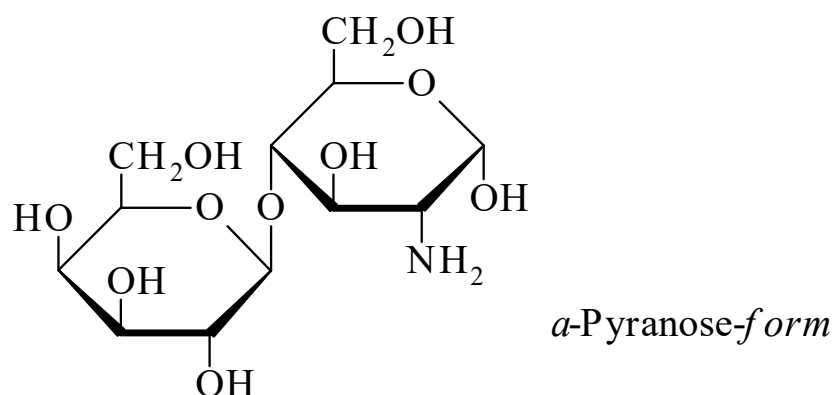




>>Entry Name: Lactosamine

ENTRY UNDER REVIEW

Synonym(s): 2-Amino-2-deoxy-4-*O*-(β -D-galactopyranosyl)-D-glucose, 9Cl. β -D-Galactopyranosyl-(1 $\rightarrow$ 4)-2-amino-2-deoxy-D-glucose. 4-*O*- β -D-Galactosyl-D-glucosamine



CAS Registry Number: 13000-25-4

Related CAS Registry Numbers(s): 4307-58-8 36954-63-9

Molecular Formula: C₁₂H₂₃NO₁₀

Molecular Weight: 341.314

Accurate Mass: 341.132199

Percentage Composition: C 42.23%; H 6.79%; N 4.10%; O 46.88%

Biological Source: Isol. from porcine gastric mucin, human milk, glycoproteins with human blood group A activity, goat colostrum and from fetuin

Physical Description: Growth factor for *Lactobacillus bifidus*

Optical Rotation: $[\alpha]_D^{21} -78.2$ (3 min) $\rightarrow$ $+63.1$ (3h) (c, 1.25 in H₂O)

>>Derivative: *N*-Ac

Synonym(s): *N*-Acetyllactosamine

CAS Registry Number: 32181-59-2

Extra CAS Registry Numbers(s): 77304-67-7

Molecular Formula: C₁₄H₂₅NO₁₁

Molecular Weight: 383.352

Accurate Mass: 383.142764

Percentage Composition: C 43.86%; H 6.57%; N 3.65%; O 45.91%

Biological Source: Repeating unit in mucopolysaccharides isol. from partial acid hydrolysates or acetolysates of human-blood group A substance and other sources. Structural unit in higher oligosaccharides present in human milk. Hydrolysis prod. of human plasma glycoprotein and of fetuin, a glycoprotein from calf foetal plasma

Physical Description: Cryst. (2-propanol/MeOH)

Melting Point: Mp 170-171° (168-170°)

Optical Rotation: $[\alpha]_D^{20} +50 \rightarrow +28.5$ (c, 0.6 in 90% MeOH aq.). $[\alpha]_D^{19} +48.3$ (3 min) $\rightarrow$ $+27.4$ (equilib.) (c, 0.5 in H₂O)

>>Variant: α -Pyranose-form

Molecular Formula: C₁₂H₂₃NO₁₀

Molecular Weight: 341.314

Accurate Mass: 341.132199

Percentage Composition: C 42.23%; H 6.79%; N 4.10%; O 46.88%

>>Derivative: Octa-Ac

CAS Registry Number: 36954-63-9

Molecular Formula: C₂₈H₃₉NO₁₈

Molecular Weight: 677.612

Accurate Mass: 677.216719

Percentage Composition: C 49.63%; H 5.80%; N 2.07%; O 42.50%

Melting Point: Mp 224-225°

Optical Rotation: $[\alpha]_D +61.5$ (+57.7) (CHCl₃)

Sigma: A3674

References: