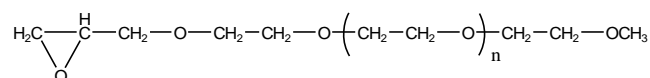


Sample Name:  $\alpha$ -epoxy,  $\omega$ -methoxy Terminated  
**Poly(ethylene glycol)**  
Sample #: P8454-EGOCH3epoxy

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI	Functionality epoxy
5.0	1.08	>55%

**Synthesis Procedure:**

$\alpha$ -epoxy,  $\omega$ -methoxyl terminated poly(ethylene glycol) was synthesized by anionic living polymerization of ethylene oxide and termination with epichlorohydrine using sodium counter ions.

**Characterization:**

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

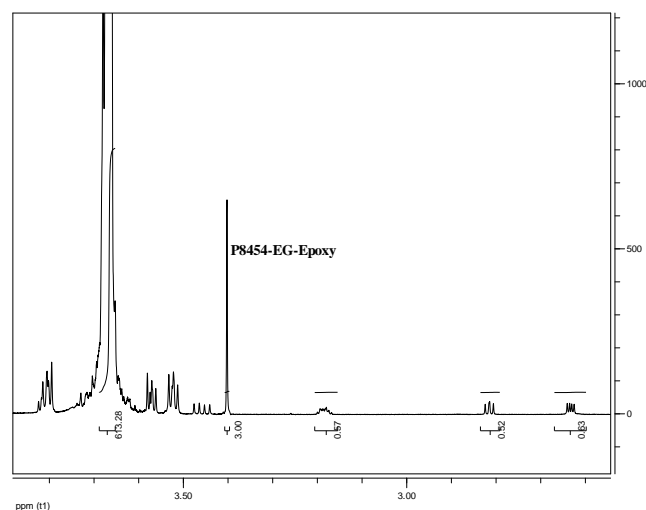
**Functionality:**

Functionality of the polymer was determined by H NMR analysis or FT-IR spectroscopy.

**Solubility:**

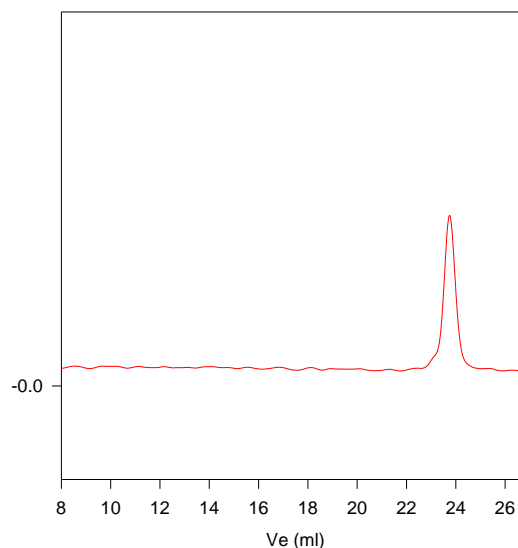
Polymer is soluble in chloroform and THF; it will be also soluble in water, methanol and ethanol. It is precipitated out from cold hexane and ether(-20°C).

**HNMR of the product:**



**SEC of product:**

**P8454-EGOCH3epoxy**



Size exclusion chromatograph of epoxy terminated poly(ethylene glycol) methyl ether:  
 $M_n=5000$ ,  $M_w=5400$ ,  $PI=1.08$  (f: 55%)