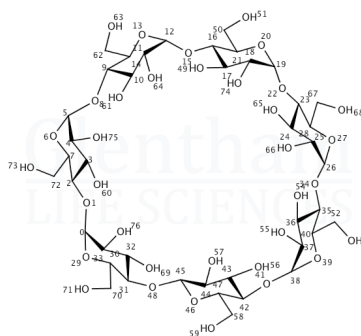


Certificate of Analysis

Product Name	Sulfobutyl ether beta-cyclodextrin sodium
Glentham Code	GP8988
CAS Number	182410-00-0
PubChem SID	310280407
Batch Number	614JLP
Molecular Weight	2242.05
Molecular Formula	$C_{70}H_{119}Na_7O_{56}S_7$
Storage Temp.	+20°C



Property	Specification	Batch 614JLP
Physical Description	White to off-white powder	White powder
Identification	To pass tests A, B, C, D	Conforms
Solubility (30% in water)	Clear, colourless solution	Clear, colourless solution
pH (30% in water)	4.0 - 6.8	6.6
Heavy Metals	≤ 5ppm	Conforms
beta-Cyclodextrin	≤ 0.1%	Conforms
1,4-Butane Sultone	≤ 0.5ppm	0.3ppm
Sodium Chloride (NaCl)	≤ 0.2%	0.05%
4-Hydroxybutane-1-sulfonic Acid	≤ 0.09%	Conforms
Bis(4-sulfobutyl) Ether Disodium	≤ 0.05%	0.04%
Total Aerobic Microbial Count	≤ 100CFU/g	≤ 10CFU/g
Total Yeast and Mould Count	≤ 50CFU/g	≤ 10CFU/g
E. Coli	Absent	Conforms
Water	≤ 10.0%	5.8%
Average Degree of Substitution	6.2 - 6.9	6.6
Assay	95.0 - 105.0 %	101.4%
Pharmacopoeia Specification(s)	USP	Conforms

Specification Version	v1.1
Manufacture Date	2023-08-05
Re-Test Date	2031-09-18

Glentham Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check www.glentham.com or contact us using the details above for the current version of this document.

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