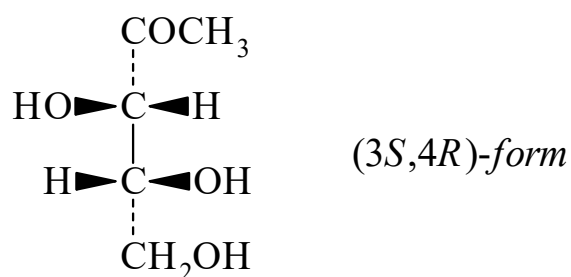




>>Entry Name: 3,4,5-Trihydroxy-2-pentanone

Synonym(s): 1-Deoxy-2-pentulose, 9Cl. 1-Deoxyxylulose



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

Molecular Formula: C₅H₁₀O₄

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: C₅H₁₀O₄

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: [α]_D +46 (c, 1.0 in H₂O)

Solubility: BERDY SOL: Sol. H₂O; fairly sol. MeOH; poorly sol. butanol, hexane

>>Derivative: 5-Phosphate

CAS Registry Number: 190079-18-6

Molecular Formula: C₅H₁₁O₇P

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: C₅H₁₀O₄

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: C₁₅H₂₀O₄

Molecular Weight: 264.321

Accurate Mass: 264.13616

Percentage Composition: C 68.16%; H 7.63%; O 24.21%

Optical Rotation: [α]_D²² -50.6 (c, 1.84 in CHCl₃)

References: