



>>Entry Name: Fluoroacetic acid, 9CI, 8CI

Synonym(s): Cymonic acid

CAS Registry Number: 144-49-0

Related CAS Registry Numbers(s): 62-74-8

FCH₂COOH

Molecular Formula: C₂H₃FO₂

Molecular Weight: 78.043

Accurate Mass: 78.011708

Percentage Composition: C 30.78%; H 3.87%; F 24.34%; O 41.00%

Biological Source: Occurs in rat weed (*Palicourea marcgravii*), *Dichapetalum cymosum*, *Gastrolobium grandiflorum* and *Acacia georginae*. Present in over 30 plant spp.

Use/Importance: Cause of Gifblaar (poison leaf) disease in South Africa caused by *D. cymosum*. Na salt is a powerful rat poison

Physical Description: Cryst.

Melting Point: Mp 35.3° (31°)

Boiling Point: Bp 167-168°

Solubility: Sol. H₂O, EtOH

Density: d³⁶ 1.3693

pKa Value: pK_{a1} 2.59 (25°)

Hazard & Toxicity: V. toxic if swallowed. Lethal human dose 2-10 mg/kg (Na salt). Toxic effects, which may be delayed, incl. gastrointestinal disturbances, muscle twitching, cardiac irregularities and respiratory failure

>>Derivative: Me ester

Synonym(s): Methyl fluoroacetate

CAS Registry Number: 453-18-9

Molecular Formula: C₃H₅FO₂

Molecular Weight: 92.07

Accurate Mass: 92.027358

Percentage Composition: C 39.14%; H 5.47%; F 20.63%; O 34.75%

Physical Description: Liq.

Boiling Point: Bp 104.5°

Solubility: Sol. H₂O; sl. sol. petrol

Density: d¹⁵ 1.161

Hazard & Toxicity: LD₅₀ (rat, orl) 3-5 mg/kg

>>Derivative: Et ester

Synonym(s): Ethyl fluoroacetate

CAS Registry Number: 459-72-3

Molecular Formula: C₄H₇FO₂

Molecular Weight: 106.096

Accurate Mass: 106.043008

Percentage Composition: C 45.28%; H 6.65%; F 17.91%; O 30.16%

Boiling Point: Bp 122°

Aldrich: 16381-3

Fluka: 46990

Sigma: M1253

>>Derivative: Isopropyl ester

Synonym(s): Isopropyl fluoroacetate

CAS Registry Number: 406-06-4

Molecular Formula: C₅H₉FO₂

Molecular Weight: 120.123

Accurate Mass: 120.058658

Percentage Composition: C 49.99%; H 7.55%; F 15.82%; O 26.64%

Boiling Point: Bp 124°