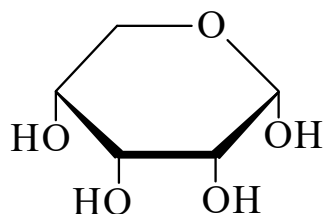




>>Entry Name: Ribose

ENTRY UNDER REVIEW

Synonym(s): Carnose



α -D-Pyranose-form

Related CAS Registry Numbers(s): 7296-61-9 7296-62-0 41546-19-4 41546-20-7

Molecular Formula: $C_5H_{10}O_5$

Molecular Weight: 150.131

Accurate Mass: 150.052825

Percentage Composition: C 40.00%; H 6.71%; O 53.28%

>>Variant: D-form

CAS Registry Number: 50-69-1

Molecular Formula: $C_5H_{10}O_5$

Molecular Weight: 150.131

Accurate Mass: 150.052825

Percentage Composition: C 40.00%; H 6.71%; O 53.28%

Biological Source: A constit. of nucleic acids, several coenzymes and bacterial polysaccharides from *Salmonella*. Also occurs in plant glycosides and free in plants. Obt. comly. from yeast, or by redn. of Ribonic acid [BVK47-Q](#) which can be obt. by oxidn. then epimerisation of Arabinose [BWQ11-M](#)

Use/Importance: Inexpensive starting material for chiral synth.

Physical Description: Hygroscopic

Melting Point: Mp 95° (87°)

Optical Rotation: $[\alpha]_D -21.5 \rightarrow -19.5$ (H_2O)

pKa Value: pK_{a1} 12.22 (25°)

Other Data: Sweet taste, sweetness = 0.33 x sucrose

Aldrich: R175-7

Fluka: 83860

Sigma: R7500

Supelco: 4-7252

>>Derivative: 4-Bromophenylhydrazone

Melting Point: Mp 164-165°

Optical Rotation: $[\alpha]_D +10$ (EtOH)

>>Derivative: Di-Et dithioacetal

>>Derivative: Dipropyl dithioacetal

>>Derivative: 2,3:4,5-Di-*O*-isopropylidene

Synonym(s): 2,3:4,5-Di-*O*-isopropylidene-D-ribose

CAS Registry Number: 50866-82-5

Molecular Formula: $C_{11}H_{18}O_5$

Molecular Weight: 230.26

Accurate Mass: 230.115425

Percentage Composition: C 57.38%; H 7.88%; O 34.74%

Physical Description: Mobile liq.

Optical Rotation: $[\alpha]_D -17$ (c, 1.1 in $CHCl_3$) (-11.8)