO ID:	9861			
Domain	Metric	EVALUATION		Comments
		Rating		
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	Low	The test substance was tested above its aqueous solubility which may have had an impact on the study results.
	Metric 6:	Testing Conditions	High	The testing conditions were reported and appropriate.
	Metric 7:	Testing Consistency	High	The testing conditions were consistent across the sample groups.
	Metric 8:	System Type and Design	N/A	The metric is not applicable to the study type.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The inoculum type was reported and appropriate for the study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to the study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed the intended outcome of interest.
	Metric 12:	Test Substance Purity	High	The sampling methods were reported and appropriate.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Low	Sources of uncertainty were not reported which may impact the study results.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to the study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	High	The data reporting was appropriate, percentage removal of the test substance was reported, and the analytical method was suitable.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Statistical analysis was not reported; however, the omission is unlikely to have a substantial impact on the study results.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The study results are reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to the study type.
Overall Quality Determination			High	

Study Citation:	Dow Chemical, (2004). [Redacted] Twins Inn site remediation treatability study.
OECD Harmonized Template:	Biodegradation in Sediment
HERO ID:	10609984

EXTRACTION	
Parameter	Data
CASRN and Test Material	Not Reported; 1,2-dichloropropane
Confidentiality, EndPoint, Type, Guideline	yes; inherent biodegradability; experimental; other: intrinsic in-situ anaerobic biodegradation
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NR; Sigma-Aldrich, St. Louis, Missouri; NR; NR
Oxygen and Inoculum	anaerobic; natural water / sediment: Groundwater and sediment core samples from North Tank source. Twins Inn site, Arvada, Colorado.
Duration, Parameter, System, and Sampling Frequency	12 months; test mat; incubation temperature: 22±2°C; glass serum bottles; sequential sampling
Results Sample Time, Compartment, Sludge Compartment, Water	0, 2, 4, 6, 9, 12 months; groundwater/sediment; sediment; anaerobic core samples; filled with groundwater so no head space; not reported; not reported
Compartment, CEC, and pH	
Control Dark, Control, and Blank	yes; not reported; heat and biocide sterilized
Concentration	> 3600 ug/L
Analytical Method, Analytical Details, and Results Per Degredation Parameter	GC/MS; Not Reported; test mat.
Results Remarks	first order rate constant: 0.054 L/month
Half-life, Standard Deviation Results, Reference Substance Results, and Reference Substance Compartment Results	389 days; not reported; 14C-TCE; Not Reported
Results Details	half-life in abiotic control 1699 days
Mean Total Recovery Results and Results Per Recovery	not reported; not reported
Results Value, Direct Quantum Yield Results, and Transformation Products	not reported; not reported; no dechlorination products were observed

EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified by name.
	Metric 2:	Test Substance Purity	Medium	The test substance source was reported, but the test substance purity was not reported; however, the omission was not likely to have a substantial impact on the study results.
Domain 2: Test Design	Metric 3:	Study Controls	High	Concurrent controls were included.
	Metric 4:	Test Substance Stability	Medium	The test substance stability, homogeneity, preparation or storage conditions were not reported; however, these factors were not likely to influence the test substance or were not likely to have a substantial impact on study results.

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Study Citation:	Dow Chemical, (2004). [Redacted] Twins Inn site remediation treatability study.			
OECD Harmonized Template:	Biodegradation in Sediment			
HERO ID:	10609984			
EVALUATION				
Domain		Metric	Rating	Comments
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	Medium	The test method was suitable for the test substance with minor deviations.
	Metric 6:	Testing Conditions	Medium	There were omissions in testing conditions; however, sufficient data were reported to determine that the deviations and omissions were not likely to have a substantial impact on study results.
	Metric 7:	Testing Consistency	Medium	Some test conditions across samples or study groups were not reported, but these discrepancies were not likely to have a substantial impact on study results.
	Metric 8:	System Type and Design	N/A	Rating of this factor is not applicable to this kind of information.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	Low	An inoculum that was pre-adapted to the test substance was used for a biodegradation rate study.
	Metric 10:	Sampling Methods	N/A	Rating of this factor is not applicable to this kind of information.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	There was incomplete reporting of outcome assessment methods; however, such differences or absence of details were not likely to be severe or have a substantial impact on the study results.
	Metric 12:	Test Substance Purity	High	The study reported the use of sampling methods that address the outcome(s) of interest, and used widely accepted methods/approaches for the chemical and media being analyzed
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Variability and uncertainty were not explicitly addressed.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	Rating of this factor is not applicable to this kind of information.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	The target chemical and transformation product(s) concentrations, extraction efficiency, percent recovery, or mass balance were not reported; however, these omissions were not likely to have a substantial impact on study results.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Kinetic calculations were not clearly described.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Medium	The study results were reasonable.
	Metric 18:	QSAR Models	N/A	Rating of this factor is not applicable to this kind of information.

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Study Citation:	Dow Chemical, (2004). [Redacted] Twins Inn site remediation treatability study.		
OECD Harmonized	Biodegradation in Sediment		
Template:			
HERO ID:	10609984		
Domain	Metric	EVALUATION Rating	Comments
Overall Quality Determination		Low	

Study Citation:	Dow Chemical, (2004). [Redacted] Twins Inn site remediation treatability study.
OECD Harmonized Template:	Biodegradation in Sediment
HERO ID:	10609984

EXTRACTION	
Parameter	Data
CASRN and Test Material	Not Reported; 1,2-dichloropropane
Confidentiality, EndPoint, Type, Guideline	yes; inherent biodegradability; experimental; other: intrinsic in-situ aerobic biodegradation
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NR; Sigma-Aldrich, St. Louis, Missouri; NR; NR
Oxygen and Inoculum	aerobic; natural water / sediment: Groundwater and sediment core samples from downgradient plume source. Twins Inn site, Arvada, Colorado.
Duration, Parameter, System, and Sampling Frequency	12 months; test mat; incubation temperature: 20°C; glass serum bottles; sequential sampling
Results Sample Time, Compartment, Sludge Compartment, Water Compartment, CEC, and pH	0, 2, 4, 6, 9, 12 months; groundwater/sediment; sediment: core samples; groundwater; not reported; not reported
Control Dark, Control, and Blank Concentration	yes; not reported; heat and biocide sterilized > 1000 ug/L
Analytical Method, Analytical Details, and Results Per Degredation Parameter	GC/MS; Not Reported; test mat.
Results Remarks	first order rate constant: 0.201 L/month
Half-life, Standard Deviation Results, Reference Substance Results, and Reference Substance Compartment Results	105 days; not reported; 14C-TCE; Not Reported
Results Details	half-life in abiotic control 134 days; first order rate constant 0.157 L/month
Mean Total Recovery Results and Results Per Recovery	not reported; not reported
Results Value, Direct Quantum Yield Results, and Transformation Products	not reported; not reported; no dechlorination products were observed

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified by name.
	Metric 2:	Test Substance Purity	Medium	The test substance source was reported, but the test substance purity was not reported; however, the omission was not likely to have a substantial impact on the study results.
Domain 2: Test Design	Metric 3:	Study Controls	High	Concurrent controls were included.
	Metric 4:	Test Substance Stability	Medium	The test substance stability, homogeneity, preparation or storage conditions were not reported; however, these factors were not likely to influence the test substance or were not likely to have a substantial impact on study results.
Domain 3: Test Conditions				

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Study Citation:	Dow Chemical, (2004). [Redacted] Twins Inn site remediation treatability study.			
OECD Harmonized Template:	Biodegradation in Sediment			
HERO ID:	10609984			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 5:	Test Method Suitability	Medium	The test method was suitable for the test substance with minor deviations.
	Metric 6:	Testing Conditions	Medium	There were omissions in testing conditions; however, sufficient data were reported to determine that the omissions were not likely to have a substantial impact on study results.
	Metric 7:	Testing Consistency	Medium	Some test conditions across samples or study groups were not reported, but these discrepancies were not likely to have a substantial impact on study results.
	Metric 8:	System Type and Design	N/A	Rating of this factor is not applicable to this kind of information.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	Low	An inoculum that was pre-adapted to the test substance was used for a biodegradation rate study.
	Metric 10:	Sampling Methods	N/A	Rating of this factor is not applicable to this kind of information.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	There was incomplete reporting of outcome assessment methods; however, such differences or absence of details were not likely to be severe or have a substantial impact on the study results.
	Metric 12:	Test Substance Purity	High	The study reported the use of sampling methods that address the outcome(s) of interest, and used widely accepted methods/approaches for the chemical and media being analyzed
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Variability and uncertainty were not explicitly addressed.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	Rating of this factor is not applicable to this kind of information.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	The target chemical and transformation product(s) concentrations, extraction efficiency, percent recovery, or mass balance were not reported; however, these omissions were not likely to have a substantial impact on study results.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Kinetic calculations were not clearly described.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Medium	The study results were reasonable.
	Metric 18:	QSAR Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

Low

Study Citation:	Hauck, R., Hegemann, W. (2000). Anaerobic degradation of 1,2-dichloropropane in batch and continuous culture. Water Science and Technology 41(12):7-13.
OECD Harmonized Template:	Biodegradation in Sediment
HERO ID:	1172599

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; screening test; Experimental; other
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NR; Merck (Darmstadt, Germany); NR; NR
Oxygen and Inoculum	anaerobic; natural sediment: freshwater: 450mL mineral medium
Duration, Parameter, System, and Sampling Frequency	35 days; test mat.; Closed serum bottles with nitrogen flushed headspace.; Days 1, 6, 9, 11, 14, 16
Results Sample Time, Compartment, Sludge Compartment, Water Compartment, CEC, and pH	Not reported; 5mL sediment, 50mL methanol (co-substrate), medium (approx. 445mL); Not reported; Not reported; Not reported; pH tests were done and briefly described. At >9 and <4, no degradation was measured.
Control Dark, Control, and Blank Concentration	yes; Autoclaved sterile controls were tested.; Live controls without DCP were tested. Not Reported
Analytical Method, Analytical Details, and Results Per Degredation Parameter	Gas chromatography-flame ionization detection; GC: HP 5890 series II; 7
Results Remarks	Complete degradation achieved in both trials after 16 days.
Half-life, Standard Deviation Results, Reference Substance Results, and Reference Substance Compartment Results	Not reported; Not reported; Not reported; Not reported
Results Details	Second doses were applied after complete degradation of the first doses. The measured rates of the second dose were 2.98-3.62.
Mean Total Recovery Results and Results Per Recovery	Not reported; Not reported
Results Value, Direct Quantum Yield Results, and Transformation Products	Degradation rate (mg/L*d): 1.69-1.89; Not Reported; the anaerobic dechlorination pathway through the formation of 1- and 2-monochloropropane was determined and the quantitative formation of propene was detected

EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified using common nomenclature.
	Metric 2:	Test Substance Purity	Medium	The test substance purity was not reported but the omission is not likely to impact the study results.
Domain 2: Test Design	Metric 3:	Study Controls	High	Autoclaved sterile controls and blank controls were both used.
	Metric 4:	Test Substance Stability	Medium	The test substance preparation or storage conditions were not reported but their omission is unlikely to have a substantia impact on the study results.

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Study Citation:	Hauck, R., Hegemann, W. (2000). Anaerobic degradation of 1,2-dichloropropane in batch and continuous culture. Water Science and Technology 41(12):7-13.			
OECD Harmonized Template:	Biodegradation in Sediment			
HERO ID:	1172599			
Domain	Metric	EVALUATION		Comments
		Rating		
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	High	Testing conditions were reported and appropriate for the method.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across the two study assays.
	Metric 8:	System Type and Design	N/A	This metric is not applicable to the study type.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	Medium	Some details regarding the inoculum were not reported.
	Metric 10:	Sampling Methods	N/A	This metric is not applicable to the study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed the intended endpoints.
	Metric 12:	Test Substance Purity	High	The sampling methods were reported and appropriate.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	High	No confounding variables were noted in the study.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	This metric is not applicable to the study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	High	The data reporting was sufficient to describe the study results.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	Kinetic calculations were not clearly described but their omission is unlikely to impact the study results.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The study results were reasonable.
	Metric 18:	QSAR Models	N/A	This metric is not applicable to the study type.

