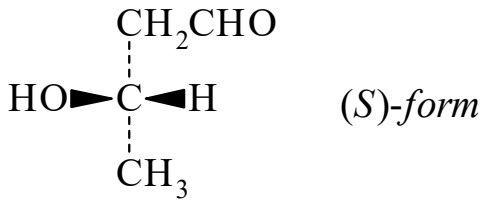
>>**Entry Name: 3-Hydroxybutanal,** 9CI
**Synonym(s):** β-Hydroxybutyraldehyde. Aldol. Acetaldol



(*S*)-*form*

**CAS Registry Number:** 107-89-1
**Related CAS Registry Numbers(s):** 39562-58-8

**Molecular Formula:** $C_4H_8O_2$
**Molecular Weight:** 88.106
**Accurate Mass:** 88.05243
**Percentage Composition:** C 54.53%; H 9.15%; O 36.32%
**Hazard & Toxicity:** Fl. p. 83/66° (oc), autoignition temp. 245/250°. Skin and eye irritant. $LD_{50}$ (rat, orl) 2180 mg/kg. $LD_{50}$ (rbt, skn) 140 mg/kg

**Rare Chemicals Library:** S42682-2

>>**Variant:** (*S*)-form
**Molecular Formula:** $C_4H_8O_2$
**Molecular Weight:** 88.106
**Accurate Mass:** 88.05243
**Percentage Composition:** C 54.53%; H 9.15%; O 36.32%

>>**Derivative:** Di-Me acetal

**CAS Registry Number:** 86146-07-8
**Boiling Point:** $Bp_{25}$ 87°
**Optical Rotation:** $[\alpha]_D^{20}$ –13.1 (c, 1.1 in $CHCl_3$)

>>**Variant:** (±)-form

**Molecular Formula:** $C_4H_8O_2$
**Molecular Weight:** 88.106
**Accurate Mass:** 88.05243
**Percentage Composition:** C 54.53%; H 9.15%; O 36.32%
**Physical Description:** Syrupy liq.
**Boiling Point:** $Bp_{20}$ 83°
**Solubility:** Misc. $H_2O$, EtOH
**Density:** $d^{16}$ 1.11
**Other Data:** Dec. at 85° → 2-Butenal HHW33-L + $H_2O$

>>**Derivative:** Oxime

**CAS Registry Number:** 82521-17-3
**Molecular Formula:** $C_4H_9NO_2$
**Molecular Weight:** 103.121
**Accurate Mass:** 103.063329
**Percentage Composition:** C 46.59%; H 8.80%; N 13.58%; O 31.03%
**Boiling Point:** $Bp_{11}$ 117-118°

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

**CAS Registry Number:** 18295-45-9
**Melting Point:** Mp 93-95°

>>**Derivative:** Ac

**CAS Registry Number:** 26391-36-6
**Molecular Formula:** $C_6H_{10}O_3$
**Molecular Weight:** 130.143
**Accurate Mass:** 130.062995
**Percentage Composition:** C 55.37%; H 7.74%; O 36.88%
**Boiling Point:** $Bp_{18}$ 87-89°

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