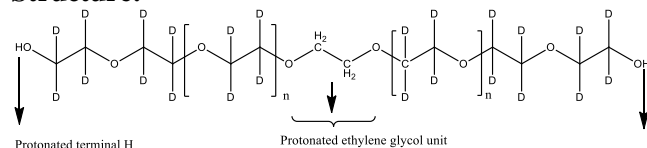


**Sample Name:** Deuterated Poly(ethylene glycol-d4),  $\alpha,\omega$ -bis(hydroxy)-terminated; with hydrogen-containing linker in center of chain

**Sample #:** P43288-dPEO2OH

### Structure:



### Composition:

Mn x 10 <sup>3</sup>	PDI
31.0	1.06

### 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.

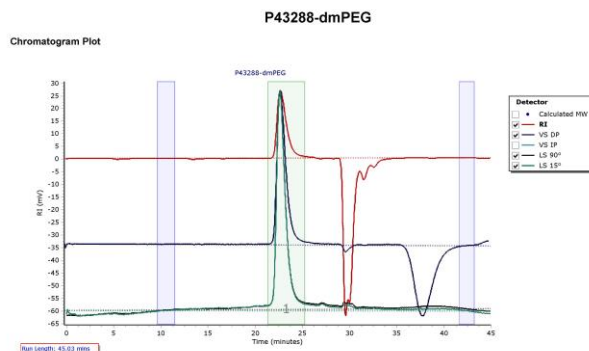
### Characterization:

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.

### 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)	PD
Peak 1	36083	30820	32810	34423	35759	34061	1.065