Overall Quality Determination

High

* Related References: ECHA rating: 4

Study Citation:	Loffler, F. E., Champine, J. E., Ritalahti, K. M., Sprague, S. J., Tiedje, J. M. (1997). Complete reductive dechlorination of 1,2-dichloropropane by anaerobic bacteria. Applied and Environmental Microbiology 63(7):2870-2875.
OECD Harmonized Template:	Biodegradation in Sediment
HERO ID:	2300820

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; other; Experimental; other: Anaerobic degradation in sediment microcosms
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NR; Aldrich, Milwaukee, Wis.; NR; NR
Oxygen and Inoculum	anaerobic; natural water / sediment: freshwater: Anaerobic Red Cedar Creek sediment
Duration, Parameter, System, and Sampling Frequency	4 months; test mat.; Inverted vials; Not reported
Results Sample Time, Compartment, Sludge Compartment, Water Compartment, CEC, and pH	Not reported; Not reported; Not reported; Not reported; Not reported; Not reported
Control Dark, Control, and Blank Concentration	yes; Not reported; autoclave killed and live (no 1,2-D) controls included 2 µmol
Analytical Method, Analytical Details, and Results Per Degredation Parameter	GC-MS; Headspace analysis by GC-MS with FID;; Authentic standards used for identification of transformation products; 7
Results Remarks	After 4 weeks ca. 0.2 µmol 1-chloropropane and ca. 0.025 µmol 2-chloropropane were detected; after 6 weeks propene was detected
Halflife, Standard Deviation Results, Reference Substance Results, and Reference Substance Compartment Results	Not reported; Not reported; Not reported; Not reported
Results Details	Not reported
Mean Total Recovery Results and Results Per Recovery	Not reported; Not reported
Results Value, Direct Quantum Yield Results, and Transformation Products	100% conversion to propene after 4 months; Not Reported; 1-chloropropane; 2-chloropropane

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified definitively.
	Metric 2:	Test Substance Purity	Medium	The source was reported; purity was not reported.
Domain 2: Test Design	Metric 3:	Study Controls	High	This metric met the criteria for high confidence as expected for this type of study.
	Metric 4:	Test Substance Stability	High	This metric met the criteria for high confidence as expected for this type of study.
Domain 3: Test Conditions				

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Study Citation:	Loffler, F. E., Champine, J. E., Ritalahti, K. M., Sprague, S. J., Tiedje, J. M. (1997). Complete reductive dechlorination of 1,2-dichloropropane by anaerobic bacteria. Applied and Environmental Microbiology 63(7):2870-2875.			
OECD Harmonized Template:	Biodegradation in Sediment			
HERO ID:	2300820			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 5:	Test Method Suitability	High	This metric met the criteria for high confidence as expected for this type of study.
	Metric 6:	Testing Conditions	Low	Testing conditions were not reported.
	Metric 7:	Testing Consistency	High	Test conditions were consistent.
	Metric 8:	System Type and Design	High	This metric met the criteria for high confidence as expected for this type of study.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	This metric met the criteria for high confidence as expected for this type of study.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	Transformation products were reported; degradation rates were not reported.
	Metric 12:	Test Substance Purity	Low	Details regarding sampling methods of the outcome were not fully reported.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	No confounding variables noted.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Low	Analytical details were omitted (MDL); extraction efficiency, percent recovery, or mass balance were not measured or reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	This metric is not applicable to this type of study.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Medium	The study results were reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to the study type.

Overall Quality Determination**Medium**

* Related References: Cited in ECHA

Study Citation:	NCBI, (2020). PubChem database: compound summary: 1,2-dichloropropane.			
OECD Harmonized Template:	Biodegradation in Sediment			
HERO ID:	6629413			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	78-87-5; 1,2-Dichloropropane			
Confidentiality, EndPoint, Type, Guideline	None; ready biodegradability; Experimental; other			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	Not Reported; NR; NR; NR			
Oxygen and Inoculum	aerobic; mixture of sewage, soil and natural water: Not reported			
Duration, Parameter, System, and Sampling Frequency	7 days; Not Reported; Not reported; Not reported			
Results Sample Time, Compartment, Sludge Compartment, Water Compartment, CEC, and pH	Not reported; Not reported; Not reported; Not reported; Not reported; Not reported			
Control Dark, Control, and Blank Concentration	Not Reported; Not reported; Not reported			
Analytical Method, Analytical Details, and Results Per Degredation Parameter	Not reported; Not reported; Not Reported			
Results Remarks	Not reported			
Halflife, Standard Deviation Results, Reference Substance Results, and Reference Substance Compartment Results	Not reported; sewage seed; Not reported; Not reported			
Results Details	Not reported			
Mean Total Recovery Results and Results Per Recovery	Not reported; Not reported			
Results Value, Direct Quantum Yield Results, and Transformation Products	42%; Not Reported; Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified by name.
	Metric 2:	Test Substance Purity	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 2: Test Design	Metric 3:	Study Controls	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 4:	Test Substance Stability	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 3: Test Conditions	Metric 5:	Test Method Suitability	Medium	Not reported in this secondary source; the primary source likely contains more detail.
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Study Citation:	NCBI, (2020). PubChem database: compound summary: 1,2-dichloropropane.			
OECD Harmonized Template:	Biodegradation in Sediment			
HERO ID:	6629413			
Domain		Metric	EVALUATION Rating	Comments
	Metric 6:	Testing Conditions	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 7:	Testing Consistency	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 8:	System Type and Design	N/A	Rating of this factor is not applicable to this kind of information.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	Medium	Some details in this secondary source; the primary source likely contains more detail.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 12:	Test Substance Purity	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	Rating of this factor is not applicable to this kind of information.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The results are reasonable based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
	Metric 18:	QSAR Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination			Medium	

* Related References: Tabak HH et al; J Water Pollut Contr Fed 53: 1503-18 (1981); cited in ECHA

Study Citation:	Roy F. Weston Inc, (1980). Characterization and fate of the discharge of priority pollutants from the Rohm and Haas Philadelphia plant into the Delaware low level collector of the Philadelphia sewer.
OECD Harmonized Template:	Biodegradation in Sediment
HERO ID:	1333014

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; other; Experimental; other: WWTP removal efficiency
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NR; NR; NR; NR
Oxygen and Inoculum	aerobic; mixture of sewage, soil and natural water: Not reported
Duration, Parameter, System, and Sampling Frequency	Sampling was done in April and December; test mat.; Samples were collected from influent, effluent out of biodisc system, and sludge from storage tanks.; Samples were taken in duplicate.
Results Sample Time, Compartment, Sludge Compartment, Water Compartment, CEC, and pH	24 or 72 hour composite samples were collected.; Not reported; Not reported; Not reported; Not reported; Not reported
Control Dark, Control, and Blank Concentration	Not Reported; Not reported; Sample blanks from the normal sampling program were taken. $\geq 1030 - \leq 1896 \mu\text{g/L}$
Analytical Method, Analytical Details, and Results Per Degredation Parameter	GC-MS; Not reported; 7
Results Remarks	The effluent collected in the December sampling contained higher levels of 1,2-dichloropropane than the influent and was considered an outlier as all other volatile organics showed high removal rates.
Halflife, Standard Deviation Results, Reference Substance Results, and Reference Substance Compartment Results	Not reported; Not reported; Not reported; Not reported
Results Details	Not reported
Mean Total Recovery Results and Results Per Recovery	Not reported; Recoveries of >60% were observed for most chemicals.
Results Value, Direct Quantum Yield Results, and Transformation Products	Influent/effluent removal % in April: 99.9.; Not Reported; Not reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Test Substance	Metric 1:	High	The test substance was identified using common nomenclature.
	Metric 2:	Medium	The purity of the analytical standards used were not reported but their omission was unlikely to impact the study results.
Domain 2: Test Design	Metric 3:	High	Blank controls were used to determine background contamination in the sampling method.

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Study Citation:	Roy F. Weston Inc, (1980). Characterization and fate of the discharge of priority pollutants from the Rohm and Haas Philadelphia plant into the Delaware low level collector of the Philadelphia sewer.			
OECD Harmonized Template:	Biodegradation in Sediment			
HERO ID:	1333014			
Domain		Metric	EVALUATION Rating	Comments
	Metric 4:	Test Substance Stability	High	Some details regarding the test substance preparation and storage conditions were omitted but are unlikely to have a substantial impact on the study results.
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	Medium	There were omissions in the testing conditions but they are unlikely to have a substantial impact on the study results.
	Metric 7:	Testing Consistency	Medium	Differences in the testing conditions between the sample groups were not clearly reported but were unlikely to have a substantial impact on the study results.
	Metric 8:	System Type and Design	N/A	The metric is not applicable to the study type.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	The inoculum source was reported and appropriate for the study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to the study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed the intended outcome of interest.
	Metric 12:	Test Substance Purity	High	The sampling methods were appropriate for the study type.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Sources of uncertainty were not clearly addressed.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to the study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Compound specific percent recoveries for influent and effluent samples and detection limits were not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Statistical analysis was not reported.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The study results were reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to the study type.

Overall Quality Determination

High

Study Citation:	Boesten, J., Vanderpas, L. J. T., Leistra, M., Smelt, J. H., Houx, N. W. H. (1992). Transformation of 14C-labelled 1,2-dichloropropane in water-saturated subsoil materials. Chemosphere 24(8):993-1011.
OECD Harmonized Template:	Biodegradation in Soil
HERO ID:	5431734

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; inherent biodegradability; Experimental; other: Not reported
Solvent, Reactivity, Storage, Stability	Acetone; NR; NR; NR
Radiolabel, Source, State, Purity	[1-14C]; NR; Liquid; NR
Oxygen, pH, and CEC	Aerobic to anaerobic over the duration of the study - in the Wassenaar subsoil material methanogenic conditions occurred during the incubation (Fig. 3); 7.3; Not reported
Test Type, Test Temperature, and Test Details	laboratory; 9.5 - 10.5°C; 51 g subsoil collected from agricultural field near Wassenaar, Netherlands, 5 cm ³ groundwater, and 41 - 43 ug test substance added to the test system and shaken for 30 min, before incubation in the dark for the test duration.
Soil Type, Clay Silts and Organic Carbon, and Bulk Density	sand; 0.1% organic matter; Not reported
Soil Classification, Microbial Biomass, and Humidity	Low-humic sand; Redox potential 10-20 mV; Not reported: Not reported
Duration, Parameter, System, and Sampling Frequency	712 d; radiochem. meas.; Glass container (110 mm length, 40 mm diameter) with glass tube sealed on top, sealed by melting narrow top; 0, approx.
Control and Blank	165, 365, 608, 712 d
Concentration	Not reported; Not reported
Analytical Method, Analytical Details, and Results Per Degredation Parameter	1.60 - 1.64 kBq
Results Remarks	Liquid scintillation counting; Hexane injected into system, system shaken on reciprocal shaker for 1 hour, centrifuged, hexane and water layers collected, extracted 3x with acetone, hexane, water, and acetone/water layers analyzed; Radiochem. Meas.
Results Value, Standard Deviation Results, Sample Time Results, Reference Substance Results, and References Substance Compartment Results	Radioactivity close to 100% first 156 d, decreased to < 20% after 712 d. 14CO2 evolution < 0.005% initial radioactivity after 712 d. Highly volatile transformation products could be propene and propane, 8:1 but could not be confirmed via radioactivity.
Results Details	96%; Not reported; 608 and 712 d; Not reported; Not reported
Mean Total Recovery Results and Results Per Recovery	Not reported
	Not reported; nearly 100% until 365 days; after 608 and 712 days, 15-35% of the dose was recovered from different layers

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High
	Metric 2:	Test Substance Purity	Medium
Domain 2: Test Design	Metric 3:	Study Controls	Medium
			Controls were not explicitly reported.

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Study Citation:	Boesten, J., Vanderpas, L. J. T., Leistra, M., Smelt, J. H., Houx, N. W. H. (1992). Transformation of 14C-labelled 1,2-dichloropropane in water-saturated subsoil materials. Chemosphere 24(8):993-1011.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	5431734			
Domain	Metric	EVALUATION		Comments
	Metric 4:	Test Substance Stability	Medium	Test substance vehicle was reported, storage conditions and preparation were not reported.
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	Medium	Limited soil characteristics were provided.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across samples and study groups.
	Metric 8:	System Type and Design	N/A	This metric is not applicable to the study type.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	Inoculum source was reported.
	Metric 10:	Sampling Methods	N/A	This metric is not applicable to the study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed the outcomes of interest.
	Metric 12:	Test Substance Purity	High	Sampling methods addressed the outcomes of interest and used widely accepted approaches.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	High	Variability between samples was addressed graphically.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	This metric is not applicable to the study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Raw data reported graphically, mass balance reported, extraction efficiency and limits of detection not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Statistical methods were not explicitly described.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The results were reasonable.
	Metric 18:	QSAR Models	N/A	This metric is not applicable to the study type.
Overall Quality Determination			High	

* Related References: ECHA rating: 2

Study Citation:	Boesten, J., Vanderpas, L. J. T., Leistra, M., Smelt, J. H., Houx, N. W. H. (1992). Transformation of 14C-labelled 1,2-dichloropropane in water-saturated subsoil materials. Chemosphere 24(8):993-1011.
OECD Harmonized Template:	Biodegradation in Soil
HERO ID:	5431734

