>>**Entry Name: Pentanal,** 9CI
ENTRY UNDER REVIEW
Synonym(s): *n*-Valeraldehyde, 8CI. Valeric aldehyde. FEMA 3098

CAS Registry Number: 110-62-3

$H_3CCH_2CH_2CH_2CHO$

Molecular Formula: $C_5H_{10}O$
Molecular Weight: 86.133
Accurate Mass: 86.073165
Percentage Composition: C 69.72%; H 11.70%; O 18.58%
Biological Source: Found in olive oil and several essential oils. Also present in Bantu beer, plum brandy, cardamon, coriander leaf, rice, Bourbon vanilla, clary sage, cooked shrimps, seaclogs, apple and banana, sweet cherry, blackcurrant and other foods
Use/Importance: Used to make flavouring compounds and resins
Physical Description: Liq.
Melting Point: Fp –92°
Boiling Point: Bp 102.5-103°
Density: d_4^{20} 0.811
Refractive Index: n_D^{20} 1.3947
Hazard & Toxicity: Highly flammable, fl. p. 12°, autoignition temp. 222°. Eye, skin and respiratory tract irritant. LD_{50} (rat, orl) 3200 mg/kg. LD_{50} (rbt, skn) 4857 mg/kg
Aldrich: 11013-2
Fluka: 94512
Sigma: V2378

>>**Derivative:** Oxime

CAS Registry Number: 628-79-5
Molecular Formula: $C_5H_{11}NO$
Molecular Weight: 101.148
Accurate Mass: 101.084064
Percentage Composition: C 59.37%; H 10.96%; N 13.85%; O 15.82%
Physical Description: Cryst.
Melting Point: Mp 52°

>>**Derivative:** 2,4-Dinitrophenylhydrazone

CAS Registry Number: 2057-84-3
Physical Description: Yellow cryst.
Melting Point: Mp 106-107°
Aldrich: 42957-0
Supelco: 44-2834

>>**Derivative:** Di-Me acetal
Synonym(s): 1,1-Dimethoxypentane

CAS Registry Number: 26450-58-8
Molecular Formula: $C_7H_{16}O_2$
Molecular Weight: 132.202
Accurate Mass: 132.11503
Percentage Composition: C 63.60%; H 12.20%; O 24.20%
Physical Description: Liq.
Boiling Point: Bp 120-129°

>>**Derivative:** Di-Et acetal
Synonym(s): 1,1-Diethoxypentane

CAS Registry Number: 3658-79-5

Molecular Formula: $C_9H_{20}O_2$
Molecular Weight: 160.256
Accurate Mass: 160.14633
Percentage Composition: C 67.45%; H 12.58%; O 19.97%
Biological Source: Volatile component of strawberries and other fruits
Physical Description: Liq.
Boiling Point: Bp 162.5-163.5°. Bp_{12} 59°
Density: d_4^{22} 0.829
Refractive Index: n