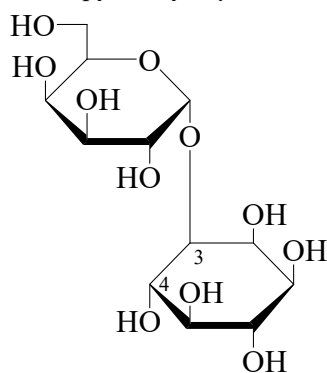




>>Entry Name: Galactinol

ENTRY UNDER REVIEW

Synonym(s): 3-*O*- α -D-Galactopyranosyl-*myo*-inositol, 8Cl. 1-*O*- α -D-Galactopyranosyl-*myo*-inositol (incorr.)



CAS Registry Number: 3687-64-7

Molecular Formula: C₁₂H₂₂O₁₁

Molecular Weight: 342.299

Accurate Mass: 342.116215

Percentage Composition: C 42.11%; H 6.48%; O 51.42%

General Statement: Frequently named as 1-*O*-galactosyl; see under *myo*-Inositol [FCS22-I](#) for correct numbering

Biological Source: Constit. of sugar-beet juice, castor-oil seed meal, potatoes after cold storage, and cambial sap of beech. Present in plant families Bignoniaceae, Ericaceae, Labiatae and Onagraceae

Use/Importance: Galactosyl donor in formation of raffinose oligosaccharides in higher plants

Melting Point: Mp 113-114° (closed tube). Mp 220-222° (open tube) (dihydrate)

Optical Rotation: $[\alpha]_D^{20} +135.6$ (c, 2.0 in H₂O)

>>Derivative: 4-Me

Synonym(s): 3-*O*- α -D-Galactopyranosyl-4-*O*-methyl-D-*myo*-inositol. 3-*O*- α -D-Galactopyranosylononitol. **4-*O*-Methylgalactinol**

CAS Registry Number: 75589-40-1

Molecular Formula: C₁₃H₂₄O₁₁

Molecular Weight: 356.326

Accurate Mass: 356.131865

Percentage Composition: C 43.82%; H 6.79%; O 49.39%

Physical Description: Powder

Optical Rotation: $[\alpha]_D^{20} +129.6$ (c, 0.5 in H₂O)

Other Data: Struct. revised in 1997

>>Derivative: Nona-Me

Molecular Formula: C₂₁H₄₀O₁₁

Molecular Weight: 468.54

Percentage Composition: C 53.83%; H 8.60%; O 37.56%

Physical Description: Cryst. (pentane)

Melting Point: Mp 96.5-98°

Optical Rotation: $[\alpha]_D +119$ (c, 2.0 in H₂O)

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Senser, M. *et al.*, *Phytochemistry*, 1967, **6**, 1533, (*occur*)
Schweizer, T.F. *et al.*, *Carbohydr. Res.*, 1981, **95**, 61-71, (*cmr, ms*)
Kuo, T.M. *et al.*, *J. Am. Oil Chem. Soc.*, 1992, **69**, 569-574, (*isol, hplc, bibl*)
Richter, A. *et al.*, *J. Nat. Prod.*, 1997, **60**, 749-751, (*4-O-Methylgalactinol*)
Mayer, T.G. *et al.*, *Liebigs Ann./Recl.*, 1997, 859, (*synth, pmr, cmr*)
Marinone, F. *et al.*, *Phytochemistry*, 1999, **51**, 499-505, (*isol, pmr*)