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; inherent biodegradability; Experimental; other: Not reported
Solvent, Reactivity, Storage, Stability	Acetone; NR; NR; NR
Radiolabel, Source, State, Purity	[1-14C]; NR; Liquid; NR
Oxygen, pH, and CEC	aerobic to anaerobic over the duration of the study; 4.7; Not reported
Test Type, Test Temperature, and Test Details	laboratory; 9.5 - 10.5°C; 51 g subsoil collected from agricultural field Kibbelveen, near Emmen, Netherlands, 5 cm ³ groundwater, and 41 - 43 ug test substance added to the test system and shaken for 30 min, before incubation in the dark for the test duration.
Soil Type, Clay Silts and Organic Carbon, and Bulk Density	sand; 0.2% organic matter; Not reported
Soil Classification, Microbial Biomass, and Humidity	Reclaimed peat soil; Redox potential 50-180 mV; Not reported: Not reported
Duration, Parameter, System, and Sampling Frequency	712 d; radiochem. meas.; Glass container (110 mm length, 40 mm diameter) with glass tube sealed on top, sealed by melting narrow top; 0, approx. 165, 365, 608, 712 d
Control and Blank	Not reported; Not reported
Concentration	1.60 - 1.64 kBq
Analytical Method, Analytical Details, and Results Per Degredation Parameter	Liquid scintillation counting; Hexane injected into system, system shaken on reciprocal shaker for 1 hour, centrifuged, hexane and water layers collected, extracted 3x with acetone, hexane, water, and acetone/water layers analyzed; Radiochem. Meas.
Results Remarks	Radioactivity close to 100%, no measurable transformation. 14CO ₂ evolution 0.07% initial radioactivity after 712 d.
Results Value, Standard Deviation Results, Sample Time Results, Reference Substance Results, and References Substance Compartment Results	No measurable transformation; Not reported; 608 and 712 d; Not reported; Not reported
Results Details	Not reported
Mean Total Recovery Results and Results Per Recovery	Not reported; nearly 100%

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified by name.
	Metric 2:	Test Substance Purity	Medium	The test substance source and purity were not reported.
Domain 2: Test Design	Metric 3:	Study Controls	Medium	Controls were not explicitly reported.
	Metric 4:	Test Substance Stability	Medium	Test substance vehicle was reported, storage conditions and preparation were not reported.
Domain 3: Test Conditions				

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Study Citation:	Boesten, J., Vanderpas, L. J. T., Leistra, M., Smelt, J. H., Houx, N. W. H. (1992). Transformation of 14C-labelled 1,2-dichloropropane in water-saturated subsoil materials. Chemosphere 24(8):993-1011.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	5431734			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	Medium	Limited soil characteristics were provided.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across samples and study groups.
	Metric 8:	System Type and Design	N/A	This metric is not applicable to the study type.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	Inoculum source was reported.
	Metric 10:	Sampling Methods	N/A	This metric is not applicable to the study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed the outcomes of interest.
	Metric 12:	Test Substance Purity	High	Sampling methods addressed the outcomes of interest and used widely accepted approaches.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	High	Variability between samples was addressed graphically.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	This metric is not applicable to the study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Raw data reported graphically, mass balance reported, extraction efficiency and limits of detection not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Statistical methods were not explicitly described.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The results were reasonable.
	Metric 18:	QSAR Models	N/A	This metric is not applicable to the study type.

Overall Quality Determination

High

* Related References: ECHA rating: 2

Study Citation:	Boesten, J., Vanderpas, L. J. T., Leistra, M., Smelt, J. H., Houx, N. W. H. (1992). Transformation of 14C-labelled 1,2-dichloropropane in water-saturated subsoil materials. Chemosphere 24(8):993-1011.
OECD Harmonized Template:	Biodegradation in Soil
HERO ID:	5431734

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; inherent biodegradability; Experimental; other: Not reported; Wassenaar
Solvent, Reactivity, Storage, Stability	Acetone; NR; NR; NR
Radiolabel, Source, State, Purity	[1-14C]; NR; Liquid; NR
Oxygen, pH, and CEC	aerobic based on redox measurements (Fig 3); 4.6; Not reported
Test Type, Test Temperature, and Test Details	laboratory; 9.5 - 10.5°C; 51 g subsoil collected from agricultural field Noord-Sleen, near Emmen, Netherlands, 5 cm ³ groundwater, and 41 - 43 ug test substance added to the test system and shaken for 30 min, before incubation in the dark for the test duration.
Soil Type, Clay Silts and Organic Carbon, and Bulk Density	sand; 0.3% organic matter; Not reported
Soil Classification, Microbial Biomass, and Humidity	Humic sand podsol; Redox potential 650-670 mV; Not reported: Not reported
Duration, Parameter, System, and Sampling Frequency	712 d; radiochem. meas.; Glass container (110 mm length, 40 mm diameter) with glass tube sealed on top, sealed by melting narrow top; 0, approx. 165, 365, 608, 712 d
Control and Blank	Not reported; Not reported
Concentration	1.60 - 1.64 kBq
Analytical Method, Analytical Details, and Results Per Degredation Parameter	Liquid scintillation counting; Hexane injected into system, system shaken on reciprocal shaker for 1 hour, centrifuged, hexane and water layers collected, extracted 3x with acetone, hexane, water, and acetone/water layers analyzed; Radiochem. Meas.
Results Remarks	Radioactivity close to 100% (no measurable transformation), except 70% recovery in hexane layer (average did not differ significantly from 100%). 14CO2 evolution 0.05% initial radioactivity after 712 d.
Results Value, Standard Deviation Results, Sample Time Results, Reference Substance Results, and Reference Substance Compartment Results	No measurable transformation; Not reported; 608 and 712 d; Not reported; Not reported
Results Details	Not reported
Mean Total Recovery Results and Results Per Recovery	Not reported; nearly 100%

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Test Substance	Metric 1:	High	The test substance was identified by name.
	Metric 2:	Medium	The test substance source and purity were not reported.
Domain 2: Test Design	Metric 3:	Medium	Controls were not explicitly reported.
	Metric 4:	Medium	Test substance vehicle was reported, storage conditions and preparation were not reported.

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Study Citation:	Boesten, J., Vanderpas, L. J. T., Leistra, M., Smelt, J. H., Houx, N. W. H. (1992). Transformation of 14C-labelled 1,2-dichloropropane in water-saturated subsoil materials. Chemosphere 24(8):993-1011.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	5431734			
Domain	Metric	EVALUATION		Comments
		Rating		
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	Medium	Limited soil characteristics were provided.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across samples and study groups.
	Metric 8:	System Type and Design	N/A	This metric is not applicable to the study type.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	Inoculum source was reported.
	Metric 10:	Sampling Methods	N/A	This metric is not applicable to the study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed the outcomes of interest.
	Metric 12:	Test Substance Purity	High	Sampling methods addressed the outcomes of interest and used widely accepted approaches.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	High	Variability between samples was addressed graphically.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	This metric is not applicable to the study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Raw data reported graphically, mass balance reported, extraction efficiency and limits of detection not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Statistical methods were not explicitly described.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The results were reasonable.
	Metric 18:	QSAR Models	N/A	This metric is not applicable to the study type.
Overall Quality Determination			High	

* Related References: ECHA rating: 2

Study Citation:	NCBI, (2020). PubChem database: compound summary: 1,2-dichloropropane.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	6629413			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	78-87-5; 1,2-Dichloropropane			
Confidentiality, EndPoint, Type, Guideline	None; inherent biodegradability; Experimental; other			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	Not Reported; NR; NR; NR			
Oxygen, pH, and CEC	aerobic; Not reported; Not reported			
Test Type, Test Temperature, and Test Details	laboratory; 15C; Not reported			
Soil Type, Clay Silts and Organic Carbon, and Bulk Density	other; Not reported; Not reported			
Soil Classification, Microbial Biomass, and Humidity	fresh soil; Not reported: Not reported			
Duration, Parameter, System, and Sampling Frequency	Not reported; Not Reported; Closed; Not reported			
Control and Blank	Not reported; Not reported			
Concentration	Not Reported			
Analytical Method, Analytical Details, and Results Per Degredation Parameter	Not reported; Not reported; Not reported			
Results Remarks	Not reported			
Results Value, Standard Deviation Results, Sample Time Results, Reference Substance Results, and References Substance Compartment Results	mean half-life: 52 days; Not reported; Not reported; Not reported; Not Reported			
Results Details	Not reported			
Mean Total Recovery Results and Results Per Recovery	Not reported; Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified by name.
	Metric 2:	Test Substance Purity	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 2: Test Design	Metric 3:	Study Controls	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 4:	Test Substance Stability	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 3: Test Conditions				
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Study Citation:	NCBI, (2020). PubChem database: compound summary: 1,2-dichloropropane.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	6629413			
Domain		Metric	EVALUATION Rating	Comments
	Metric 5:	Test Method Suitability	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 6:	Testing Conditions	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 7:	Testing Consistency	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 8:	System Type and Design	N/A	closed system using fresh soil at 15°C.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 10:	Sampling Methods	N/A	Rating of this factor is not applicable to this kind of information.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 12:	Test Substance Purity	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	Rating of this factor is not applicable to this kind of information.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Not reported in this secondary source; the primary source likely contains more detail.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Not reported in this secondary source; the primary source likely contains more detail.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The results are reasonable based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
	Metric 18:	QSAR Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination			Medium	

* Related References: van Dijk H; Pestic Sci 11: 625-32 (1980)

Study Citation:	Roberts, T. R., Stoydin, G. (1976). The degradation of (Z)- and (E)-1,3-dichloropropenes and 1,2-dichloropropane in soil. Pest Management Science 7(4):325-335.
OECD Harmonized Template:	Biodegradation in Soil
HERO ID:	4840127

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; inherent biodegradability; Experimental; other: Biodegradation in closed-bottle
Solvent, Reactivity, Storage, Stability	Acetone; NR; NR; NR
Radiolabel, Source, State, Purity	1,2-dichloropropane-2-14C; NR; NR; >99% determined by radio-gas-liquid chromatography Notes: Specific activity 8.0 mCi/g
Oxygen, pH, and CEC	not specified; Not reported; Not reported
Test Type, Test Temperature, and Test Details	laboratory; 20 - 22°C; Soil and test substance mixture sealed in flask and stored in the dark until sampling. Separate flask taken at each sampling, whole sample extracted.
Soil Type, Clay Silts and Organic Carbon, and Bulk Density	sandy loam; 2% organic matter; Not reported
Soil Classification, Microbial Biomass, and Humidity	Not reported; Not reported: 15% moisture content
Duration, Parameter, System, and Sampling Frequency	80 wk; radiochem. meas.; 250 conical flask with 50 g soil and test substance in acetone (1 - 2 mL), sealed with glass stopped secured with tape; 4, 8, 12, and 80 wk
Control and Blank	Not reported; Not reported
Concentration	71 unclear whether mg/hg or mg/kg
Analytical Method, Analytical Details, and Results Per Degredation Parameter	Liquid scintillation counting with Intertechnique SL 40 instrument and Butyl-PBD-Triton X-100-toluene scintillator solution; Extracted from soil samples in acetone, re-extracted with water or methanol-water (1:1 v/v), and finally with 0.5 - 2% aqueous NaOH; Concentration as % applied radioactivity
Results Remarks	Only slight degradation observed. Total degradation products detected: < 0.2%/4wk, < 0.2%/8wk, < 0.2%/12wk, and < 0.2%/80wk
Results Value, Standard Deviation Results, Sample Time Results, Reference Substance Results, and References Substance Compartment Results	less than 2%; Not reported; 12 wk; Not reported; Not reported
Results Details	Not reported
Mean Total Recovery Results and Results Per Recovery	Not reported; 74 - 89%Concentration detected (% applied radioactivity): 89%/4 wk, 82%/8 wk, 80%/12 wk, 74%/80 wkUnextracted radioactivity: 0.6%/4wk, 0.4%/8wk, 0.3%/12wk, 1.0%/80wk

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High The test substance was identified by name.
	Metric 2:	Test Substance Purity	High The test substance purity was confirmed analytically.
Domain 2: Test Design	Metric 3:	Study Controls	Medium No explicit control was included.

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Study Citation:	Roberts, T. R., Stoydin, G. (1976). The degradation of (Z)- and (E)-1,3-dichloropropenes and 1,2-dichloropropane in soil. Pest Management Science 7(4):325-335.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	4840127			
		EVALUATION		
Domain		Metric	Rating	Comments
	Metric 4:	Test Substance Stability	High	The test substance preparation and storage conditions were reported and were appropriate.
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	Medium	Some testing conditions were reported, the majority of the soil conditions were said to have been reported in another source.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across samples and study groups.
	Metric 8:	System Type and Design	N/A	The metric is not applicable to this study type.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	The test inoculum were reported and are used for similar study types.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed the outcomes of interest.
	Metric 12:	Test Substance Purity	High	Sampling methods addressed the outcomes of interest and were appropriate for the chemical and media.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Variability and uncertainty were not explicitly considered in data evaluation.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Target chemical concentrations were reported and analytical methods were appropriate, however detection limits and extraction efficiency was not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	Statistical and kinetic calculations were not reported.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The results were reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.

