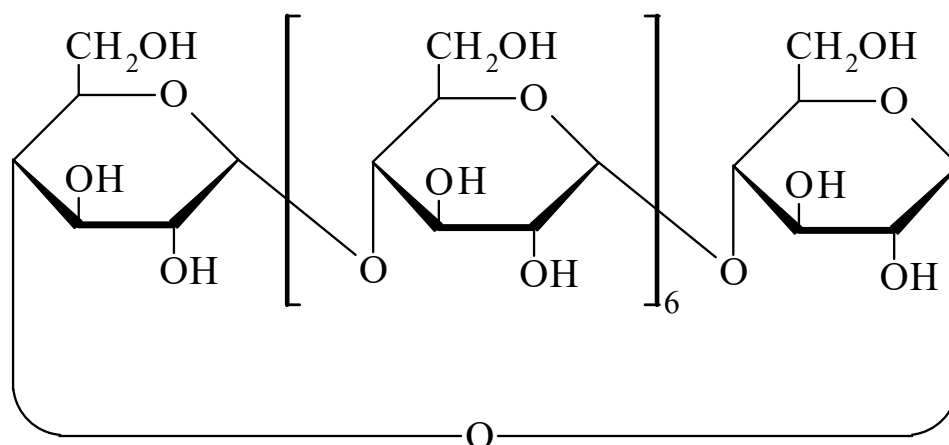




>>Entry Name: γ -Cyclodextrin, 9Cl, 8Cl

Synonym(s): Cyclooctakis-(1 $\rightarrow$ 4)-(α -D-glucopyranose). Cyclooctaamylose. Cyclomaltooctaose



CAS Registry Number: 17465-86-0

Molecular Formula: $C_{48}H_{80}O_{40}$

Molecular Weight: 1297.136

Accurate Mass: 1296.4226

Percentage Composition: C 44.45%; H 6.22%; O 49.34%

Biological Source: Obt. from the breakdown of starch by the action of *Bacillus macerans*

Optical Rotation: $[\alpha]_D +177.4$ (c, 1.0 in H_2O)

Other Data: Forms cryst. complexes with propanol and iodine

Fluka: 28708

Sigma: C4892

>>Derivative: Hexadeca-Ac

Molecular Formula: $C_{80}H_{112}O_{56}$

Molecular Weight: 1969.731

Accurate Mass: 1968.59164

Percentage Composition: C 48.78%; H 5.73%; O 45.49%

Optical Rotation: $[\alpha]_D +138.5$ (c, 1.0 in $CHCl_3$)

>>Derivative: 2,2',2'',2''',2''',2''''',2''''''-Octaepimer

Synonym(s): γ -Cyclomannin. Cyclooctakis-(1 $\rightarrow$ 4)-(α -D-mannopyranose)

CAS Registry Number: 130322-69-9

Molecular Formula: $C_{48}H_{80}O_{40}$

Molecular Weight: 1297.136

Accurate Mass: 1296.4226

Percentage Composition: C 44.45%; H 6.22%; O 49.34%

Optical Rotation: $[\alpha]_D^{23} +27.2$ (c, 0.3 in H_2O)

References:

- Aldrich Library of FT-IR Spectra, 1st edn., 1985, **1**, 198B, (ir)
French, D. *et al.*, *J.A.C.S.*, 1949, **71**, 353, (isol)
French, D., *Adv. Carbohydr. Chem.*, 1957, **12**, 189, (rev)
Takeo, K. *et al.*, *Chem. Lett.*, 1973, 1233, (conformn, cmr)
Bender, M.L. *et al.*, *Cyclodextrin Chemistry*, Springer-Verlag, 1978
Bender, H. *et al.*, *Carbohydr. Res.*, 1983, **124**, 225, (synth)
Takahashi, Y. *et al.*, *Carbohydr. Res.*, 1987, **169**, 127, (synth)
Clarke, R.J. *et al.*, *Adv. Carbohydr. Chem. Biochem.*, 1988, **46**, 205, (rev, complexes)
Mori, M. *et al.*, *Tet. Lett.*, 1990, **31**, 3191, (γ -Cyclomannin)
Shieh, W.J. *et al.*, *J. Macromol. Sci., Chem., Part A*, 1996, **33**, 673-683, (rev)
Irie, T. *et al.*, *J. Pharm. Sci.*, 1997, **86**, 147-162, (rev, toxicol, safety)
D'Souza, V.T. *et al.*, *Chem. Rev.*, 1998, **98**, 1743-1753, (rev)
Schneider, H.J. *et al.*, *Chem. Rev.*, 1998, **98**, 1755-1785, (pmr, cmr)