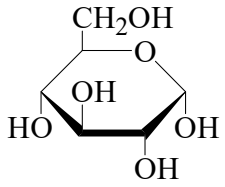
>>**Entry Name: Glucose,** 9Cl, 8Cl
Synonym(s): Dextrose. Grape sugar. Blood sugar. Corn sugar. Cerelose



α-D-Pyranose-*form*

Related CAS Registry Numbers(s): 815-92-9 8013-17-0 39281-65-7 41846-85-9 41846-86-0 53691-70-6 53691-71-7

Molecular Formula: $C_6H_{12}O_6$
Molecular Weight: 180.157
Accurate Mass: 180.06339
Percentage Composition: C 40.00%; H 6.71%; O 53.28%

>>**Variant:** D-form

CAS Registry Number: 50-99-7
Extra CAS Registry Numbers(s): 5996-10-1

Molecular Formula: $C_6H_{12}O_6$
Molecular Weight: 180.157
Accurate Mass: 180.06339
Percentage Composition: C 40.00%; H 6.71%; O 53.28%
Biological Source: Most common sugar, abundant in free and combined form. Occurs free in blood, cerebrospinal fluid, lymph, urine of diabetic subjects, fruits, honey and plant juices. Major component of many oligosaccharides and polysaccharides. Occurs in sucrose combined with fructose. Comly. available by the acid hydrol. of potato starch (Europe) and cornstarch (USA)
Use/Importance: Fluid and nutrient replenisher. Food additive: nutritive sweetener, humectant. Tablet diluent
pKa Value: pK_{a1} 12.34 (25°)
Other Data: Sweet taste, sweetness = 0.46 x sucrose
Hazard & Toxicity: Reacts violently with Na_2O_2 plus KNO_3, and other strong oxidants. LD_{50} (rat, orl) 25800 mg/kg. Human and exp. reprod. and teratogenic effects (large doses)

Sigma: G7528
Supelco: R42-2080

>>**Derivative:** Phenylhydrazone

CAS Registry Number: 3713-25-5

Molecular Formula: $C_{12}H_{18}N_2O_5$
Molecular Weight: 270.285
Accurate Mass: 270.121573
Percentage Composition: C 53.33%; H 6.71%; N 10.36%; O 29.60%
Physical Description: Three forms obtainable
Melting Point: Mp 115°. Mp 142°. Mp 160°
Optical Rotation: $[\alpha]_D$ –47 (H_2O). $[\alpha]_D$ –2. $[\alpha]_D$ –87

>>**Derivative:** 4-Bromophenylhydrazone

CAS Registry Number: 18841-82-2
Melting Point: Mp 143-146°

>>**Derivative:** 1-Phosphate

>>**Derivative:** 2-Phosphate

>>**Derivative:** 3-Phosphate

>>**Derivative:** 4-Phosphate