Overall Quality Determination**High**

* Related References: HSDB and ECHA

Study Citation:	Roberts, T. R., Stoydin, G. (1976). The degradation of (Z)- and (E)-1,3-dichloropropenes and 1,2-dichloropropane in soil. Pest Management Science 7(4):325-335.
OECD Harmonized Template:	Biodegradation in Soil
HERO ID:	4840127

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; inherent biodegradability; Experimental; other: Biodegradation in closed-bottle
Solvent, Reactivity, Storage, Stability	Acetone; NR; NR; NR
Radiolabel, Source, State, Purity	1,2-dichloropropane-2-14C; NR; NR; >99% determined by radio-gas-liquid chromatography Notes: Specific activity 8.0 mCi/g
Oxygen, pH, and CEC	not specified; Not reported; Not reported
Test Type, Test Temperature, and Test Details	laboratory; 20 - 22°C; Soil and test substance mixture sealed in flask and stored in the dark until sampling. Separate flask taken at each sampling, whole sample extracted.
Soil Type, Clay Silts and Organic Carbon, and Bulk Density	loam; medium loam; 7% organic matter; Not reported
Soil Classification, Microbial Biomass, and Humidity	Not reported; Not reported: 30% moisture content
Duration, Parameter, System, and Sampling Frequency	20 wk; radiochem. meas.; 250 conical flask with 50 g soil and test substance in acetone (1 - 2 mL), sealed with glass stopped secured with tape; 12 and 20 wk
Control and Blank	Not reported; Not reported
Concentration	71 unclear whether mg/hg or mg/kg
Analytical Method, Analytical Details, and Results Per Degredation Parameter	Liquid scintillation counting with Intertechnique SL 40 instrument and Butyl-PBD-Triton X-100-toluene scintillator solution; Extracted from soil samples in acetone, re-extracted with water or methanol-water (1:1 v/v), and finally with 0.5 - 2% aqueous NaOH; Concentration as % applied radioactivity
Results Remarks	Only slight degradation observed.Total degradation products detected: < 0.2%/12wk, < 0.2%/20wk
Results Value, Standard Deviation Results, Sample Time Results, Reference Substance Results, and References Substance Compartment Results	Less than 2%; Not reported; 12 wk; Not reported; Not reported
Results Details	Not reported
Mean Total Recovery Results and Results Per Recovery	Not reported; 74 - 89%Concentration detected (% applied radioactivity): 77%/12 wk, 75%/20 wkUnextracted radioactivity: 3.0%/12wk, 4.0%/20wk

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High The test substance was identified by name.
	Metric 2:	Test Substance Purity	High The test substance purity was confirmed analytically.
Domain 2: Test Design	Metric 3:	Study Controls	Medium No explicit control was included.
	Metric 4:	Test Substance Stability	High The test substance preparation and storage conditions were reported and were appropriate.

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Study Citation:	Roberts, T. R., Stoydin, G. (1976). The degradation of (Z)- and (E)-1,3-dichloropropenes and 1,2-dichloropropane in soil. Pest Management Science 7(4):325-335.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	4840127			
Domain		Metric	EVALUATION	
			Rating	Comments
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	Medium	Some testing conditions were reported, the majority of the soil conditions were said to have been reported in another source.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across samples and study groups.
	Metric 8:	System Type and Design	N/A	The metric is not applicable to this study type.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	The test inoculum were reported and are used for similar study types.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed the outcomes of interest.
	Metric 12:	Test Substance Purity	High	Sampling methods addressed the outcomes of interest and were appropriate for the chemical and media.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Variability and uncertainty were not explicitly considered in data evaluation.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	Target chemical concentrations were reported and analytical methods were appropriate, however detection limits and extraction efficiency was not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	Statistical and kinetic calculations were not reported.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The results were reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.
Overall Quality Determination			High	

* Related References: HSDB and ECHA

Study Citation:	Roberts, T. R., Stoydin, G. (1976). The degradation of (Z)- and (E)-1,3-dichloropropenes and 1,2-dichloropropane in soil. Pest Management Science 7(4):325-335.
OECD Harmonized Template:	Biodegradation in Soil
HERO ID:	4840127

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	None; inherent biodegradability; Experimental; other: Biodegradation in outdoor open jar
Solvent, Reactivity, Storage, Stability	Acetone; NR; NR; NR
Radiolabel, Source, State, Purity	1,2-dichloropropane-2-14C; NR; NR; >99% determined by radio-gas-liquid chromatography Notes: Specific activity 8.0 mCi/g
Oxygen, pH, and CEC	not specified; Not reported; Not reported
Test Type, Test Temperature, and Test Details	other; Not reported; 3 cm sandy loam mixed with 7.0 mg test substance and covered with 12 cm layer untreated soil and pressed down
Soil Type, Clay Silts and Organic Carbon, and Bulk Density	sandy loam; 2% organic matter; Not reported
Soil Classification, Microbial Biomass, and Humidity	Not reported; Not reported: 15% moisture content
Duration, Parameter, System, and Sampling Frequency	6 mo; radiochem. meas.; Open glass jar 10 cm i.d. x 20 cm deep, stored outdoors protected from direct rainfall; 10 d, 6 mo
Control and Blank	Not reported; Not reported
Concentration	NR NR
Analytical Method, Analytical Details, and Results Per Degredation Parameter	Liquid scintillation counting with Intertechnique SL 40 instrument and Butyl-PBD-Triton X-100-toluene scintillator solution; Extracted from soil samples in acetone, re-extracted with water or methanol-water (1:1 v/v), and finally with 0.5 - 2% aqueous NaOH; Concentration degraded as % applied radioactivity
Results Remarks	More than 99% lost from the soil after 10 days treatment, no degradation occurred.
Results Value, Standard Deviation Results, Sample Time Results, Reference Substance Results, and References Substance Compartment Results	Not Reported; Not reported; 10 d; Not reported; Not reported
Results Details	Not reported
Mean Total Recovery Results and Results Per Recovery	Not reported; 0.4 % applied recovered

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified by name.
	Metric 2:	Test Substance Purity	High	The test substance purity was confirmed analytically.
Domain 2: Test Design	Metric 3:	Study Controls	Medium	No explicit control was included.
	Metric 4:	Test Substance Stability	High	The test substance preparation and storage conditions were reported and were appropriate.

Domain 3: Test Conditions

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Study Citation:	Roberts, T. R., Stoydin, G. (1976). The degradation of (Z)- and (E)-1,3-dichloropropenes and 1,2-dichloropropane in soil. Pest Management Science 7(4):325-335.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	4840127			
Domain		Metric	EVALUATION Rating	Comments
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	Medium	Some testing conditions were reported, the majority of the soil conditions were said to have been reported in another source.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across samples and study groups.
	Metric 8:	System Type and Design	Low	The open-system design, given the volatility of the test substance, is not capable of appropriately maintaining substance concentrations. Loss was attributed to volatilization.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	High	The test inoculum were reported and are used for similar study types.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed the outcomes of interest.
	Metric 12:	Test Substance Purity	High	Sampling methods addressed the outcomes of interest and were appropriate for the chemical and media.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Variability and uncertainty were not explicitly considered in data evaluation.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Low	Target chemical concentrations were reported; however, there is inconsistent reporting of units mg/kg or mg/hg. Analytical methods were appropriate, however detection limits and extraction efficiency was not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	Statistical and kinetic calculations were not reported.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The results were reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.
Overall Quality Determination			High	

* Related References: HSDB and ECHA

Study Citation:	Tesoriero, A. J., Löffler, F. E., Liebscher, H. (2001). Fate and origin of 1,2-dichloropropane in an unconfined shallow aquifer. Environmental Science & Technology 35(3):455-461.
OECD Harmonized Template:	Biodegradation in Soil
HERO ID:	2797868

EXTRACTION	
Parameter	Data
CASRN and Test Material	78-87-5; 1,2-Dichloropropane
Confidentiality, EndPoint, Type, Guideline	Not Reported; Inherent biodegradability, microcosm study, aquifer material, products reported; Experimental; Inherent biodegradability, microcosm study, aquifer material from impacted site, products reported; other: Microcosm
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NA; NR; NR; NR
Oxygen, pH, and CEC	Aerobic; NR; NR
Test Type, Test Temperature, and Test Details	laboratory; 25 deg C; Systems shaken at 100 rpm. Systems amended with 2.5 mM actate, 2 mM formate, 2 mM propionate, 2 mM butyrate, 2 mM pyruvate, 2 mM lactate, or 2 mM glycerol as electron donors
Soil Type, Clay Silts and Organic Carbon, and Bulk Density	other; NR; NR
Soil Classification, Microbial Biomass, and Humidity	NR; Aquifer material collected from groundwater well at 3.3 - 4.3 m depth: NR
Duration, Parameter, System, and Sampling Frequency	4 months; Test material; 24 mL glass vial with 2 g aquifer material and 20 mM potassium phosphate buffer, sealed with teflon-lined rubber stoppers; Once
Control and Blank	NR; NR
Concentration	2.5 umol
Analytical Method, Analytical Details, and Results Per Degredation Parameter	GC-FID; NR; Appearance of degradation products
Results Remarks	Not Reported
Results Value, Standard Deviation Results, Sample Time Results, Reference Substance Results, and References Substance Compartment Results	0%; Not Reported; 4 months; NR; NR
Results Details	Not Reported
Mean Total Recovery Results and Results Per Recovery	NR; NR

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified definitively by name.
	Metric 2:	Test Substance Purity	Medium	The source and purity of the test substance was not reported.
Domain 2: Test Design	Metric 3:	Study Controls	Medium	Sterile controls were not explicitly included.
	Metric 4:	Test Substance Stability	Medium	Test substance storage and preparation were not reported.

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Study Citation:	Tesoriero, A. J., Löffler, F. E., Liebscher, H. (2001). Fate and origin of 1,2-dichloropropane in an unconfined shallow aquifer. Environmental Science & Technology 35(3):455-461.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	2797868			
Domain		Metric	EVALUATION Rating	Comments
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	High	The test method and tested concentrations were appropriate for the test substance.
	Metric 6:	Testing Conditions	High	Temperature, aerobic/anaerobic conditions, and electron donors were reported.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across study groups.
	Metric 8:	System Type and Design	N/A	Not applicable.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	Medium	The inoculum source was reported and is routinely used for similar study types. It was not clear if the aquifer samples came from impacted sites.
	Metric 10:	Sampling Methods	N/A	Not applicable.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	As part of the methodology the study authors did identify products, but did not calculate test substance degradation based on the appearance of products.
	Metric 12:	Test Substance Purity	Medium	Sampling frequency was insufficiency for degradation rate calculation.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Low	Variability and uncertainty were not explicitly addressed.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	Not applicable.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Low	The analytical method was appropriate; no other details other than instrumentation were reported. Data was reported graphically and degradation was calculated by the reviewer.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	Statistical and kinetic calculations were not conducted.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Medium	The general degradation of the test substance in aerobic vs anaerobic zones was supported by the field study findings. Many experimental details may have been reported in a previously published study.
	Metric 18:	QSAR Models	N/A	Not applicable.
Overall Quality Determination			Medium	

Study Citation:	Tesoriero, A. J., Löffler, F. E., Liebscher, H. (2001). Fate and origin of 1,2-dichloropropane in an unconfined shallow aquifer. Environmental Science & Technology 35(3):455-461.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	2797868			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	78-87-5; 1,2-Dichloropropane			
Confidentiality, EndPoint, Type, Guideline	Not Reported; Inherent biodegradability, microcosm study, aquifer material, products reported; Experimental; Inherent biodegradability, microcosm study, aquifer material from impacted site, products reported; other			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	NA; NR; NR; NR			
Oxygen, pH, and CEC	Anaerobic, iron-reducing; NR; NR			
Test Type, Test Temperature, and Test Details	laboratory; 25 deg C; Systems incubated without shaking, in the dark. Systems amended with 2.5 mM actate, 2 mM formate, 2 mM propionate, 2 mM butyrate, 2 mM pyruvate, 2 mM lactate, or 2 Mm glycerol as electron donors			
Soil Type, Clay Silts and Organic Carbon, and Bulk Density	other; NR; NR			
Soil Classification, Microbial Biomass, and Humidity	NR; Aquifer material collected from groundwater well at 6 - 7 m m depth: NR			
Duration, Parameter, System, and Sampling Frequency	4 months; Test material; 24 mL glass vial with 2 g aquifer material and 20 mM potassium phosphate buffer, sealed with teflon-lined rubber stoppers; Once			
Control and Blank	NR; NR			
Concentration	2.5 umol			
Analytical Method, Analytical Details, and Results Per Degredation Parameter	GC-FID; NR; Appearance of degradation products (1-chloropropane and 2-chloropropane			
Results Remarks	% degradation calculated by reviewer based on umol initial test substance and approx. umol formation of 1-chloropropane and 2-chloropropane reported in figureNone: no product formation, no degradationAcetate: no product formation, no degradationAcetate + H2: no product formation, no degradationAcetate + formate: 0.35 umol 1-CP, 0.03 umol 2-CP; 15.2% degradationAcetate + propionate: 0.45 umol 1-CP, 0.04 umol 2-CP; 19.6% degradationAcetate + butyrate: 1.3 umol 1-CP, 0.19 umol 2-CP; 59.6% degradationAcetate + pyruvate: 0.62 umol 1-CP, 0.04 umol 2-CP; 26.4% degradationAcetate + lactate: 0.58 umol 1-CP, 0.04 umol 2-CP; 24.8% degradationAcetate + glycerol: 0.94 umol 1-CP, 0.1 umol 2-CP; 41.6% degradation			
Results Value, Standard Deviation Results, Sample Time Results, Reference Substance Results, and Referencs Substance Compartment Results	Approx. 0-59.6%; Not Reported; 4 months; NR; NR			
Results Details	Not Reported			
Mean Total Recovery Results and Results Per Recovery	NR; NR			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance				
	Metric 1:	Test Substance Identity	High	The test substance was identified definitively by name.
	Metric 2:	Test Substance Purity	Medium	The source and purity of the test substance was not reported.
Domain 2: Test Design				
	Metric 3:	Study Controls	Medium	Sterile controls were not explicitly included.
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Study Citation:	Tesoriero, A. J., Löffler, F. E., Liebscher, H. (2001). Fate and origin of 1,2-dichloropropane in an unconfined shallow aquifer. Environmental Science & Technology 35(3):455-461.			
OECD Harmonized Template:	Biodegradation in Soil			
HERO ID:	2797868			
EVALUATION				
Domain	Metric		Rating	Comments
	Metric 4:	Test Substance Stability	Low	Test substance storage and preparation were not reported.
Domain 3: Test Conditions	Metric 5:	Test Method Suitability	High	The test method and tested concentrations were appropriate for the test substance.
	Metric 6:	Testing Conditions	High	Temperature, aerobic/anaerobic conditions, and electron donors were reported.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across study groups.
	Metric 8:	System Type and Design	N/A	Not applicable.
Domain 4: Test Organisms	Metric 9:	Outcome Assessment Methodology	Medium	The inoculum source was reported and is routinely used for similar study types. It was not clear if the aquifer samples came from impacted sites.
	Metric 10:	Sampling Methods	N/A	Not applicable.
Domain 5: Outcome Assessment	Metric 11:	Test Substance Identity	Medium	As part of the methodology the study authors did identify products, but did not calculate test substance degradation based on the appearance of products.
	Metric 12:	Test Substance Purity	Medium	Sampling frequency was insufficiency for degradation rate calculation.
Domain 6: Confounding/Variable Control	Metric 13:	Confounding Variables	Medium	Variability and uncertainty were not explicitly addressed.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	Not applicable.
Domain 7: Data Presentation and Analysis	Metric 15:	Data Reporting	Low	The analytical method was appropriate; no other details other than instrumentation were reported. Data was reported graphically and degradation was calculated by the reviewer.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	Statistical and kinetic calculations were not conducted.
Domain 8: Other	Metric 17:	Verification or Plausibility of Results	Medium	The general degradation of the test substance in aerobic vs anaerobic zones was supported by the field study findings. Many experimental details may have been reported in a previously published study.
	Metric 18:	QSAR Models	N/A	Not applicable.

