>>**Entry Name: 1,5-Pentanediol,** 9CI
Synonym(s): Pentamethylene glycol

CAS Registry Number: 111-29-5
$HOCH_2CH_2CH_2CH_2CH_2OH$

Molecular Formula: $C_5H_{12}O_2$
Molecular Weight: 104.149
Accurate Mass: 104.08373
Percentage Composition: C 57.66%; H 11.61%; O 30.72%
Source/Synthesis: Manuf. by hydrogenation of glutaric acid or glutaraldehyde
Use/Importance: Used in manuf. of pharmaceuticals and pesticides. Monomer for polyamides and polyurethanes
Physical Description: Oil with bitter taste
Melting Point: Mp –18°
Boiling Point: Bp 238-239°. Bp_{12} 134°
Solubility: Sol. H_2O, EtOH, Me_2CO
Density: d_{15}^{11} 0.999
Refractive Index: n_D^{20} 1.4499
Hazard & Toxicity: Eye and skin irritant

Aldrich: P770-3
Fluka: 76892

>>**Derivative:** Diformyl

CAS Registry Number: 5436-53-3
Molecular Formula: $C_7H_{12}O_4$
Molecular Weight: 160.169
Accurate Mass: 160.07356
Percentage Composition: C 52.49%; H 7.55%; O 39.96%
Physical Description: Liq.
Boiling Point: Bp_{20} 122-123°

>>**Derivative:** Di-Ac

CAS Registry Number: 6963-44-6
Molecular Formula: $C_9H_{16}O_4$
Molecular Weight: 188.223
Accurate Mass: 188.10486
Percentage Composition: C 57.43%; H 8.57%; O 34.00%
Physical Description: Liq. with fruity odour
Melting Point: Fp 2°
Boiling Point: Bp 241°. Bp_3 122-123°

>>**Derivative:** Bisphenylurethane

Physical Description: Needles (EtOH or EtOH/$CHCl_3$)
Melting Point: Mp 176°

>>**Derivative:** Bis-4-nitrobenzoyl

CAS Registry Number: 22104-39-8
Physical Description: Cryst. (C_6H_6 or Me_2CO aq.)
Melting Point: Mp 104.5°

>>**Derivative:** Mono-Me ether
Synonym(s): 5-Methoxy-1-pentanol, 9CI

CAS Registry Number: 4799-62-6
Molecular Formula: $C_6H_{14}O_2$
Molecular Weight: 118.175
Accurate Mass: 118.09938
Percentage Composition: C 60.98%; H 11.94%; O 27.08%
Physical Description: Liq.
Boiling Point: Bp_{50} 118°