



Product Profile

Identification

Product Name: POLY(ETHYLENE GLYCOL) OR POLY(ETHYLENE OXIDE), A, Ω -BIS(HYDROXY)-TERMINATED

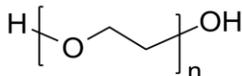
Synonym(s): PEO, PEG

Linear Formula: H(OCH₂CH₂)_nOH

CAS: 25322-68-3

Product Lot Number: P5617-EG2OH (PEO)

Product Chemical Architecture:



Composition:

Mn (g/mole)	320,000
MW (g/mole)	332,000
Mw/Mn	1.04
dn/dc (mL/g)	0.132 in water

Method of Synthesis

The polymer is prepared by living anionic polymerization process.

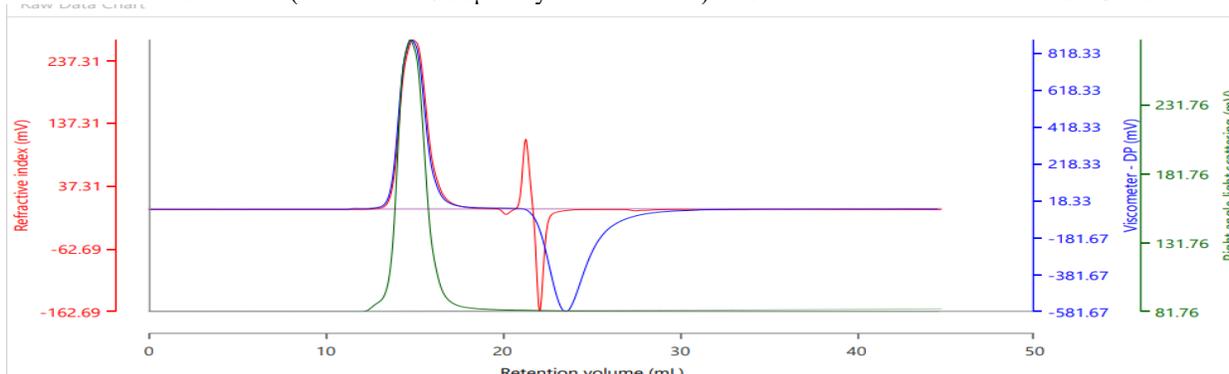
Solubility in different solvents

THF	√	DMF	√
Methanol	√	CHCl ₃	√
Toluene	X	DMSO	√

Validation of Architecture

A. Gel Permeation Chromatography (GPC), SEC- Profile:

Molecular weights were determined by Malvern OmniSec Reveal & Resolve GPC/SEC System equipped with Triple detector (RI, Viscometer, RALS 90° and LALS 7°) and two columns (A600M General Mixed 300×7.5 mm, Viscotek Deionized water (Filtrated on 0.22μm Nylon membrane) was the eluent. The flow rate was 1.0 ml/min.



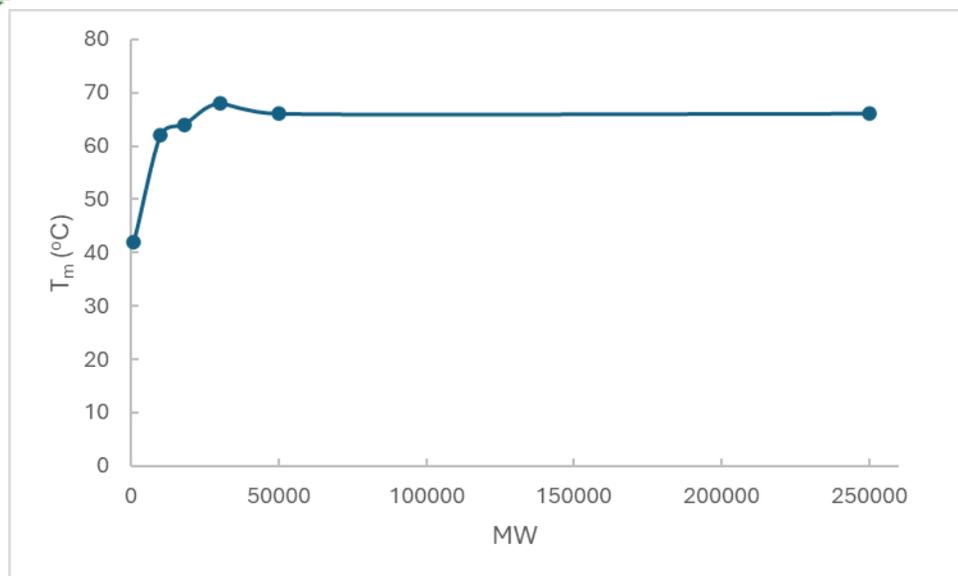
Results (Rows)						
Injection Name	RV (mL)	Mn (g/mol)	Mw (g/mol)	Mp (g/mol)	Mz (g/mol)	Mw/Mn
P5617, Injection 1, Peak 1	14.9	319,786	332,387	312,521	363,285	1.039

