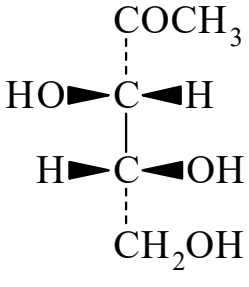
>>**Entry Name: 3,4,5-Trihydroxy-2-pentanone**
Synonym(s): 1-Deoxy-2-pentulose, 9CI. 1-Deoxyxylulose



(3*S*,4*R*)-*form*

Related CAS Registry Numbers(s): 66065-07-4

Molecular Formula: $C_5H_{10}O_4$
Molecular Weight: 134.132
Accurate Mass: 134.05791
Percentage Composition: C 44.77%; H 7.51%; O 47.71%
Use/Importance: Precursor of Pyridoxine BDV40-Q and Thiamine DKN09-S in bacteria

>>**Variant:** (3*S*,4*R*)-form
Synonym(s): D-*threo*-form

CAS Registry Number: 60299-43-6
Molecular Formula: $C_5H_{10}O_4$
Molecular Weight: 134.132
Accurate Mass: 134.05791
Percentage Composition: C 44.77%; H 7.51%; O 47.71%
Biological Source: Metab. of *Streptomyces hygroscopicus*
Use/Importance: *In vitro* inhibitor of *Mycobacterium avium*
Melting Point: Mp 61-63°
Optical Rotation: $[\alpha]_D$ +46 (c, 1.0 in H_2O)
Solubility: BERDY SOL: Sol. H_2O; fairly sol. MeOH; poorly sol. butanol, hexane

>>**Derivative:** 5-Phosphate

CAS Registry Number: 190079-18-6

Molecular Formula: $C_5H_{11}O_7P$
Molecular Weight: 214.112
Accurate Mass: 214.024242
Percentage Composition: C 28.05%; H 5.18%; O 52.31%; P 14.47%
Biological Source: Biosynthetic precursor of non-mevalonate terpenoids

>>**Variant:** (3*S*,4*S*)-form
Synonym(s): D-*erythro*-form

Molecular Formula: $C_5H_{10}O_4$
Molecular Weight: 134.132
Accurate Mass: 134.05791
Percentage Composition: C 44.77%; H 7.51%; O 47.71%

>>**Derivative:** 5-Benzyl, 3,4-isopropylidene
Synonym(s): 5-*O*-Benzyl-1-deoxy-3,4-*O*-isopropylidene-L-*erythro*-2-pentulose

Molecular Formula: $C_{15}H_{20}O_4$
Molecular Weight: 264.321
Accurate Mass: 264.13616
Percentage Composition: C 68.16%; H 7.63%; O 24.21%
Optical Rotation: $[\alpha]_D^{22}$ –50.6 (c, 1.84 in $CHCl_3$)

References: