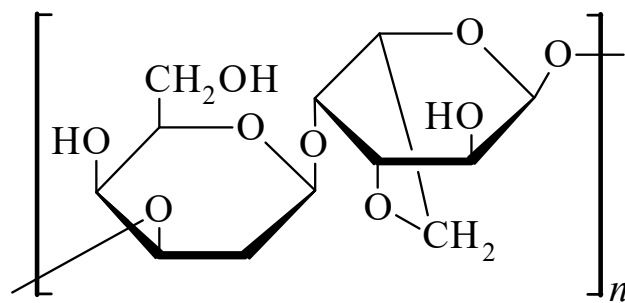




>>Entry Name: Agarose

Synonym(s): Neutral agarose. Indubiose A4



CAS Registry Number: 9012-36-6

Extra CAS Registry Numbers(s): 9036-61-7

General Statement: See also Agar [KTM20-U](#). Composed of repeating units of β -D-Galp (1 $\rightarrow$ 4) 3,6-anhydro- α -L-Galp(1 $\rightarrow$ 3). Has a domain struct. of double helixes aggregating into a three-dimensional framework holding water molecules

Biological Source: Isol. from red seaweed agar (*Gelidium* spp.)

Use/Importance: Gives gels of high strength at low concs. in water which are nearly transparent. These are used commercially as gelling agents and for biomedical applications, eg. electrophoresis media, chromatography and immunology assays

Other Data: There are two other polysaccharides in agar, one is similar to agarose but with 4,6-acetals of pyruvic acid at some of the D-galactose units. The other contains fewer 3,6-anhydro-L-galactose units and is sulfated

Aldrich: 19415-8

Fluka: 5081

Sigma: I3378

>>Derivative: Poly(6-aminohexyl) ether

Synonym(s): Agarose (6-aminohexyl)carbamimidate. Sepharose AH

CAS Registry Number: 58856-73-8

Use/Importance: Intermed. for the prepn. of affinity chromatog. absorbents

Other Data: Non-stoichiometric

>>Derivative: Poly(5-carboxypentyl) ether

CAS Registry Number: 55128-01-3

Use/Importance: Intermed. for the prepn. of affinity chromatog. absorbents

Other Data: Non-stoichiometric

References:

- Aldrich Library of FT-IR Spectra*, 1st edn., 1985, **1**, 201C; 201D, (*ir*)
Hegenauer, J.C. *et al.*, *Biochim. Biophys. Acta*, 1965, **111**, 334, (*isol*)
BeMiller, J.N., *Methods Carbohydr. Chem.*, 1965, **5**, 65, (*purifn*)
Percival, E., *The Carbohydrates*, 1970, **2B**, 553
Batey, J.F. *et al.*, *Carbohydr. Res.*, 1975, **43**, 133
Turvey, J.R. *et al.*, *Carbohydr. Res.*, 1976, **49**, 419
Rees, D. *et al.*, *Angew. Chem., Int. Ed.*, 1977, **16**, 214
Taylor, J.L. *et al.*, *J. Chromatogr.*, 1983, **257**, 275-284, (*5-carboxypentyl ether*)
Szewczyk, A. *et al.*, *Biochim. Biophys. Acta*, 1987, **89**, 252-260, (*6-aminohexyl ether*)
Kiwitt-Haschemie, K. *et al.*, *Carbohydr. Res.*, 1993, **248**, 267
Arndt, E.R. *et al.*, *Carbohydr. Res.*, 1997, **303**, 73-78, (*cd, struct*)
Gamini, A. *et al.*, *Carbohydr. Res.*, 1997, **304**, 293-302, (*pmr, cmr, conformn*)