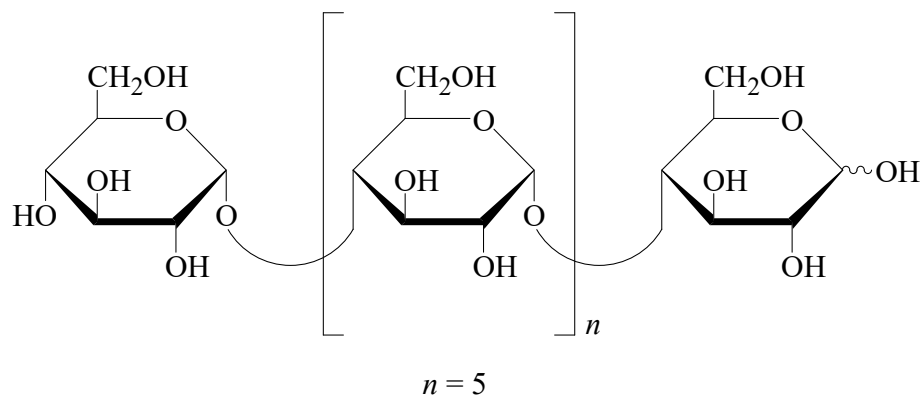




>>Entry Name: Maltoheptaose

Synonym(s): *O*- α -D-Glucopyranosyl-(1 $\rightarrow$ 4)-[*O*- α -D-glucopyranosyl-(1 $\rightarrow$ 4)]₅-D-glucose. Amyloheptaose



CAS Registry Number: 34620-78-5

Molecular Formula: C₄₂H₇₂O₃₆

Molecular Weight: 1153.009

Accurate Mass: 1152.38034

Percentage Composition: C 43.75%; H 6.29%; O 49.95%

Source/Synthesis: Synth. by acid hydrol. of cyclodextrins

Biological Source: Prod. from [BWP13-J](#) using *Bacillus sphaericus* E-244

Use/Importance: Used in detn. of α -amylase. Maltooligosaccharide mixtures are important food additives (sweeteners, gelling agents and viscosity modifiers)

Optical Rotation: $[\alpha]_D +175.5$ (c, 2 in H₂O)

Solubility: V. sol. H₂O; insol. EtOH

>>Derivative: Tricosa-Ac

CAS Registry Number: 114715-54-7

Extra CAS Registry Numbers(s): 84814-32-4

Molecular Formula: C₈₈H₁₁₈O₅₉

Molecular Weight: 2119.865

Accurate Mass: 2118.623335

Percentage Composition: C 49.86%; H 5.61%; O 44.53%

Physical Description: Powder

>>Variant: β -Pyranose-form

Molecular Formula: C₄₂H₇₂O₃₆

Molecular Weight: 1153.009

Accurate Mass: 1152.38034

Percentage Composition: C 43.75%; H 6.29%; O 49.95%

>>Derivative: 2-Chloro-4-nitrophenyl glycoside

CAS Registry Number: 90826-64-5

Molecular Formula: C₄₈H₇₄ClNO₃₈

Molecular Weight: 1308.549

Accurate Mass: 1307.357746

Percentage Composition: C 44.06%; H 5.70%; Cl 2.71%; N 1.07%; O 46.46%

Use/Importance: Reagent for detn. of α -amylase in body fluids

References:

Friebolin, H. *et al.*, *Makromol. Chem.*, 1976, **177**, 845-858, (*cmr*)

Henkel, E. *et al.*, *Fresenius' Z. Anal. Chem.*, 1984, **317**, 753-754, (*chloronitrophenyl glycoside, use*)

Oguma, T. *et al.*, *Agric. Biol. Chem.*, 1991, **55**, 1661-1662

Hitchkiss, A.T. *et al.*, *Carbohydr. Res.*, 1993, **242**, 1-9, (*synth*)

Sakairi, N. *et al.*, *J.C.S. Perkin 1*, 1995, 437-443, (*tricosa-Ac*)