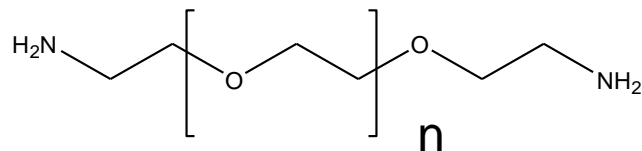


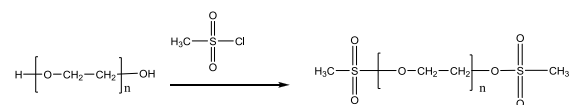
**Sample Name:**

Poly (ethylene glycol) diamino or  
 $\alpha,\omega$ -diamino Terminated Poly(ethylene glycol)  
 Sample: P20223N-EG2NH2

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

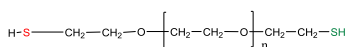
Mn x 10 <sup>3</sup>	PDI	NH2 functionality
1.9	1.2	
		>70%

\* - starting material

**Synthetic Procedure:**

1) NaHS / DMF at 45 °C

2) Reducing Agent / DTT

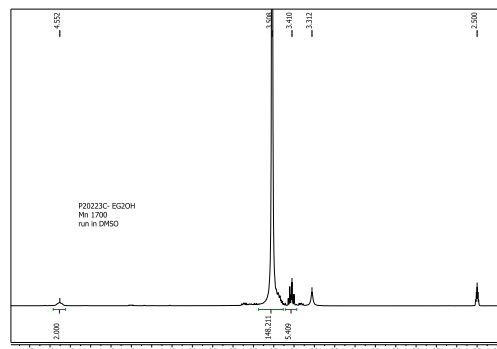
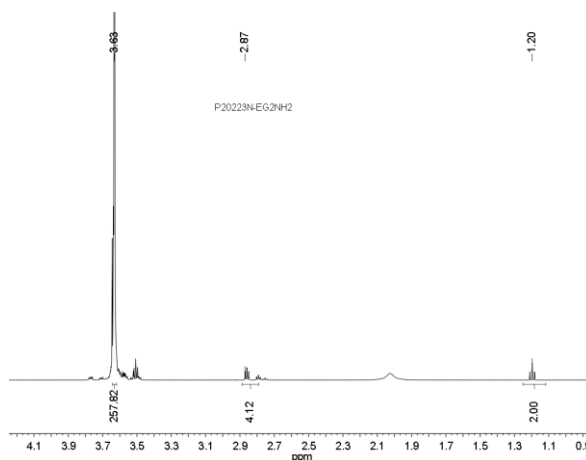
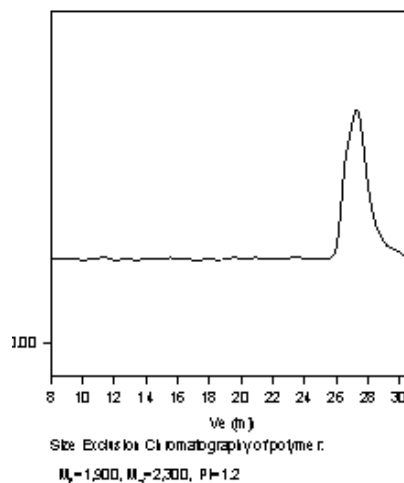
**Characterization:**

The molecular weight and polydispersity index were determined by <sup>1</sup>H NMR and size exclusion chromatography (SEC) using a Varian liquid chromatography 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) dithiol:****SEC of Sample:****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.