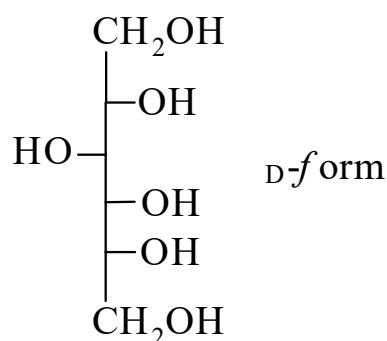




>>Entry Name: Glucitol, 9CI, 8CI

ENTRY UNDER REVIEW

Synonym(s): Sorbitol. Gulitol. *gulo*-Hexitol. *gluco*-Hexitol. E 240



CAS Registry Number: 26566-34-7

Related CAS Registry Numbers(s): 45007-61-2

Molecular Formula: C₆H₁₄O₆

Molecular Weight: 182.173

Accurate Mass: 182.07904

Percentage Composition: C 39.56%; H 7.75%; O 52.70%

name for glucitol but is imprecise and should be discouraged. Reduction of sorbose can produce either glucitol or iditol. Furthermore, D-glucitol is usually referred to as D-sorbitol whereas reduction of D-sorbose gives L-glucitol

>>Variant: D-form

Synonym(s): D-Glucitol. L-Gulitol. FEMA 3029. Many other names

CAS Registry Number: 50-70-4

Molecular Formula: C₆H₁₄O₆

Molecular Weight: 182.173

Accurate Mass: 182.07904

Percentage Composition: C 39.56%; H 7.75%; O 52.70%

Biological Source: Occurs widely in plants ranging from algae to the higher orders. Fruits of the plant family Rosaceae, which include apples, pears, cherries, apricots, contain appreciable amounts. Rich sources are the fruits of the *Sorbus* and *Crataegus* spp.

Use/Importance: Used for manuf. of sorbose, propylene glycol, ascorbic acid, resins, plasticisers and as antifreeze mixts. with glycerol or glycol. Tablet diluent, sweetening agent and humectant, other food uses. Used in photometric detn. of Ru(VI) and Ru(VIII); in acid-base titration of borate

Physical Description: Needles + ½ or 1H₂O (EtOH) with sweet taste (60% of sucrose)

Melting Point: Mp 92° (labile form). Mp 97° (stable form). Mp 110-112° (anhyd.)

Optical Rotation: [α]_D +7 (borax). [α]_D +31 (molybdate)

Solubility: Freely sol. H₂O; fairly sol. hot EtOH; spar. sol. cold EtOH

pKa Value: pK_a 13 (60°)

Hazard & Toxicity: Gastrointestinal effects by ingestion, LD₅₀ (rat, orl) 15900 mg/kg

Aldrich: 24085-0

Fluka: 85530

Sigma: S0900

Supelco: R42-2500

>>Derivative: Fe(III) complex, compd. with citric acid

Synonym(s): Iron sorbitex, USAN. Jectofer

CAS Registry Number: 1338-16-5

Biological Use/Importance: Haematinic

Other Data: A colloidal soln. containing Fe(III), sorbitol and citrate stabilised with dextrin

>>Derivative: Hexa-Ac

Synonym(s): 1,2,3,4,5,6-Hexa-O-acetyl-D-glucitol

CAS Registry Number: 7208-47-1

Molecular Formula: C₁₈H₂₆O₁₂

Molecular Weight: 434.396

Accurate Mass: 434.14243

Percentage Composition: C 49.77%; H 6.03%; O 44.20%

Melting Point: Mp 99° (120°)

Optical Rotation: [α]