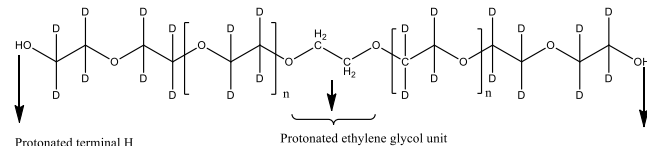


**Sample Name:** Deuterated Poly(ethylene glycol-d4),  $\alpha,\omega$ -bis(hydroxy)-terminated; with hydrogen-containing linker in center of chain

**Sample #:** P43289-dPEO2OH

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
25.0	1.08

**Synthesis Procedure:**

Deuterated Poly(ethylene glycol) is obtained by living anionic polymerization using  $\alpha,\omega$ -dipotassium alkoxide of ethylene glycol (protonated). 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 Al<sub>2</sub>O<sub>3</sub> packed column and precipitated in ethyl ether at low temperature. Polymer was dried at room temperature for 24h.

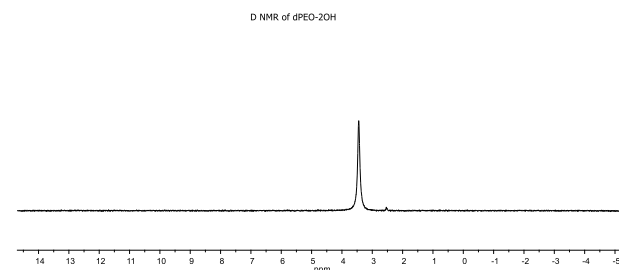
**Characterization:**

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

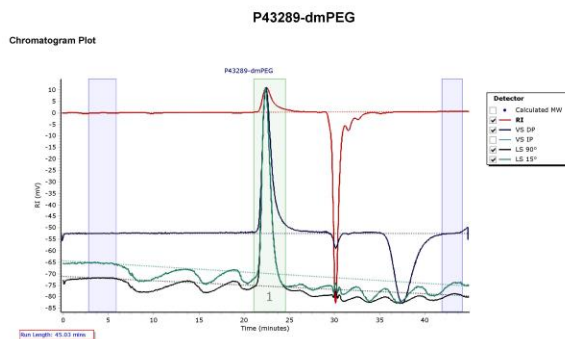
**Solubility:**

Deuterated Poly(ethyl glycol) is soluble in toluene, THF, water and CHCl<sub>3</sub>. The polymer is insoluble in hexane, ether, isopropanol, and cold ethanol.

**DNMR spectrum of the polymer:**



**SEC elugram of the Sample:**



Molecular Weight Averages						
Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)
Peak 1	30006	24992	27051	28830	30343	28296
						1.082