

Electronic Supporting Information

Natural organic activator quercetin for persulfate oxidative degradation of
halogenated hydrocarbons

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Table S1. Physical/Chemical properties of EPA 8010 Halogenated volatile organic compound Mix

Compound Name (Formula)	Molecular Weight g/mole	Melting Point °C	Boiling Point °C	Density g/cm ³	Solubility mg/L	Vapor Pressure mmHg	K _{ow}	Structure
1,1-dichloroethane (C ₂ H ₄ Cl ₂)	98.9	-96.9	57.3	1.18	5000	234	1.9	
Chloroform (CHCl ₃)	119.4	-63.4	61.2	1.48	8000	100	1.97	
1,1,1-trichloroethane (C ₂ H ₃ Cl ₃)	133.4	-30.0	74.1	1.34	1290	124	2.49	
Carbontetrachloride (CCl ₄)	153.8	-22.6	76.8	1.59	1200	115	2.83	
1,2-dichloroethane (C ₂ H ₄ Cl ₂)	98.9	-35.7	83.5	1.25	8690	61	1.45	
Trichloroethylene (C ₂ H ₃ Cl ₃)	131.4	-84.7	87.2	1.46	1000	58	2.29	
1,2-dichloropropane (C ₃ H ₆ Cl ₂)	112.9	-100.5	96.4	1.16	2800	50	2.28	
Dibromomethane (CH ₂ Br ₂)	173.8	-52.3	97.0	2.49	11900	44	1.7	
1,1,2-trichloroethane (C ₂ H ₃ Cl ₃)	133.4	-36.3	113.8	1.44	4400	23.25	2.49	
Tetrachloroethylene (C ₂ Cl ₄)	165.8	-22.3	121.3	1.62	150	14	2.6	
1,1,1,2-tetrachloroethane (C ₂ H ₂ Cl ₄)	167.8	-70.2	130.2	1.54	1070	12	2.93	
Bromoform (CHBr ₃)	252.7	8.69	149.1	2.88	3100	5	2.4	

1,1,2,2- tetrachloroethane (C ₂ H ₂ Cl ₄)	167.8	-42.4	145.2	1.59	2830	4.62	2.39	
1,2,3- trichloropropane (C ₃ H ₅ Cl ₃)	147.4	-14.7	157.0	1.39	1750	3.69	2.27	

References:

1. Toxic and Chemical Substances Bureau, Environmental Protection Administration Executive Yuan, Taiwan, (2019) <https://www.tcsb.gov.tw/>
2. NIST, NIST Chemical WebBook, National Institute of Standards and Technology (NIST), (2011) <https://webbook.nist.gov/chemistry/>