B. Thermal analysis results:

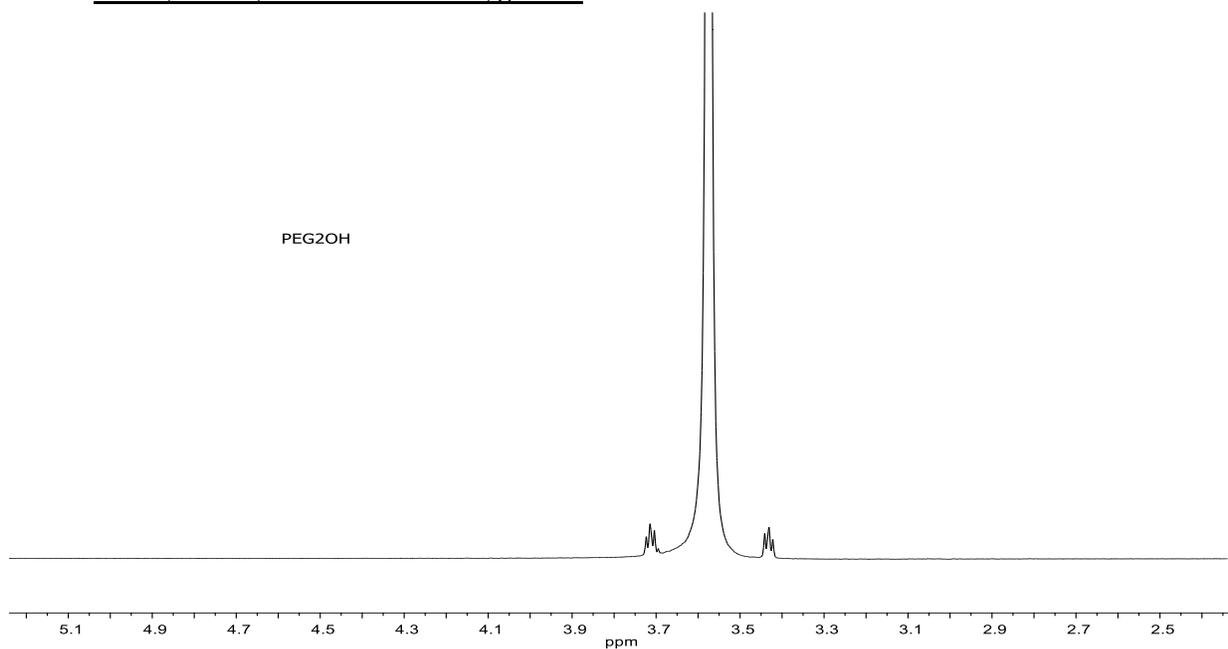
Dependence of glass transition temperature (T_g) of PEO from its molecular weight:



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C. NMR (HNMR) OF PEO in DMSO, general



124 avenue Avro, Dorval (Montreal)
Quebec H9P 2X8 Canada
Phone : +1-514-421-5517 or +1-514-421-5506
support@polymersource.com
www.polymersource.ca