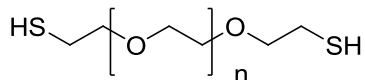


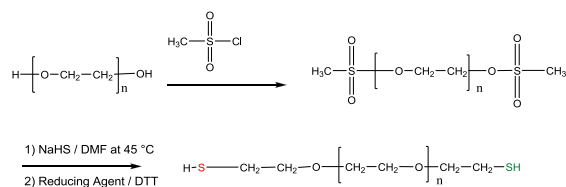
**Sample Name:**

Poly (ethylene glycol) dithiol or  
 $\alpha,\omega$ -dithiol Terminated Poly(ethylene glycol)  
 Sample: P20223G-EG2SH

**Structure:****Composition:**

Mn x 10 <sup>3</sup>	PDI	SH functionality
10.3 (SEC)*	1.10	99%

\* - starting material

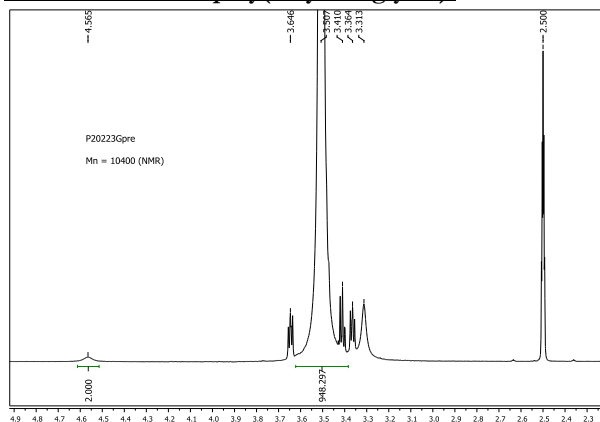
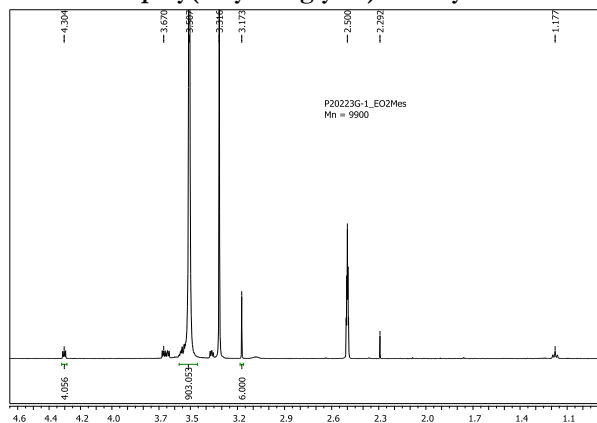
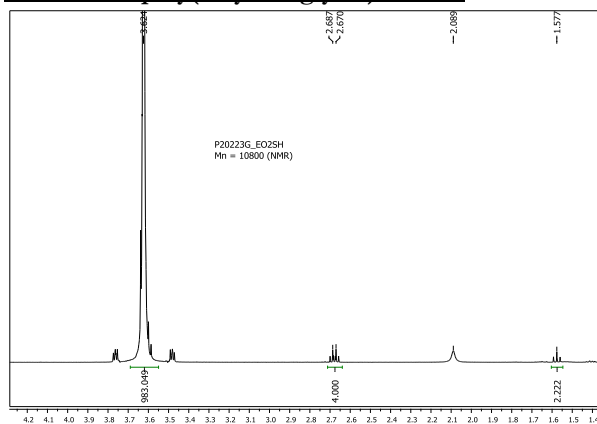
**Synthetic Procedure:****Characterization:**

The molecular weight and polydispersity index were determined by <sup>1</sup>H 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 <sup>1</sup>H NMR.

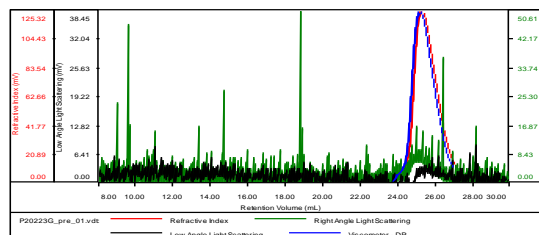
**Solubility:**

Polymer is soluble in water, acetone, THF, CHCl<sub>3</sub>.  
 It was precipitated from hexane / ether.

**<sup>1</sup>H NMR of initial poly(ethylene glycol):****<sup>1</sup>H NMR of poly(ethylene glycol) dimesylate:****<sup>1</sup>H NMR of poly(ethylene glycol) dithiol:****SEC of Sample:**

Sample ID: P20223G-EG2SH

Concentration (mg/mL)	2.9431
Sample dn/dc (mL/g)	0.0600
Method File	PS80K-June30-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P20223G_pre_01.vdt	10,291	11,342	10,165	1.102	0.8024

**References:**

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