



>>Entry Name: Pentanedioic acid, 9CI

Synonym(s): Glutaric acid. Propane-1,3-dicarboxylic acid

CAS Registry Number: 110-94-1

Related CAS Registry Numbers(s): 56703-79-8 102040-91-5

HOOCCH₂CH₂CH₂COOH

Molecular Formula: C₅H₈O₄

Molecular Weight: 132.116

Accurate Mass: 132.04226

Percentage Composition: C 45.46%; H 6.10%; O 48.44%

Biological Source: Isol. from basidiomycete fungi and fruits of *Prunus cerasus*

Use/Importance: Monomer for polyesters and polyamides

Physical Description: Needles or prisms (C₆H₆ or CHCl₃)

Melting Point: Mp 97-98°

Boiling Point: Bp 302-304°. Bp₂₀ 200°

Solubility: Sol. H₂O, EtOH, Et₂O, C₆H₆, CHCl₃

pKa Value: pK_{a1} 4.35; pK_{a2} 5.4 (25°)

Hazard & Toxicity: LD₅₀ (mus, orl) 6000 mg/kg

Aldrich: G340-7

Fluka: 49660

Sigma: G4126

>>Derivative: Mono-Me ester

Synonym(s): Methyl hydrogen glutarate

CAS Registry Number: 1501-27-5

Molecular Formula: C₆H₁₀O₄

Molecular Weight: 146.143

Accurate Mass: 146.05791

Percentage Composition: C 49.31%; H 6.90%; O 43.79%

Physical Description: Liq.

Boiling Point: Bp₁₀ 150-151°

Aldrich: M4735-3

Fluka: 49734

>>Derivative: Di-Me ester

Synonym(s): Dimethyl glutarate

CAS Registry Number: 1119-40-0

Molecular Formula: C₇H₁₂O₄

Molecular Weight: 160.169

Accurate Mass: 160.07356

Percentage Composition: C 52.49%; H 7.55%; O 39.96%

Use/Importance: Monomer for polyesters and polyamides

Physical Description: Liq.

Melting Point: Mp -42°

Boiling Point: Bp 230°. Bp₆ 84-85°

Density: d²⁰ 1.087

Refractive Index: n_D²⁰ 1.4240

Aldrich: D15880-1

Fluka: 49720

Sigma: G5260

>>Derivative: Mono-Et ester

Synonym(s): Ethyl hydrogen glutarate

CAS Registry Number: 1070-62-8

Molecular Formula: C₇H₁₂O₄

Molecular Weight: 160.169

Accurate Mass: 160.07356

Percentage Composition: C 52.49%; H 7.55%; O 39.96%

Physical Description: Oil

Boiling Point: Bp_{0.1} 108-110°