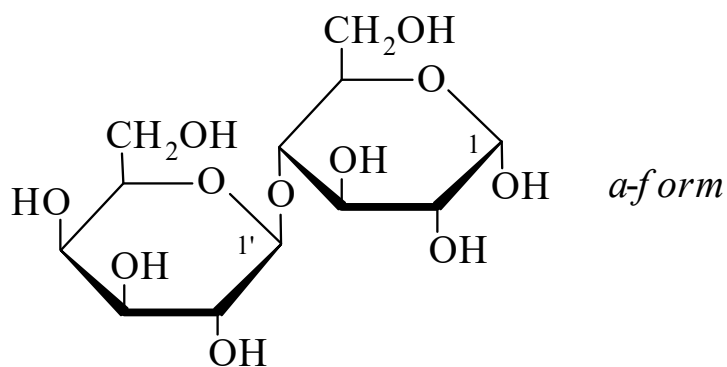




>>Entry Name: Lactose

ENTRY UNDER REVIEW

Synonym(s): 4-*O*-β-D-Galactopyranosyl-D-glucose, 9Cl, 8Cl. Milk sugar. Lactobiose. Tablettose. Lactin



CAS Registry Number: 63-42-3

Related CAS Registry Numbers(s): 10039-26-6

Extra CAS Registry Numbers(s): 64044-51-5

Molecular Formula: C₁₂H₂₂O₁₁

Molecular Weight: 342.299

Accurate Mass: 342.116215

Percentage Composition: C 42.11%; H 6.48%; O 51.42%

Biological Source: Occurs in mammalian milk (human 6-7%, cow 4-5%), fruits of *Achras sapota*, and a few other plants. Nutrient. Obt. industrially from whey

Use/Importance: V. inexpensive starting material for synthesis. Common excipient for tablets

Other Data: Sweetness 0.68 x sucrose

Hazard & Toxicity: Exp. teratogen. Gastrointestinal effects if intestinal lactase activity is diminished. Mixtures with strong oxidants are explosive. May cause allergy in sensitive patients

>>Derivative: Phenyllosazone

Synonym(s): Lactosazone

CAS Registry Number: 4746-17-2

Melting Point: Mp 200-212°

>>Variant: α-form

CAS Registry Number: 14641-93-1

Extra CAS Registry Numbers(s): 5989-81-1

Molecular Formula: C₁₂H₂₂O₁₁

Molecular Weight: 342.299

Accurate Mass: 342.116215

Percentage Composition: C 42.11%; H 6.48%; O 51.42%

Melting Point: Mp 202° (monohydrate). Mp 252° (anhyd.)

Optical Rotation: [α]_D +85 → +52.6 (monohydrate) (c, 8 in H₂O) (H₂O)

Fluka: 61339

>>Derivative: Octa-Ac

Synonym(s): Octa-*O*-acetyl-α-D-lactopyranose

CAS Registry Number: 34213-32-6

Molecular Formula: C₂₈H₃₈O₁₉

Molecular Weight: 678.597

Accurate Mass: 678.200735

Percentage Composition: C 49.56%; H 5.64%; O 44.80%

Melting Point: Mp 152°

Optical Rotation: [α]_D +53 (c, 10 in CHCl₃)

>>Derivative: Me glycoside

Synonym(s): Methyl α-D-lactopyranoside