Overall Quality Determination**Medium**

Study Citation:	OECD, (2006). SIDS Initial Assessment Report: 1,2-Dichloropropane. :219.
OECD Harmonized Template:	Aquatic Bioconcentration
HERO ID:	5160041

EXTRACTION

Parameter	Data
CASRN and Test Material	78-87-5; 1,2-dichloropropane
Confidentiality, Type, and Guideline	none; experimental; OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish) - [before 14 June 1996]
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	NR; NR; NR; NR Notes: NR
Test Organism and Test Organism Details	not reported; carp
Lipid Content, Test Temperature, pH, and Depuration Time	not reported; not reported; not reported; not reported
Media Type, TOC, and Salinity	not reported; not reported; not reported
Dissolved Oxygen, Conductivity, and Hardness	not reported; not reported; not reported
Exposure Route, Elimination, and Nominal Measurements	not reported; not reported; not reported
Test Type, Test Temperature, and Test Condition	not reported; not reported; not reported
Comments	
Duration, Parameter, and Sampling Frequency	not reported; not reported; not reported
Concentration	= 0.04 - = 0.4 mg/L
Analytical Method and Analytical Details	not reported; not reported;
Rate Constant and Results per Recovery	not reported; not reported
Statistics, Basis, and Calculation Basis	not reported; not reported; not reported
Results Value and Results Details	BCF = 0.5-7; not reported
Metabolites, Reference, and Results Reference Substance	not reported; not reported; not reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Test Substance	Metric 1: Test Substance Identity	High	The test substance was identified definitively.
	Metric 2: Test Substance Purity	N/A	The metric is not applicable this source.
Domain 2: Test Design	Metric 3: Study Controls	N/A	The metric is not applicable this source.
	Metric 4: Test Substance Stability	N/A	The metric is not applicable this source.
Domain 3: Test Conditions	Metric 5: Test Method Suitability	N/A	The metric is not applicable this source.
	Metric 6: Testing Conditions	N/A	The metric is not applicable this source.
	Metric 7: Testing Consistency	N/A	The metric is not applicable this source.

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Study Citation:	OECD, (2006). SIDS Initial Assessment Report: 1,2-Dichloropropane. :219.			
OECD Harmonized Template:	Aquatic Bioconcentration			
HERO ID:	5160041			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 8:	System Type and Design	N/A	The metric is not applicable this source.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable this source.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable this source.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	N/A	The metric is not applicable this source.
	Metric 12:	Test Substance Purity	N/A	The metric is not applicable this source.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	The metric is not applicable this source.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable this source.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	N/A	The metric is not applicable this source.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	The metric is not applicable this source.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Medium	Limited detail reported in the cited source.
	Metric 18:	QSAR Models	N/A	The metric is not applicable this source.

Overall Quality Determination

High

* Related References: Source cited: MITI 1992 Biodegradation and bioaccumulation data of existing chemicals based on the CSCL Japan. Edited by Chemicals Inspection & Testing Institute, Japan, October 1992, 2-18.

Study Citation:	Ali, S. M., Bowes, G. W., Cohen, D. B. (1986). Occurrence and fate of 1,2-dichloropropane in California, USA ground water and soil samples. Abstracts of Papers of the American Chemical Society 191:14-ENVR.			
OECD Harmonized Template:	Adsorption and Desorption			
HERO ID:	2799812			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	NR; 1,2-dichloropropane			
Confidentiality, Type, Guideline	None; experimental; other: None, monitoring study			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	NR; NR; NR; NR Notes: NR			
Sampling Frequency, Sampling Details, and Number of Replicates	NR; NR; NR			
pH, Test Temperature, Buffer, and Test Details	NR; NR; NR; NR			
Matrix, Clay Silts and Organic Carbon, and CEC	other; NR; NR			
Bulk Density and Matrix Details	NR; California soil and groundwater discussed			
Media, Recovery, and Statistics	NR; NR; NR			
Transformation Products, Equilibrium Adsorption Details, and Equilibrium Desorption Details	NR; NR; NR			
Reference Substance, Reference Substance Results, and Percent Adsorption	NR; NR; NR			
Adsorption Coefficient Type, Adsorption Coefficient Results, Adsorption Coefficient Results Comments, and Adsorption Desorption Type	NR; NR; NR; NR			
Partition Coefficient Type and Partition Coefficient Results	NR; Monitoring data presented in an abstract: 75 wells from nine counties had up to 1200 ppb 1,2-DCP, 12 domestic wells exceeded 10 ppb 1,2-DCP, at an agricultural site a 24-foot soil profile had up to 12.2 ppb 1,2-DCP.			
Partition Coefficient Phase and Partition Coefficient Results	NR; NR			
Mass Balance	NR			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified definitively.
	Metric 2:	Test Substance Purity	Low	The source and purity of the test substance were not reported or verified by analytical means.
Domain 2: Test Design	Metric 3:	Study Controls	Low	No details reported in the study report (abstract).
	Metric 4:	Test Substance Stability	N/A	No details reported in the study report (abstract).
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Study Citation:	Ali, S. M., Bowes, G. W., Cohen, D. B. (1986). Occurrence and fate of 1,2-dichloropropane in California, USA ground water and soil samples. Abstracts of Papers of the American Chemical Society 191:14-ENVR.			
OECD Harmonized Template:	Adsorption and Desorption			
HERO ID:	2799812			
Domain		Metric	EVALUATION Rating	Comments
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	N/A	No details reported in the study report (abstract).
	Metric 6:	Testing Conditions	Uninformative	Testing conditions were not reported and data provided were insufficient to interpret results.
	Metric 7:	Testing Consistency	N/A	No details reported in the study report (abstract).
	Metric 8:	System Type and Design	N/A	No details reported in the study report (abstract).
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to this study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Low	There was incomplete reporting of outcome assessment methods.
	Metric 12:	Test Substance Purity	N/A	No details reported in the study report (abstract).
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	No details reported in the study report (abstract).
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Low	There was insufficient evidence presented to confirm that parent compound disappearance was not likely due to some other process.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	No quantitative data reported.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Low	Due to limited information, evaluation of the reasonableness of the study results was not possible.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.
Overall Quality Determination			Uninformative	

Study Citation:	Chiou, C. T., Peters, L. J., Freed, V. H. (1979). A physical concept of soil-water equilibria for nonionic organic compounds. Science 206(4420):831-832.			
OECD Harmonized Template:	Adsorption and Desorption			
HERO ID:	18016			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	78-87-5; 1,2-Dichloropropane			
Confidentiality, Type, Guideline	None; Experimental; other: Organic matter-water partitioning of 1,2-DCP in soil.			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	NR; NR; NR; NR			
Sampling Frequency, Sampling Details, and Number of Replicates	Not reported; Not reported; Not Reported			
pH, Test Temperature, Buffer, and Test Details	6.8; 20°C; Not Reported; Not reported			
Matrix, Clay Silts and Organic Carbon, and CEC	silt loam; 26/69/3.3/1.6; Not reported			
Bulk Density and Matrix Details	Not reported; Not reported			
Media, Recovery, and Statistics	Not reported; Not reported; Not Reported			
Transformation Products, Equilibrium	Not Reported; Not Reported; Not Reported			
Adsorption Details, and Equilibrium Desorption Details	Not Reported; Not Reported; Not Reported			
Reference Substance, Reference Substance Results, and Percent Adsorption	Not Reported; Not Reported; Not Reported			
Adsorption Coefficient Type, Adsorption Coefficient Results, Adsorption Coefficient Results Comments, and Adsorption	Not Reported; Not Reported; Not Reported; Not Reported			
Desorption Type	Not Reported; Not Reported; Not Reported			
Partition Coefficient Type and Partition Coefficient Results	Soil organic-water distribution coefficient; 27			
Partition Coefficient Phase and Partition Coefficient Results	Not Reported; Log Koc: 1.4			
Mass Balance	Not Reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified using common nomenclature.
	Metric 2:	Test Substance Purity	Medium	The test substance purity was not reported; however, the omission is unlikely to have a substantial impact on the study results.
Domain 2: Test Design	Metric 3:	Study Controls	Uninformative	Controls were not reported in the study.
	Metric 4:	Test Substance Stability	Medium	The test substance preparation and storage conditions were not reported but are unlikely to have a substantial impact on the study results.
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Study Citation:	Chiou, C. T., Peters, L. J., Freed, V. H. (1979). A physical concept of soil-water equilibria for nonionic organic compounds. Science 206(4420):831-832.			
OECD Harmonized Template:	Adsorption and Desorption			
HERO ID:	18016			
Domain	Metric	EVALUATION		Comments
		Rating		
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	Low	The test method was not specified.
	Metric 6:	Testing Conditions	High	The testing conditions were reported and appropriate.
	Metric 7:	Testing Consistency	High	There were no reported changes in the testing conditions between study groups.
	Metric 8:	System Type and Design	Low	Some details regarding the system type were not reported.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to the study type.
	Metric 10:	Sampling Methods	High	The soil type was described.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	Some details regarding the outcome assessment methodology were not reported but the omissions are unlikely to have a substantial impact on the study results.
	Metric 12:	Test Substance Purity	Medium	The sampling methods were not reported; however, the omissions are unlikely to have a substantial impact on the study results.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Low	Uncertainty was not reported in the partition coefficients which may have an impact on the results.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to the study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Low	The analytical method was not reported which may have an impact on the study results.
	Metric 16:	Statistical Methods and Kinetic Calculations	Low	A statistical analysis was not reported.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Low	Due to limited information, the reasonableness of the study results could not be evaluated.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to the study type.
Overall Quality Determination		Uninformative		

Study Citation:	Poole, S. K., Poole, C. F. (1999). Chromatographic models for the sorption of neutral organic compounds by soil from water and air. Journal of Chromatography A 845(1-2):381-400.
OECD Harmonized Template:	Adsorption and Desorption
HERO ID:	645740

EXTRACTION	
Parameter	Data
CASRN and Test Material	Not Reported; Not Reported
Confidentiality, Type, Guideline	None; Calculation; other: model for sorption and partitioning
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	None; NR; NR; NR
Sampling Frequency, Sampling Details, and Number of Replicates	Not applicable; Not applicable; Not applicable
pH, Test Temperature, Buffer, and Test Details	Not applicable; Not applicable; Not applicable; 138 compounds were used in soil-water model; 69 compounds were used in soil-air model; using up to 6 descriptors; characteristic volume (0.776 cm ³ /mol/100), excess molar refraction (0.371 cm ³ /10), solute's dipolarity/polarizability (0.60), solute's hydrogen-bond acidity (0.10), solute's hydrogen-bond basicity (0.11), distribution constant between gas and n-hexadecane @ 298 K (2.857)
Matrix, Clay Silts and Organic Carbon, and CEC	other; Not applicable; Not applicable
Bulk Density and Matrix Details	Not applicable; Not applicable
Media, Recovery, and Statistics	Not applicable; Not applicable; Summary of statistics for 138 compounds for soil-water: p=0.940, SE=0.391, F=202; for 69 compounds soil-air: p=0.991, SE=0.238, F=667
Transformation Products, Equilibrium Adsorption Details, and Equilibrium Desorption Details	Not applicable; Not applicable; Not applicable
Reference Substance, Reference Substance Results, and Percent Adsorption	Not applicable; Not applicable; Not applicable
Adsorption Coefficient Type, Adsorption Coefficient Results, Adsorption Coefficient Results Comments, and Adsorption Desorption Type	Not applicable; Not applicable; Not applicable; Not applicable
Partition Coefficient Type and Partition Coefficient Results	Log K _{oc} ; Log K _{ow} ; Log K _{oca} ; 1.67; 1.99; 2.60
Partition Coefficient Phase and Partition Coefficient Results	soil-water (K _{oc}); octanol-water (K _{ow}); soil-air (K _{oca}); Not Reported
Mass Balance	Not applicable

EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified by name.
	Metric 2:	Test Substance Purity	N/A	The metric is not applicable to this study type.
Domain 2: Test Design	Metric 3:	Study Controls	N/A	The metric is not applicable to this study type.

