

APPENDIX P: CHEMICAL PROPERTIES FOR TEA AND BEE

Study	Triclopyr BEE	Triclopyr TEA
Molecular Weight	356.63 g/mol	358.67 g/mol
Aqueous Solubility (25o C)	at 25° C: 7.4 ppm	at 25° C: pH 5: 1.2 wt% pH 7: 41.2 wt% pH 9: 127.8 wt%
Vapor Pressure (25o C)	MRID 40557003, MRID 42443402 3.6×10^{-6} torr	MRID 41219104 $< 1.0 \times 10^{-8}$ torr
Henry's Law constant	2.47×10^{-7} atm m ³ mol ⁻¹	1.15×10^{-14} atm m ³ mol ⁻¹
Hydrolysis	MRID 134174 Sterile Buffered Solutions: pH 5 = 84 days pH 7 = 8.7 days pH 9 = 0.3 days Natural Water: pH 6.7 = 0.5 days	NA
Direct Aqueous Photolysis	MRID 43007601 6.6 days in Sterile pH 5 aqueous buffer solution Stable in Dark Control	MRID 41732201, MRID 42411804 Sterile solution: 0.6 days in natural light, pH7 0.36 days in artificial light, pH7 River Water: 1.7 days in natural light 0.7 days in artificial light
Soil Photolysis	No acceptable data	No acceptable data
Aerobic Soil Metabolism	MRID 43799101 for [¹⁴ C-1-butyl] 2-butoxyethanol 0.9 hours Hanford Sandy Loam Soil at 25° C 1.4 hours Commerce Silt Loam Soil at 25° C	MRID 43837501 for [¹⁴ C-1-ethyl] triethylamine hydrochloride 5.6 days Sandy Loam Soil at 25° C 13.7 days Silt Loam Soil at 25° C
Anaerobic Soil Metabolism	Fulfilled by Anaerobic Aquatic Metabolism study.	Fulfilled by Anaerobic Aquatic Metabolism study.
Anaerobic Aquatic Metabolism	MRID 43799103 for [¹⁴ C-1-butyl] 2-butoxyethanol 1.4 days	MRID 43837502 for [¹⁴ C-1-ethyl] triethylamine hydrochloride 2 years
Aerobic Aquatic Metabolism	MRID 43799106 for [¹⁴ C-1-butyl] 2-butoxyethanol 0.6 – 3.4 days at 25° C	MRID 43837503 for [¹⁴ C-1-ethyl] triethylamine hydrochloride Between 14 – 18 days
K _{d-ads} / K _{d-des} (mL/g)	Waived due to rapid degradation of BEE moiety in soil.	Waived due to rapid degradation of TEA moiety in soil.
K _{oc-ads} / K _{oc-des} (mL/g)	Waived due to rapid degradation of BEE moiety in soil.	Waived due to rapid degradation of TEA moiety in soil.
Terrestrial Field Dissipation	MRID 43837503 1.1 days (degraded to triclopyr acid; depth 0 to 7.5 cm) 10.6 days (dissipation of BEE and triclopyr acid; depth 0- 7.5 cm) MRID 42730601 ~2 weeks (dissipation of BEE and triclopyr acid; depth 0 to 6 inches)	MRID 43837503 1.1 days (BEE degraded to triclopyr acid; depth 0 to 7.5 cm) 10.6 days (dissipation of BEE and triclopyr acid; depth 0- 7.5 cm)
Aquatic Field Dissipation	No acceptable data	MRID 41714304, MRID 42821301 Surface Water: 0.5 to 3.5 days

NA: Not Applicable