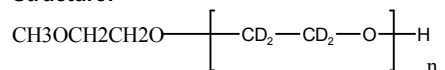


Sample Name: Deuterated Poly(ethylene glycol) methyl ether

Sample #: P5381-dPEO-OCH3

Structure:



Composition:

Mn x 10 ³	PDI
2.2	1.13

Synthesis Procedure:

Deuterated Poly(ethylene glycol) is obtained by living anionic polymerization using methoxy ethanol—potassium alkoxide (the initiator portion is protonated) as initiator. Polymerization of freshly distilled deuterated ethylene oxide (d4) was carried out at room temperature for 24h followed by termination with acidic methanol. The obtained polymer was passed through neutral Al₂O₃ packed column and precipitated in ethyl ether at low temperature. Polymer was dried at room temperature for 24h.

Characterization:

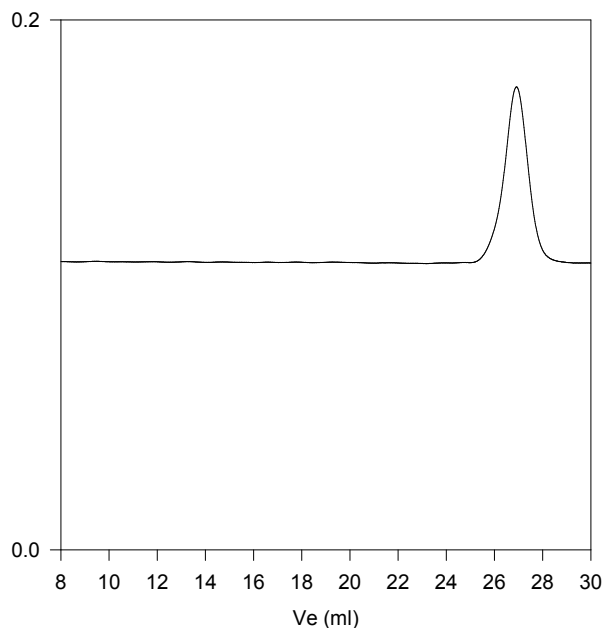
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography.

Solubility:

Deuterated Poly(ethyl glycol methyl ether) is soluble in toluene, THF, water and CHCl₃. The polymer is insoluble in hexane, ether, isopropanol and cold ethanol.

SEC of Sample :

P5381-dPEO



Size Exclusion Chromatography of dihydroxy Terminated Deuterated Poly(ethylene glycol-d₄) methyl ether

M_n =2200, M_w =2500, PI=1.13