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Study Citation:	Poole, S. K., Poole, C. F. (1999). Chromatographic models for the sorption of neutral organic compounds by soil from water and air. Journal of Chromatography A 845(1-2):381-400.			
OECD Harmonized Template:	Adsorption and Desorption			
HERO ID:	645740			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 4:	Test Substance Stability	N/A	The metric is not applicable to this study type.
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	N/A	The metric is not applicable to this study type.
	Metric 6:	Testing Conditions	N/A	The metric is not applicable to this study type.
	Metric 7:	Testing Consistency	N/A	The metric is not applicable to this study type.
	Metric 8:	System Type and Design	N/A	The metric is not applicable to this study type.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to this study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	N/A	The metric is not applicable to this study type.
	Metric 12:	Test Substance Purity	N/A	The metric is not applicable to this study type.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	The metric is not applicable to this study type.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	High	This metric met the criteria for high confidence as expected for this type of study.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	This metric met the criteria for high confidence as expected for this type of study.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	This metric met the criteria for high confidence as expected for this type of study.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.
Overall Quality Determination		High		

Study Citation:	Van Dijk, H. (1980). Dissipation rates in soil of 1,2-dichloropropane and 1,3- and 2,3-dichloropropenes. Pesticide Science 11(6):625-632.			
OECD Harmonized Template:	Adsorption and Desorption			
HERO ID:	2799279			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	78-87-5; 1,2-Dichloropropane			
Confidentiality, Type, Guideline	None; Experimental; other: Soil dissipation study			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	NR; NR; NR; NR			
Sampling Frequency, Sampling Details, and Number of Replicates	1; extracted with xylene and water; 4 different soils			
pH, Test Temperature, Buffer, and Test Details	4.3, 5, 7.6, 7.7 for soil; 15°C; yes; 5.5 and 7.5 buffer; sealed glass containers			
Matrix, Clay Silts and Organic Carbon, and CEC	Not Reported; organic content 7.7 and 1.9% and 1.5 and 1.8 %; clay content 7.9 and 17.4%; Not reported			
Bulk Density and Matrix Details	Not reported; Spier and Wageningen			
Media, Recovery, and Statistics	distilled water; Not reported; average reported			
Transformation Products, Equilibrium	Not applicable; Yes, 24h; Not reported			
Adsorption Details, and Equilibrium Desorption Details				
Reference Substance, Reference Substance Results, and Percent Adsorption	Not applicable; Not applicable; Not applicable			
Adsorption Coefficient Type, Adsorption Coefficient Results, Adsorption Coefficient Results Comments, and Adsorption Desorption Type	Not reported; Not reported; Not reported; Not reported			
Partition Coefficient Type and Partition Coefficient Results	Dissipation rate constant and half-life; kr= 0.013 (average) t1/2 = 52 days			
Partition Coefficient Phase and Partition Coefficient Results	soil-water; Not Reported			
Mass Balance	closed system, mass balance considered			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified definitively.
	Metric 2:	Test Substance Purity	Low	The test substance source and purity were not reported.
Domain 2: Test Design	Metric 3:	Study Controls	Medium	Study controls were not included or discussed.
	Metric 4:	Test Substance Stability	High	This metric met the criteria for high confidence as expected for this type of study.
Domain 3: Test Conditions	Metric 5:	Test Method Suitability	High	The test method was suitable.
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Study Citation:	Van Dijk, H. (1980). Dissipation rates in soil of 1,2-dichloropropane and 1,3- and 2,3-dichloropropenes. Pesticide Science 11(6):625-632.			
OECD Harmonized Template:	Adsorption and Desorption			
HERO ID:	2799279			
Domain	Metric	EVALUATION		Comments
	Metric 6:	Testing Conditions	Medium	Soil matrix details and characteristics were not fully reported.
	Metric 7:	Testing Consistency	High	This metric met the criteria for high confidence as expected for this type of study.
	Metric 8:	System Type and Design	High	The system type and design were appropriate.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to this study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	Koc not reported; however, dissipation rate constant determined.
	Metric 12:	Test Substance Purity	Medium	Minimal detail on sampling, analytical methods and standards; however, the limitations were not likely to have a substantial impact on results.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	High	No confounding variables were noted.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	The target chemical concentrations, extraction efficiency, percent recovery were not reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Statistical analysis was not reported.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The study results are reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.

Overall Quality Determination

Medium

* Related References: ECHA rating: 2; cited in NLM HSDB

Study Citation:	Buszka, P. M., Yeskis, D. J., Kolpin, D. W., Furlong, E. T., Zaugg, S. D., Meyer, M. T. (2009). Waste-indicator and pharmaceutical compounds in landfill-leachate-affected ground water near Elkhart, Indiana, 2000-2002. Bulletin of Environmental Contamination and Toxicology 82(6):653-659.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	4912133			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	Not Reported; 1,2-dichloropropane			
Confidentiality, Type, Guideline	no; monitoring; monitoring			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	NR; NR; NR; NR			
Test Method Details, Test Condition Details, and Test Consistency Details	test chemical concentration measured at an observation well downgradient from a landfill near Elkhart, Indiana and at a domestic well in a neighborhood east of thelandfill; The domestic well water had concentrations of acetaminophen and caffeine larger than the concentrations detected in the observation well water; the authors suggest this indicates domestic well water may be contaminated by nearby septic systems. However, leachate contamination of the domestic well water was also indicated by the presence of benzene, chloroform, 1,2-dichloroethane, vinyl chloride, 1,1-dichloroethane, arsenic, sodium, and calcium.; duplicate samples were obtained and analyzed			
System Type Design	Not Reported			
Sampling Frequency and Sampling Details	twice for wells downgradient from the landfill, once for domestic well samples; sample dates were 11/16/2000 and 10/31/2002			
Test Temperature	NR			
Results Details	average concentrations were 1 (1, 1) and <4.4 (<4.4, <4.4) ug/L for samples in 2000 and 2002, respectively and 8 ug/L from the domestic well on 11/15/2000			
Analytical Method and Analytical Details	GC/MS; Not Reported			
Transformation Products, Statistics, and Kinetics	Not Reported; Not Reported; Not Reported			
Reference Substance and Reference Substance Results	Not Reported; Not Reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance				
	Metric 1:	Test Substance Identity	High	The test substance was identified by name.
	Metric 2:	Test Substance Purity	Medium	The analytical substance source or purity were not reported; however, the omissions were not likely to have a substantial impact on the study results.
Domain 2: Test Design				
	Metric 3:	Study Controls	Medium	Some concurrent control details were not reported; however, the lack of data was not likely to have a substantial impact on study results.
	Metric 4:	Test Substance Stability	N/A	This metric is not applicable to this study type.
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	N/A	This metric is not applicable to this study type.
	Metric 6:	Testing Conditions	Medium	Testing conditions were monitored, reported, and appropriate for the method.
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Study Citation:	Buszka, P. M., Yeskis, D. J., Kolpin, D. W., Furlong, E. T., Zaugg, S. D., Meyer, M. T. (2009). Waste-indicator and pharmaceutical compounds in landfill-leachate-affected ground water near Elkhart, Indiana, 2000-2002. Bulletin of Environmental Contamination and Toxicology 82(6):653-659.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	4912133			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 7:	Testing Consistency	Medium	Some test conditions across samples or study groups were not reported, but these discrepancies were not likely to have a substantial impact on study results.
	Metric 8:	System Type and Design	High	Equilibrium is assumed under field conditions.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to this study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Low	The assessment methodology reported the presence of the target chemical in ground-water; however, the environmental transport and/or persistence of the compound were unable to be quantified.
	Metric 12:	Test Substance Purity	High	The study reported the use of sampling methods that address the outcome(s) of interest, and used widely accepted methods/approaches for the chemical and media being analyzed.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	No confounding variables were noted.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Low	There was insufficient evidence presented to confirm that parent compound disappearance was not likely due to some other process.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Kinetic calculations were not clearly described.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Low	Due to limited information, evaluation of the reasonableness of the study results was not possible.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.
Overall Quality Determination		Medium		

Study Citation:	Kincannon, D. F., Stover, E. L., Nichols, V., Medley, D. (1983). Removal mechanisms for toxic priority pollutants. Journal of Water Pollution Control Federation 55(2):157-163.
OECD Harmonized Template:	Miscellaneous
HERO ID:	1009775

Parameter		EXTRACTION	
CASRN and Test Material	78-87-5; 0		
Confidentiality, Type, Guideline	None; Experimental; Experimental		
Solvent, Reactivity, Storage, Stability	Not Reported; Not Reported; Not Reported; Not Reported		
Radiolabel, Source, State, Purity	Not Reported; Not Reported; Not Reported; Not Reported		
Test Method Details, Test Condition Details, and Test Consistency Details	Test substance removal in continuous-flow activated sludge system; Residence times 2, 4, and 6 days per system cell; mean cell residence time 3 d; Not Reported		
System Type Design	Continuous-flow system with internal recycle reactor, settling compartment, and collection tank. Off-gas collected through a vacuum pump to a purge trap with 150 mm Tenax and 100 mm silica gel		
Sampling Frequency and Sampling Details	not reported; not reported		
Test Temperature	Not Reported		
Results Details	99.0% Overall removal efficiency. Effluent: 1.81 mg/L 89% via stripping; ND sorption; ND biodegradation		
Analytical Method and Analytical Details	Not Reported; Not Reported		
Transformation Products, Statistics, and Kinetics	Not Reported; Not Reported; Not Reported		
Reference Substance and Reference Substance Results	Not Reported; Not Reported		
Domain		EVALUATION	
Metric		Rating	Comments
Domain 1: Test Substance			
Metric 1:	Test Substance Identity	High	The test substance was identified definitively.
Metric 2:	Test Substance Purity	Medium	The test substance purity and source were not reported, however this is not likely to have a significant impact on study results
Domain 2: Test Design			
Metric 3:	Study Controls	Medium	Concurrent control was not explicitly included
Metric 4:	Test Substance Stability	Medium	The test substance preparation and storage conditions were not reported
Domain 3: Test Conditions			
Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance
Metric 6:	Testing Conditions	Medium	Some of the test conditions were reported; many were not despite reportedly monitored
Metric 7:	Testing Consistency	High	Test conditions were consistent across replicates
Metric 8:	System Type and Design	N/A	The metric is not applicable to the study type.
Domain 4: Test Organisms			

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Study Citation:	Kincannon, D. F., Stover, E. L., Nichols, V., Medley, D. (1983). Removal mechanisms for toxic priority pollutants. Journal of Water Pollution Control Federation 55(2):157-163.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	1009775			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 9:	Outcome Assessment Methodology	High	The inoculum source was reported and is used for similar study types.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed or reported the intended outcome of interest.
	Metric 12:	Test Substance Purity	Medium	The study did not specify sampling methods but the samples collected address the outcomes of interest.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Sources of variability and uncertainty were not explicitly considered.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	High	Sufficient evidence was presented to confirm that the parent disappearance was not likely due to some other process
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Statistical analyses was not conducted but sufficient data were reported to conduct an independent analysis
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The study results were reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to the study type.
Overall Quality Determination		High		

