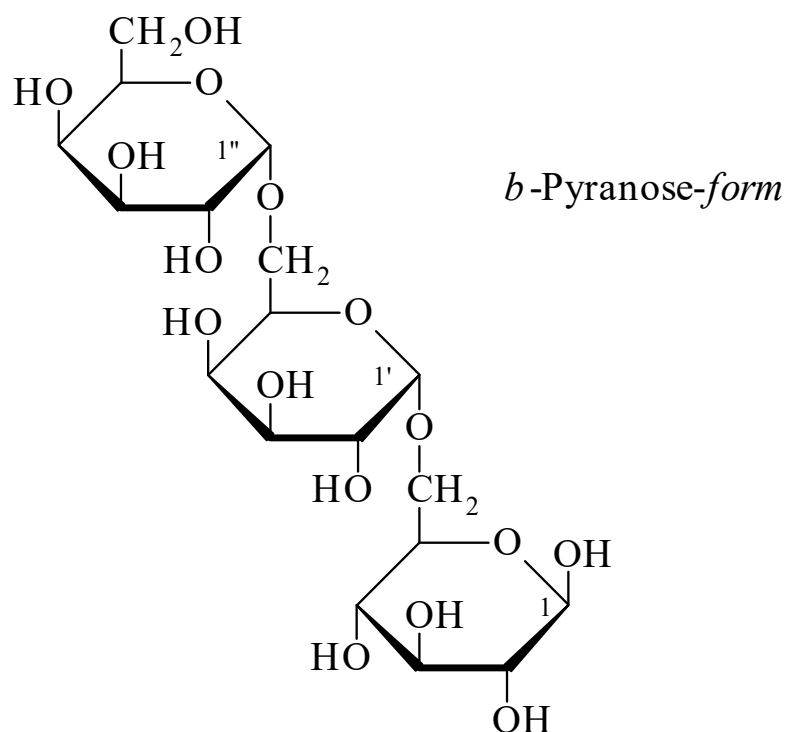




>>Entry Name: α -D-Galactopyranosyl-(1 $\rightarrow$ 6)- α -D-galactopyranosyl-(1 $\rightarrow$ 6)-D-glucose

ENTRY UNDER REVIEW

Synonym(s): Manninotriose. Mnt



CAS Registry Number: 13382-86-0

Molecular Formula: $C_{18}H_{32}O_{16}$

Molecular Weight: 504.441

Accurate Mass: 504.16904

Percentage Composition: C 42.86%; H 6.39%; O 50.75%

Biological Source: Found free in cocoa beans, hazelnuts and in various plant mannans. Synth. by the transferase action of yeast, bacterial and other α -galactosidases on melibiose. Formed by the action of α -galactosidase of *Absidia corymbifera* on melibiose

Use/Importance: Selectively utilised by bifidobacteria in the intestine but hardly utilised by other microorganisms. Increases faecal bifidobacteria and decreases Clostridia

Optical Rotation: $[\alpha]_D +167$ (H_2O)

>>Derivative: Phenylosazone

Melting Point: Mp 122°

>>Variant: β -Pyranose-form

Molecular Formula: $C_{18}H_{32}O_{16}$

Molecular Weight: 504.441

Accurate Mass: 504.16904

Percentage Composition: C 42.86%; H 6.39%; O 50.75%

>>Derivative: Undeca-Ac

CAS Registry Number: 64544-38-3

Molecular Formula: $C_{40}H_{54}O_{27}$

Molecular Weight: 966.85

Accurate Mass: 966.285255

Percentage Composition: C 49.69%; H 5.63%; O 44.68%

Physical Description: Cryst. (EtOH)

Melting Point: Mp 106-107.5°

Optical Rotation: $[\alpha]_D^{21} +132.7$ (c, 0.98 in $CHCl_3$)

References:

- French, D., *Adv. Carbohydr. Chem.*, 1954, **4**, 149, (*synth*)
Bailey, R.W., *Biochem. J.*, 1963, **85**, 509, (*synth*)
Lombard, A. *et al.*, *CA*, 1976, **85**, 59634t, (*isol*)
Adachi, R. *et al.*, *Bull. Chem. Soc. Jpn.*, 1977, **50**, 1901, (β -Ac *synth*, *pmr*)
Aamen, P., *J. Sci. Food Agric.*, 1979, **30**, 869, (*isol*)
Wight, A.W. *et al.*, *Food Chem.*, 1986, **21**, 167, (*hplc*)
Sugawara, S. *et al.*, *Agric. Biol. Chem.*, 1990, **54**, 211, (*enzym synth*, *cmr*)
Wada, K. *et al.*, *CA*, 1991, **115**, 204361w, (*synth*)