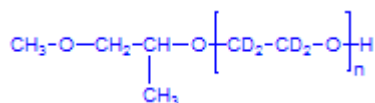


Sample Name: **Deuterated Poly (ethylene glycol)**
Deuterated Ethyl Ether or Deuterated Poly
ethylene oxide

Sample #: **P2220-dPEO**

Deuterated Poly (ethylene glycol) Methyl Ether



Composition:

Mn x 10 ³	PDI
19.1	1.10

Synthesis Procedure:

Deuterated Poly(ethylene glycol) is obtained by living anionic polymerization using α - ω -dipotassium alkoxide of ethylene glycol. Polymerization of freshly distilled deuterated ethylene oxide 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:

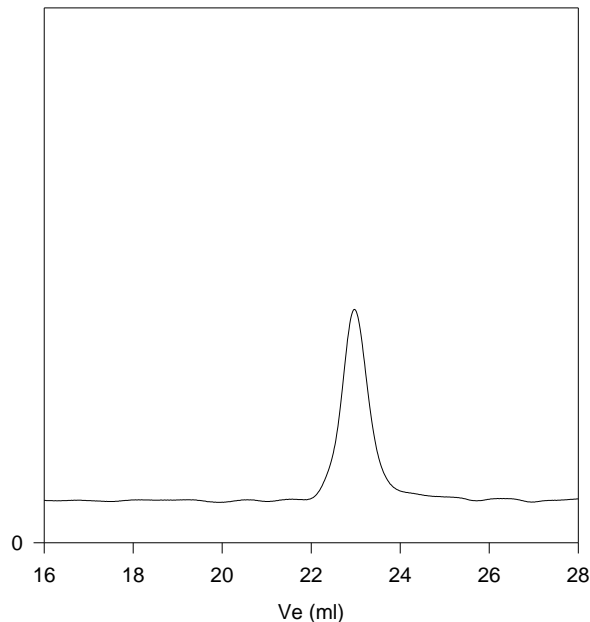
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography.

Solubility:

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

SEC of Sample

P2220-dPEO



Size Exclusion Chromatography of Deuterated Poly(ethylene oxide-d₄)
M_n = 19,100, M_w = 21,000, PI=1.10