Study Citation:	Monsanto, (1987). Monsanto Pensacola plant ground water assessment feasibility study with 19 chemicals with attachments and cover letter dated 121887.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	4214180			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	Not Reported; 1,2-dichloropropane			
Confidentiality, Type, Guideline	None; Monitoring data and modeling; Monitoring data and modeling			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	NR; Contaminated site; NR; NA Notes: NR			
Test Method Details, Test Condition Details, and Test Consistency Details	Monitoring sample from Monsanto Pensacola Plant groundwater; NA; NR			
System Type Design	NR			
Sampling Frequency and Sampling Details	NR; NR			
Test Temperature	NR			
Results Details	Detected at 0.008 mg/L at or near area E; modeling results 3.6E-5 to 9.7E-10 mg/L			
Analytical Method and Analytical Details	Assumed the Florida Groundwater and Surface Quality Criteria in appendix was used.; NR			
Transformation Products, Statistics, and Kinetics	NR; NR; NR			
Reference Substance and Reference Substance Results	NR; NR			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified definitively.
	Metric 2:	Test Substance Purity	N/A	This metric does not apply to this type of study.
Domain 2: Test Design	Metric 3:	Study Controls	N/A	This metric does not apply to this type of study.
	Metric 4:	Test Substance Stability	N/A	This metric does not apply to this type of study.
Domain 3: Test Conditions	Metric 5:	Test Method Suitability	Uninformative	Lack of information resulted in serious flaws that make the study unusable.
	Metric 6:	Testing Conditions	Uninformative	Lack of information resulted in serious flaws that make the study unusable.
	Metric 7:	Testing Consistency	N/A	This metric does not apply to this type of study.
	Metric 8:	System Type and Design	N/A	This metric does not apply to this type of study.
Domain 4: Test Organisms	Metric 9:	Outcome Assessment Methodology	N/A	This metric does not apply to this type of study.
	Metric 10:	Sampling Methods	N/A	This metric does not apply to this type of study.
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Study Citation:	Monsanto, (1987). Monsanto Pensacola plant ground water assessment feasibility study with 19 chemicals with attachments and cover letter dated 121887.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	4214180			
Domain	Metric	EVALUATION Rating		Comments
Domain 5: Outcome Assessment	Metric 11:	Test Substance Identity	Medium	There was incomplete reporting of outcome assessment methods; however, such differences or absence of details were not likely to be severe or have a substantial impact on the study results.
	Metric 12:	Test Substance Purity	Low	Details regarding sampling methods of the outcome(s) were not fully reported, and the omissions were likely to have a substantial impact on study results.
Domain 6: Confounding/Variable Control	Metric 13:	Confounding Variables	N/A	This metric does not apply to this type of study.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	This metric does not apply to this type of study.
Domain 7: Data Presentation and Analysis	Metric 15:	Data Reporting	Low	Concentrations of the target chemical or transformation product(s), extraction efficiency, percent recovery, or mass balance were not measured or reported, preventing meaningful interpretation of study results.
	Metric 16:	Statistical Methods and Kinetic Calculations	Medium	Limited statistical and/or kinetic details reported; however, these differences were not likely to have a substantial impact on study results.
Domain 8: Other	Metric 17:	Verification or Plausibility of Results	Medium	The study results were reasonable.
	Metric 18:	QSAR Models	N/A	This metric does not apply to this type of study.
Overall Quality Determination		Uninformative		

Study Citation:	(1982). Fate of Priority Pollutants in Publicly Owned Treatment Works, Volume I.
OECD Harmonized Template:	Miscellaneous
HERO ID:	1265686

EXTRACTION

Parameter	Data
CASRN and Test Material	Not Reported; 1,2-dichloropropane
Confidentiality, Type, Guideline	None; experimental; experimental
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR
Radiolabel, Source, State, Purity	No; NR; NR; NR
Test Method Details, Test Condition Details, and Test Consistency Details	influent, effluent and sludge samples from 50 treatment plants (plant descriptions are available); duplicate and field blanks were included; plant treatments: primary (P); secondary activated sludge (AS); secondary trickling filter (TF); secondary oxygen activated sludge (OAS); secondary rotating biological contactor (RBC); secondary aerated lagoon (AL); secondary parallel activated sludge and trickling filter (AS/TF); tertiary (T); not reported
System Type Design	not reported
Sampling Frequency and Sampling Details	influent, effluent, sludge; in general: six consecutive days; 24 hour samples; more detail are available.
Test Temperature	not applicable
Results Details	not reported
Analytical Method and Analytical Details	EPA volatile protocol; mean recovery 57-100% and 100±17%
Transformation Products, Statistics, and Kinetics	not applicable; % detection @ influent concentration: 7% @ 1-2600 ug/L (POTW 1-40); 2% @ 88-88 ug/L (POTW 51-60); effluent concentrations: 4% @ 1-8 ug/L (POTW 1-40); not detected (POTW 51-60); sludge concentrations: 6% @ 1-103 ug/L (POTW 1-40); 34% @ 2-53 ug/L (POTW 51-60); not reported
Reference Substance and Reference Substance Results	not applicable; Not Reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Test Substance			
	Metric 1: Test Substance Identity	High	The test substance was identified by common name.
	Metric 2: Test Substance Purity	N/A	The metric is not applicable to the study type.
Domain 2: Test Design			
	Metric 3: Study Controls	High	Concurrent blanks and controls were analyzed.
	Metric 4: Test Substance Stability	N/A	The metric is not applicable to the study type.
Domain 3: Test Conditions			
	Metric 5: Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6: Testing Conditions	High	Testing conditions were monitored, reported, and appropriate for the method.
	Metric 7: Testing Consistency	High	The conditions were documented.
	Metric 8: System Type and Design	N/A	The metric is not applicable to the study type.
Domain 4: Test Organisms			

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Study Citation:	(1982). Fate of Priority Pollutants in Publicly Owned Treatment Works, Volume I.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	1265686			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to the study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to the study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	High	The outcome assessment methodology addressed or reported the intended outcome of interest.
	Metric 12:	Test Substance Purity	High	The study reported the use of sampling methods that address the outcome of interest, and used widely accepted methods/approaches for the chemical and media being analyzed.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	High	Sources of variability and uncertainty in the measurements, and statistical techniques and between study groups were considered and accounted for in data evaluation.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to the study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	High	The target chemical concentrations, extraction efficiency, percent recovery, or mass balance were reported.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	Statistical methods or kinetic calculations were clearly described and address the dataset.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	Reported values were expected.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to the study type.
Overall Quality Determination		High		

Study Citation:	Shell Oil, (1986). Fate of some specific compounds in the Norco chemical biotreater and their effect on the outcome of effluent bioassays.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	1629033			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	78-87-5; 1,2-Dichloropropane			
Confidentiality, Type, Guideline	None; Experimental; Experimental			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	Not Reported; NR; NR; NR			
Test Method Details, Test Condition Details, and Test Consistency Details	Pilot completely mixed activated sludge unit maintained during April 22 to 24, May 11, and June 11, 1984.; HRT: 24 hSRT: -20 dAir flow rate: 1130 L/hrWastewater flow rate: 3.2 L/hAir/wastewater flow ratio: 350; Not reported			
System Type Design	One single large aeration tank aerated by coarse bubble diffuser rings.			
Sampling Frequency and Sampling Details	Daily; Feed and effluent; off gas samples collected in TENAX traps once.			
Test Temperature	Not reported			
Results Details	Average removal efficiency through air stripping (range): 97.5% (96-99%).Influent: 21 - 240 µg/LEffluent: ND - < 5 µg/LOff gas: 0.15 ppm			
Analytical Method and Analytical Details	GC/MS; U.S. EPA Method 624			
Transformation Products, Statistics, and Kinetics	Not reported; Not reported; Not reported			
Reference Substance and Reference Substance Results	Not reported; Not reported			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified by name.
	Metric 2:	Test Substance Purity	Medium	The test substance source and purity were not reported.
Domain 2: Test Design	Metric 3:	Study Controls	High	A control activated sludge unit was operated.
	Metric 4:	Test Substance Stability	Medium	Test substance preparation and storage were not reported.
Domain 3: Test Conditions	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	High	Operational parameters and stages were reported.
	Metric 7:	Testing Consistency	High	Test conditions were consistent across study groups.
	Metric 8:	System Type and Design	N/A	Not applicable.
Domain 4: Test Organisms	Metric 9:	Outcome Assessment Methodology	N/A	Not applicable.
	Metric 10:	Sampling Methods	N/A	Not applicable.

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Study Citation:	Shell Oil, (1986). Fate of some specific compounds in the Norco chemical biotreater and their effect on the outcome of effluent bioassays.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	1629033			
Domain	Metric	EVALUATION		Comments
		Rating		
Domain 5: Outcome Assessment				
	Metric 11: Test Substance Identity	High		The outcome assessment methodology was appropriate for determining removal efficiency.
	Metric 12: Test Substance Purity	Medium		Sampling methods were reported generally, off-gas samples were collected only once.
Domain 6: Confounding/Variable Control				
	Metric 13: Confounding Variables	High		No notable sources of uncertainty were identified.
	Metric 14: Health Outcomes Unrelated to Exposure	N/A		Not applicable.
Domain 7: Data Presentation and Analysis				
	Metric 15: Data Reporting	Medium		The analytical method was reported generally, the limit of detection was not reported. Averages of raw data were reported.
	Metric 16: Statistical Methods and Kinetic Calculations	N/A		Not conducted.
Domain 8: Other				
	Metric 17: Verification or Plausibility of Results	High		The results were reasonable based on the method.
	Metric 18: QSAR Models	N/A		Not applicable.
Overall Quality Determination		High		

Study Citation:	Shell Oil, (1976). Residues of the major components of D-D* and primary metabolites in soil from Germany.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	2803579			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	78-87-5; 1,2-Dichloropropane			
Confidentiality, Type, Guideline	no; experimental; experimental			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	NR; D-D pesticide (Shell); NR; pesticide; composition not reported, major constituents: 1,2-dichloropropane, E and Z isomers of 1,3-dichloropropane			
Test Method Details, Test Condition Details, and Test Consistency Details	D-D applied to sandy soil at 1000 l/ha, soil depth at 18 cm (or 10?, text illegible); analysis of soil samples, collected at depths down to 100 cm (text illegible, may not be correct), and sub-soil and water samples.; not reported; not reported			
System Type Design	soil plot design illegible			
Sampling Frequency and Sampling Details	day of treatment, 1 and 5 weeks, and 2 and 3 months post treatment (DEC 1976 - January 1974); Samples were not adequately stored prior to analysis which may have resulted in loss via volatilization; attempt to keep samples frozen and unbroken vials was not fully successful.			
Test Temperature	not reported			
Results Details	In two trials: 0.1-0.2 mg/kg detected in samples collected at 5 weeks and 3 months, and were also detected at <0.2 mg/kg in the lower layers of the soil; in the third trial residues up to 7 mg/kg in samples collected 1 week after treatment; lower residues found 3 months later. Lower levels were found in lower layers of soil, trace residues found below 60 cm; additional concentrations reported in tables illegible.			
Analytical Method and Analytical Details	ECD of FID; not reported			
Transformation Products, Statistics, and Kinetics	not reported; not reported; not reported			
Reference Substance and Reference Substance Results	not reported; not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance	Metric 1:	Test Substance Identity	Low	The test substance was identified; however, it was a pesticide containing the target chemical and composition data were omitted.
	Metric 2:	Test Substance Purity	Low	Purity was not reported.
Domain 2: Test Design	Metric 3:	Study Controls	N/A	The metric is not applicable to this study type.
	Metric 4:	Test Substance Stability	Uninformative	There were inconsistencies with sample storage conditions that likely had an impact on concentration; these are serious flaws that make the study unusable.
Domain 3: Test Conditions	Metric 5:	Test Method Suitability	Uninformative	Applied target chemical concentrations were not specified; reported concentrations were illegible.
	Metric 6:	Testing Conditions	Low	Soil and site characteristics were not reported.
	Metric 7:	Testing Consistency	N/A	The metric is not applicable to this study type.
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Study Citation:	Shell Oil, (1976). Residues of the major components of D-D* and primary metabolites in soil from Germany.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	2803579			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 8:	System Type and Design	Low	Equilibrium was not established or reported.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to this study type.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Uninformative	Intended outcome of interest (subsurface transport) was not reported; reported soil concentrations are illegible.
	Metric 12:	Test Substance Purity	Low	Limitations were identified in sampling.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Uninformative	Loss due to other processes could not be ruled out.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this type of study.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Uninformative	Data is illegible in several parts of the document.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	The metric is not applicable to this type of study.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Uninformative	Verification or plausibility of results is not possible due to document deficiencies.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this type of study.
Overall Quality Determination		Uninformative		

Study Citation:	Stover, E. L., Fazel, A., Kincannon, D. F. (1985). Powdered activated carbon and ozone-assisted activated sludge treatment for removal of toxic organic compounds. <i>Ozone: Science and Engineering</i> 7(3):191-203.
OECD Harmonized Template:	Miscellaneous
HERO ID:	5468013

EXTRACTION	
Parameter	Data
CASRN and Test Material	NR; 1,2-Dichloropropane
Confidentiality, Type, Guideline	None; Experimental; Experimental
Solvent, Reactivity, Storage, Stability	influent wastewater; NR; NR; NR
Radiolabel, Source, State, Purity	NR; NR; NR; NR Notes: NR
Test Method Details, Test Condition Details, and Test Consistency	Bench-scale, continuous flow, complete-mix activated sludge reactors with 3.0 liter activated sludge reactor volumes and 3.23 liter settling compartment volumes; Study states ozone made 1,2-dichloropropane biodegradable; Not Reported
Details	
System Type Design	NR
Sampling Frequency and Sampling Details	NR; Not Reported
Test Temperature	NR
Results Details	Overall removed = 98.5-99.7% of which amount recovered from off-gas was 43.2-58.1% when ozonated and 97.8% when unozonated and 97.3 when unozonated and nonbiological system used.
Analytical Method and Analytical Details	off-gas analyzed by gas chromatograph; other methods not specified; NA
Transformation Products, Statistics, and Kinetics	NR; NR; Not Reported
Reference Substance and Reference Substance Results	NA; NA

		EVALUATION		
Domain	Metric	Rating	Comments	
Domain 1: Test Substance	Metric 1:	Test Substance Identity	High	The test substance was identified definitively.
	Metric 2:	Test Substance Purity	Medium	The test substance source was not reported the test substance purity was low or not reported; however, the omissions or identified impurities were not likely to have a substantial impact on the study results.
Domain 2: Test Design	Metric 3:	Study Controls	N/A	The study did not require concurrent control groups.
	Metric 4:	Test Substance Stability	Medium	The test substance stability, homogeneity, preparation or storage conditions were not reported; however, these factors were not likely to influence the test substance or were not likely to have a substantial impact on study results.
Domain 3: Test Conditions	Metric 5:	Test Method Suitability	Medium	The test method was suitable for the test substance with minor omissions; these deviations or omissions were not likely to have a substantial impact on study results.

