



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

ENTRY UNDER REVIEW

Synonym(s): Caproic acid. Pentane-1-carboxylic acid. Hexylic acid. Hexoic acid. FEMA 2559

CAS Registry Number: 142-62-1

Related CAS Registry Numbers(s): 10051-44-2

$\text{H}_3\text{C}(\text{CH}_2)_4\text{COOH}$

Molecular Formula: $\text{C}_6\text{H}_{12}\text{O}_2$

Molecular Weight: 116.16

Accurate Mass: 116.08373

Percentage Composition: C 62.04%; H 10.41%; O 27.55%

Biological Source: Occurs naturally, e.g. in lichens. Sex pheromone of the female dermestid beetle *Trogoderma glabrum*

Use/Importance: Simple esters are used as flavouring agents. Used for extraction of Co, Mn, Ni and rare earth elements

Physical Description: Oily liq. with acrid taste and unpleasant odour

Melting Point: Fp -1.5°

Boiling Point: Bp 205°

Solubility: Sol. alkalis, EtOH, Et₂O; spar. sol. H₂O

Density: d_4^{15} 0.93

pKa Value: $\text{p}K_{\text{a}1}$ 4.8 (25°)

Refractive Index: n_D^{20} 1.4164

Hazard & Toxicity: Skin and eye irritant. LD₅₀ (rat, orl) 3000 mg/kg. Fl. p. 102° (oc), autoignition temp. $380/402^\circ$

Aldrich: 15374-5

Fluka: 21530

Sigma: C2250

Supelco: 47-2559

>>Derivative: S-Benzylthiuronium salt

Melting Point: Mp $146-147^\circ$

>>Derivative: Me ester

Synonym(s): Methyl hexanoate. Methyl caproate. FEMA 2708

CAS Registry Number: 106-70-7

Molecular Formula: $\text{C}_7\text{H}_{14}\text{O}_2$

Molecular Weight: 130.186

Accurate Mass: 130.09938

Percentage Composition: C 64.58%; H 10.84%; O 24.58%

Biological Source: Present in fruits

Physical Description: Liq. with ether-like odour reminiscent of pineapple

Melting Point: Fp -71°

Boiling Point: Bp 150° . Bp₁₅ 52°

Density: d_4^{24} 0.885

Refractive Index: n_D^{20} 1.4049

Hazard & Toxicity: Causes burns, flammable, fl. p. 32°

Aldrich: W27081-4

Fluka: 21600

Sigma: C5049

>>Derivative: Et ester

Synonym(s): Ethyl hexanoate. Ethyl caproate

CAS Registry Number: 123-66-0

Molecular Formula: $\text{C}_8\text{H}_{16}\text{O}_2$

Molecular Weight: 144.213

Accurate Mass: 144.11503

Percentage Composition: C 66.63%; H 11.18%; O 22.19%

Source/Synthesis: Found in many fruits, Camembert, cheese, milk, fruit brandies, sparkling wine and Bourbon vanilla

Use/Importance: Used in perfumes and fruit flavours

Physical Description: Liq. with strong pineapple odour

Melting Point: Mp -67.5°

Boiling Point: Bp 168° . Bp₂ 27°

Density: d