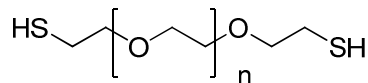


Sample Name:

**Poly (ethylene glycol) dithiol or
 α,ω -dithiol Terminated Poly(ethylene glycol)**

Sample: **P16191-EG2SH**

Structure:

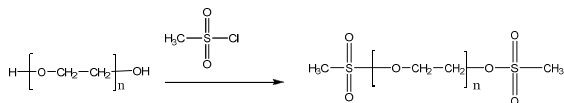


Composition:

Mn x 10 ³	PDI	SH functionality
1.0*	1.10	80%

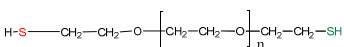
* - starting material

Synthetic Procedure:



1) NaHS / DMF at 45 °C

2) Reducing Agent / DTT



Characterization:

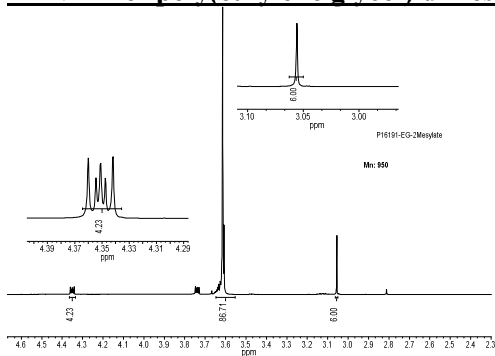
The molecular weight and polydispersity index were determined by ¹H NMR and size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with UV and refractive index detector.

Functionality: Functionality of the polymer was determined by ¹H NMR.

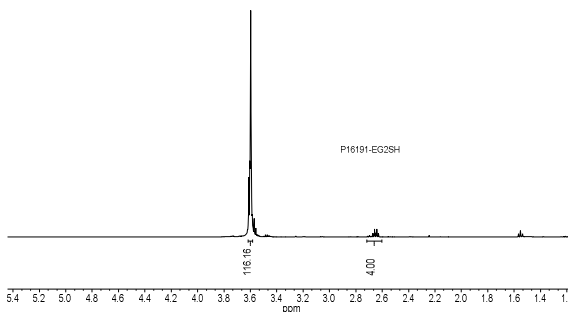
Solubility:

Polymer is soluble in water, acetone, THF, and CHCl₃. It was precipitated from hexane and ether.

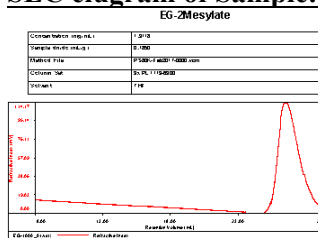
¹H NMR of poly(ethylene glycol) dimesylate:



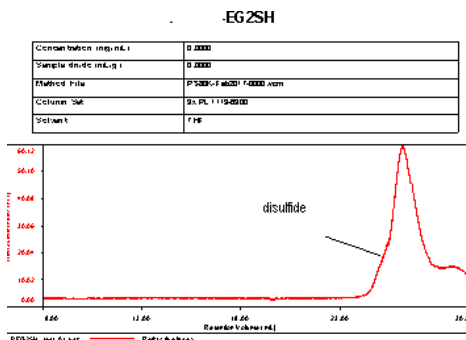
¹H NMR of poly(ethylene glycol) dithiol:



SEC elugram of Sample:



Mp: 26.63 elution counts



Mp: 26.5 elution counts

References:

S. K. Varshney, J.X. Zhang, Apply US patent 09/895,323, 2001. Heterofunctional Polyethylene glycol and Poly ethylene oxide, process for their Manufacture.