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Study Citation:	Stover, E. L., Fazel, A., Kincannon, D. F. (1985). Powdered activated carbon and ozone-assisted activated sludge treatment for removal of toxic organic compounds. <i>Ozone: Science and Engineering</i> 7(3):191-203.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	5468013			
Domain	Metric	EVALUATION Rating	Comments	
	Metric 6:	Testing Conditions	Medium	There were reported deviations or omissions in testing conditions; however, sufficient data were reported to determine that the deviations and omissions were not likely to have a substantial impact on study results.
	Metric 7:	Testing Consistency	Medium	Some test conditions across samples or study groups were not reported, but these discrepancies were not likely to have a substantial impact on study results.
	Metric 8:	System Type and Design	Medium	The system type and design were not capable of appropriately maintaining substance concentrations or not described but the deviation was not likely to have a substantial impact on study results.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	Low	No justification for selection of the test organism was provided. The deviation was likely to have a substantial impact on study results.
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	There was incomplete reporting of outcome assessment methods; however, such differences or absence of details were not likely to be severe or have a substantial impact on the study results.
	Metric 12:	Test Substance Purity	Medium	Minor limitations were identified in sampling methods of the outcome(s) of interest were reported; however, the limitations were not likely to have a substantial impact on results.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	Medium	Sources of variability and uncertainty in the measurements and statistical techniques and between study groups (if applicable) were reported in the study and the differences in the measurements and statistical techniques and between study groups were considered or accounted for in data evaluation with minor deviations or omissions and the minor deviations or omissions were not likely to have a substantial impact on study results.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	The target chemical and transformation product(s) concentrations, extraction efficiency, percent recovery, or mass balance were not reported; however, these omissions were not likely to have a substantial impact on study results.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	Statistical methods or kinetic calculations were clearly described and address the dataset(s).
Domain 8: Other				
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Study Citation:	Stover, E. L., Fazel, A., Kincannon, D. F. (1985). Powdered activated carbon and ozone-assisted activated sludge treatment for removal of toxic organic compounds. Ozone: Science and Engineering 7(3):191-203.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	5468013			
		EVALUATION		
Domain	Metric	Rating	Comments	
	Metric 17: Verification or Plausibility of Results	High	The study results were reasonable.	
	Metric 18: QSAR Models	N/A	The metric is not applicable to this study type.	
Overall Quality Determination		Medium		

Study Citation:	Stover, E. L., Fazel, A., Kincannon, D. F. (1985). Powdered activated carbon and ozone-assisted activated sludge treatment for removal of toxic organic compounds. <i>Ozone: Science and Engineering</i> 7(3):191-203.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	5468013			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	NR; 1,2-Dichloropropane			
Confidentiality, Type, Guideline	none; Wastewater treatment removal; Wastewater treatment removal			
Solvent, Reactivity, Storage, Stability	NR; NR; NR; NR			
Radiolabel, Source, State, Purity	NR; NR; NR; NA Notes: NR			
Test Method Details, Test Condition Details, and Test Consistency Details	The test substance was spiked in a synthetic wastewater mixture of ethylene glycol, ethyl alcohol, glucose, glutamic acid, acetic acid, and salts with an initial BOD5, TOC, and COD of approximately 250, 165, and 500 mg/L.; NR; NR			
System Type Design	NR			
Sampling Frequency and Sampling Details	Test results obtained over a two-year period; NR			
Test Temperature	NR			
Results Details	Influent = 182 mg/L, stripping = 99.9%, total percent treatment achieved= 99.9%			
Analytical Method and Analytical Details	NR; NR			
Transformation Products, Statistics, and Kinetics	NR; NR; NR			
Reference Substance and Reference Substance Results	NR; NR			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Test Substance				
	Metric 1:	Test Substance Identity	High	The test substance was identified definitively.
	Metric 2:	Test Substance Purity	Medium	The source and purity of the test substance were not reported or verified by analytical means but may be available in cited sources.
Domain 2: Test Design				
	Metric 3:	Study Controls	N/A	The study did not require concurrent control groups.
	Metric 4:	Test Substance Stability	Medium	The test substance stability, homogeneity, preparation or storage conditions were not reported; however, these factors were not likely to influence the test substance or were not likely to have a substantial impact on study results.
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	High	The test method was suitable for the test substance.
	Metric 6:	Testing Conditions	N/A	Testing conditions were not reported but may be available in cited sources.
	Metric 7:	Testing Consistency	N/A	Testing consistency were not reported but may be available in cited sources.
	Metric 8:	System Type and Design	N/A	System type and design were not reported but may be available in cited sources.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	Details not reported but may be available in cited sources.
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Study Citation:	Stover, E. L., Fazel, A., Kincannon, D. F. (1985). Powdered activated carbon and ozone-assisted activated sludge treatment for removal of toxic organic compounds. Ozone: Science and Engineering 7(3):191-203.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	5468013			
EVALUATION				
Domain		Metric	Rating	Comments
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Medium	Limited details were reported; however, such differences or absence of details were not likely to be severe or have a substantial impact on the study results.
	Metric 12:	Test Substance Purity	N/A	Details not reported but may be available in cited sources.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	Details not reported but may be available in cited sources.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	Medium	The target chemical and transformation product(s) concentrations, extraction efficiency, percent recovery, or mass balance were not reported; however, these omissions were not likely to have a substantial impact on study results.
	Metric 16:	Statistical Methods and Kinetic Calculations	N/A	Details not reported but may be available in cited sources.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	High	The study results were reasonable.
	Metric 18:	QSAR Models	N/A	The metric is not applicable to this study type.

Overall Quality Determination**Medium**

* Related References: Citing KINCANNON, D.F., E.L. STOVER and Y.P. CHUNG, "Biological Treatment of Organic Compounds Found in Industrial Aqueous Effluents", presented at the Am. Chem. Soc. Natl. Mtg., Atlanta, GA., March and April (1981) and STOVER, E.L. and D.F. KINCANNON, "Biological Treatability of Specific Organic Compounds Found in Chemical Industry Wastewaters", in Proc. 36th Industrial Waste Conf., (Stonehara, MA: Ann Arbor Sci. Publ., Inc., 1982), pp 1-16 (HERO ID 18214).

Study Citation:	Washington, J. W. (1996). Gas partitioning of dissolved volatile organic compounds in the vadose zone: Principles, temperature effects and literature review. Groundwater 34(4):709-718.
OECD Harmonized Template:	Miscellaneous
HERO ID:	647200

EXTRACTION	
Parameter	Data
CASRN and Test Material	Not Reported; 1,2-dichloropropane
Confidentiality, Type, Guideline	None; Experimental; Experimental
Solvent, Reactivity, Storage, Stability	NA; NA; NA; NA
Radiolabel, Source, State, Purity	NA; NA; NA; NA Notes: NA
Test Method Details, Test Condition Details, and Test Consistency Details	Calculation of enthalpy and entropy of volatilization; NR; NA
System Type Design	NA
Sampling Frequency and Sampling Details	NA; NA
Test Temperature	NA
Results Details	Enthalpy of volatilization = 31.68 kJ/M and entropy of volatilization = 56.9 J/MK
Analytical Method and Analytical Details	NA; NA
Transformation Products, Statistics, and Kinetics	NA; NA; NA
Reference Substance and Reference Substance Results	NA; NA

EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Test Substance				
	Metric 1:	Test Substance Identity	High	The test substance was identified definitively.
	Metric 2:	Test Substance Purity	N/A	The metric is not applicable to this study type.
Domain 2: Test Design				
	Metric 3:	Study Controls	N/A	The metric is not applicable to this study type.
	Metric 4:	Test Substance Stability	N/A	The metric is not applicable to this study type.
Domain 3: Test Conditions				
	Metric 5:	Test Method Suitability	N/A	The metric is not applicable to this study type.
	Metric 6:	Testing Conditions	N/A	The metric is not applicable to this study type.
	Metric 7:	Testing Consistency	N/A	The metric is not applicable to this study type.
	Metric 8:	System Type and Design	N/A	The metric is not applicable to this study type.
Domain 4: Test Organisms				
	Metric 9:	Outcome Assessment Methodology	N/A	The metric is not applicable to this study type.

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Study Citation:	Washington, J. W. (1996). Gas partitioning of dissolved volatile organic compounds in the vadose zone: Principles, temperature effects and literature review. Groundwater 34(4):709-718.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	647200			
		EVALUATION		
Domain		Metric	Rating	Comments
	Metric 10:	Sampling Methods	N/A	The metric is not applicable to this study type.
Domain 5: Outcome Assessment				
	Metric 11:	Test Substance Identity	Low	Enthalpy and entropy data presented in support of volatilization estimates.
	Metric 12:	Test Substance Purity	N/A	The metric is not applicable to this study type.
Domain 6: Confounding/Variable Control				
	Metric 13:	Confounding Variables	N/A	The metric is not applicable to this study type.
	Metric 14:	Health Outcomes Unrelated to Exposure	N/A	The metric is not applicable to this study type.
Domain 7: Data Presentation and Analysis				
	Metric 15:	Data Reporting	N/A	The metric is not applicable to this study type.
	Metric 16:	Statistical Methods and Kinetic Calculations	High	Statistical methods or kinetic calculations were clearly described and address the dataset.
Domain 8: Other				
	Metric 17:	Verification or Plausibility of Results	Medium	No serious study deficiencies were identified, and the value was plausible.
	Metric 18:	QSAR Models	N/A	A QSAR model was not reported.
Overall Quality Determination			Low	

List of Abbreviations and Acronyms for Data Quality Evaluation and Extraction Tables

Term	Definition
BAF	Biaccumulation Factor
BCF	Bioconcentration Factor
BMF	Biomagnification Factor
BSAF	Biota-sediment Accumulation Factor
C	Concentration
CASRN	Chemical Abstract Service registry number
DOC	Dissolved Organic Carbon
dw	Dry weight
DW	Drinking Water
DWTP	Drinking Water Treatment Plant
EPA	Environmental Protection Agency
ESI	Electrospray Ionisation
FID	Flame Ionisation Detector
FPD	Flame Photometric Detector
GC	Gas Chromatography
g/L	Grams per Liter
HLC	Henry's Law Constant
HPLC	High-performance liquid chromatography
ISO	International Organization for Standardization
K _{oa}	Octanol-Air partition coefficient
K _{oc}	Organic carbon-water partition coefficient
K _{ow}	Octanol-Water partition coefficient
L/d	Liters per day
LOD	Limit of Detection
LOQ	Limit of Quantification
lw	Lipid weight
M	Molarity (mol/L = moles per Liter)
mL/min	Milliliters per minute
mM	Millimolar
MDL	Method Detection Limit
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
mg/m ³	Milligrams per cubic meter
MRL	Method Reporting Limit
MS	Mass Spectrometry
n	Sample Size
N/A	Not applicable
ND	Non-Detection
ng/L	Nanograms per Liter

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Term	Definition
nm	Nanometers
NR	Not Reported
OECD	Organisation for Economic Co-operation and Development
· OH	Hydroxyl radical
OPE	Organophosphate Ester
pg/L	Picograms per Liter
ppm	parts per million
QSAR	Quantitative Structure Activity Relationship
RSD	Relative Standard Deviation
SI	Supplemental Information
SIM	Selected Ion Monitoring
SPE	Solid Phase Extraction
STP	Sewage Treatment Plant
TMF	Trophic Magnification Factor
TOC	Total Organic Carbon
TOF	Time of Flight
µg/L or µg/mL	micrograms per liter or per milliliter
UPLC	Ultra-performance liquid chromatography
US or USA	United States of America
UV (UV-Vis)	Ultra Violet (Visible)
ww	Wet Weight
WWTP	Wastewater Treatment Plant