

**G029**  
**Crotonaldehyde [4170-30-3]**

**Results of Testing**

Chemical Name	CAS No.	Study Code/Type	Protocol/Guideline	Species	Exposure	Dose/Concentration	No. per Group	Results	Reference
Crotonaldehyde	4170-30-3	EEATOX Daphnid acute toxicity	40 CFR 797.1300 (modified)	<i>Daphnia magna</i>	flow-through, 48 hr	0.6, 1.2, 2.5, 5, 10 mg/L	20 (10/replicate)	The 48-hour EC <sub>50</sub> (immobilization) was 2.0 mg/L, and the NOEC was 0.61 mg/L.	55 FR 50055; 10/31/90 OTS0530892
Crotonaldehyde	4170-30-3	EEATOX Algae acute toxicity	40 CFR 797.1050 (modified)	freshwater alga	closed-system culture flasks, 96 hr	2.7, 5.2, 10.6 mg/L (nominal)	Not applicable	The 96-hour EC <sub>50</sub> (population growth) value was <0.881 mg/L. Crotonaldehyde was algicidal at 5.2 and 10.6 mg/L.	55 FR 50055; 10/31/90 OTS0530892
Crotonaldehyde	4170-30-3	EEATOX Acute invertebrate toxicity	40 CFR 797.1310 (modified)	Gammarus	flow-through, 96 hr	0.6, 1.2, 2.5, 5, 10 mg/L	20 (10/replicate)	The 96-hour LC <sub>50</sub> was 2.6 mg/L, and the NOEC was 1.1 mg/L.	55 FR 50055; 10/31/90 OTS0530892
Crotonaldehyde	4170-30-3	EEATOX Acute fish toxicity	40 CFR 797.1400 (modified)	fathead minnow	flow-through, 96 hr	0.6, 1.2, 2.5, 5, 10 mg/L (nominal)	20 (10/replicate)	The 96-hour LC <sub>50</sub> was 0.84 mg/L, and the NOEC (for both lethal and sublethal effects) was 0.51 mg/L.	55 FR 50055; 10/31/90 OTS0530892
Crotonaldehyde	4170-30-3	EEATOX Acute fish toxicity	40 CFR 797.1400 (modified)	trout	flow-through, 96 hr	0.12, 0.25, 0.5, 1, 2 mg/L (nominal)	20 (10/replicate)	The 96-hour LC <sub>50</sub> was 0.71 mg/L, and the NOEC (for both lethal and sublethal effects) was 0.25 mg/L.	55 FR 50055; 10/31/90 OTS0530892
Crotonaldehyde	4170-30-3	EECLIF Fish early life stage	40 CFR 797.1600 (modified)	fathead minnow	flow-through	1.7, 0.87, 0.43, 0.22, 0.11, 0.054 mg/L (measured)	40 eggs/dish	The early life-stage experiment resulted in a LOEC of 0.22 mg/L, a NOEC of 0.11 mg/L and a MATC >0.11 mg/L and <0.22 mg/L	58 FR 350; 1/5/93. Docket OPPTS-44594
Crotonaldehyde	4170-30-3	EECTOX Chronic invertebrate toxicity	40 CFR 797.1330 (modified)	<i>Daphnia magna</i>	flow-through, 28 days	1.5, 0.76, 0.38, 0.19, 0.095 mg/L (nominal)	10/vessel	The 28 day EC <sub>50</sub> value is >1.5 mg/L	58 FR 350; 1/5/93, Docket OPPTS-44594
Crotonaldehyde	4170-30-3	EFADEG Oxidation in water	Non-TSCA Protocol/Guideline (docket OPPTS -42108)	Not applicable	25 °C, diluent water contained either 9 mg/L of dissolved oxygen (normal) or was purged with nitrogen	6 mg/L	Not applicable	In normal diluent water, oxidation occurred rapidly, the test chemical concentration decreasing by almost 40% within 25 hours, and by almost 85% within 48 hours. In water purged with nitrogen, degradation occurred at about the same rate (presumed by the authors due to the small but significant amount of oxygen that purging did not remove).	OTS0530889
Crotonaldehyde	4170-30-3	EFBDEG Ready biodegradation: closed bottle	40 CFR 796.3200 (modified)	Not applicable	Closed bottle, 28 days, inoculum is secondary domestic wastewater	2.1 mg/L	Not applicable	No toxicity was seen at the concentration tested. The 28-day biodegradation was 55%, indicating crotonaldehyde is not readily biodegradable under these test conditions.	55 FR 50055; 10/31/90 OTS0530892