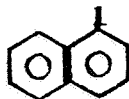


US EPA ARCHIVE DOCUMENT

589

Chemical Name : Alpha Naphthaleneacetic Acid

Chemical Structure: CH_2COOH



Melting Point : 133°C

Physical State : White crystals or cryst powder.

Odor : Odorless

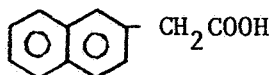
Solubility : Soluble in about 30 parts alcohol; freely soluble in acetone, ether, and chloroform.

Human Toxicity : May be irritating to the skin and mucous membranes and cause central nervous system depression (Merck).

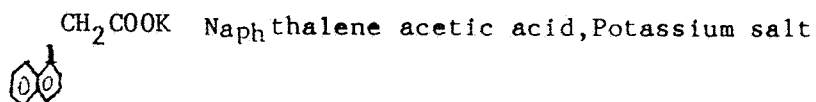
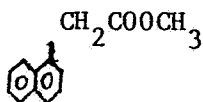
Use : Plant hormone (growth regulator).

Derivatives

Naphthalene acetic acid



Naphthalene acetic acid, methyl ester



1- Naphthaleneacetic acid, sodium salt

Acute Guinea Pig Oral: $LD_{50} = 1.0 \text{ gm/kg.}$

Reviewers Comments: Data inadequate to permit evolution.

Naphthalene acetic acid, methyl ester.

Oral MLD: (Rats): MLD = 1.5 mg/kg. No symptoms up to 1.0 gm/kg. Content of Vit. C not effected.

Acute Rat Oral: $LD_{50} = 1.68$ gm/kg.

Lifetime
Chronic Mice Feeding: The estimated levels of 7.5, 22.5, and 77.5 mg/kg/day showed no gross pathological changes or evidence of accumulation.

Reviewers comments: Data inadequate to permit evaluation

Naphthalene acetic acid

Acute Rat Oral : $LD_{50} = 500$ mg/kg. Caused C.N.S. depression and gastro-enteritis.

Used as 0.95% in diacetone alcohol.

Rabbit Skin: Caused slight to moderate irritation.

Acute Chick Oral: $LD_{50} = 2.40$ ^{gm} ~~mg~~/kg.

Human: No ill effects reported in 20 years.

Acute Mice I.P.: Five of ten mice died 20 minutes to six days after receiving 100 mg/kg of a 1% material in water or diethylene glycol. Respiratory involvement and failure noted. Pulmonary congestion seen in 1/3 animals.

Reviewers Comments: Data inadequate to permit evaluation.

Alphanaphthaleneacetic acid

Acute Rat Oral: $LD_{50} = \sim 1.0$ gm/kg.

Acute Mice I.P. : $LD = 0.1 \pm 0.2$ gm/kg.

Rabbit I.V. : When injected into tuberculous rabbits no effect on complement but causes an increase in percentage of lymphocytes. Excreted unchanged in the urine.

Tumorigenic (Mice) : No tumor resulted from serial injection totaling 3 mg.

Reviewers Comments: Data inadequate to permit evaluation.