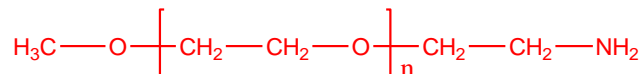


Sample Name:

**α Methoxy ω - amino end functionalized
Poly(ethylene glycol)**

Sample #: P5782-EGOCH3NH2

Structure:



Composition:

Mn x 10 ³ (Mw)	PDI	Functionality (NH ₂)
9.5 (10.1)	1.07	> 95% (by titration)
		> 90% by HNMR in D ₂ O

Synthesis Procedure:

Mesylate end functionalized Poly(ethylene glycol) methyl ether is prepared by living anionic polymerization of ethylene oxide followed by reaction of OH terminated polymethylene glycol methyl ether with methanesulfonyl chloride and then converting it to NH₂.

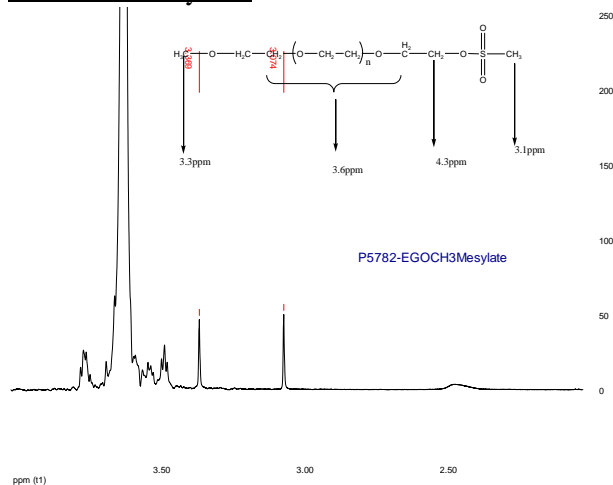
Characterization:

Polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The end functionality was calculated from ¹H-NMR spectroscopy.

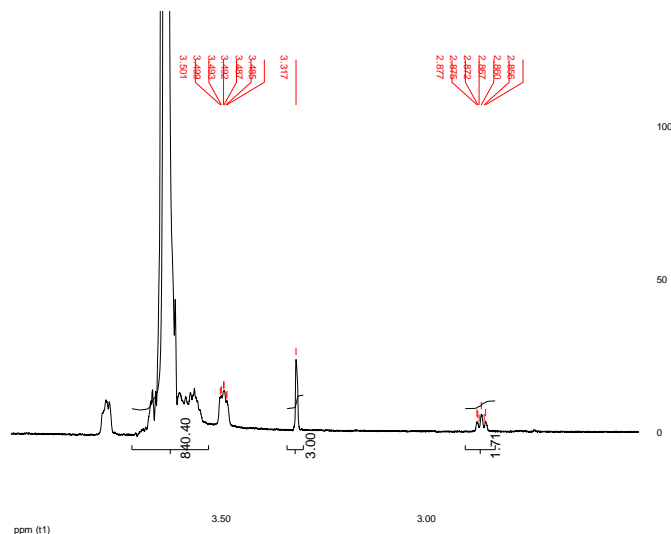
Solubility:

Functionalized Poly(ethylene oxide) is soluble in CHCl₃, THF, and precipitated out from cold diethyl ether.

**¹H-NMR Spectrum of the polymer
EGOCH3Mesylate:**

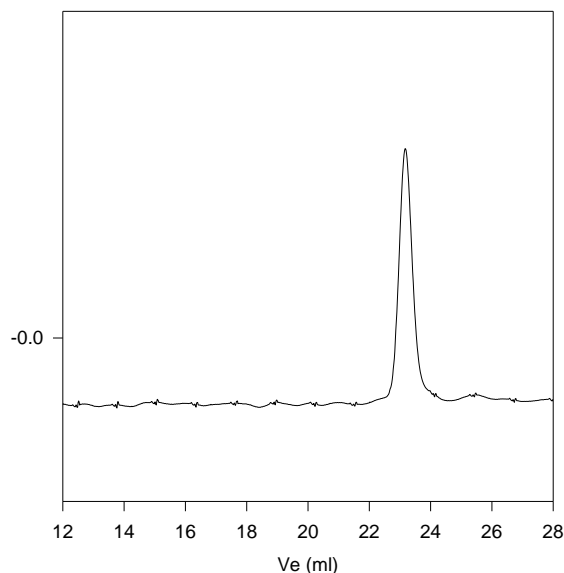


¹H-NMR Spectrum of the polymer EGOCH3NH2:



**SEC of the polymer before terminating with mesyl
chloride (methane sulfonyl chloride):**

P5782-EGOCH3NH2



Size exclusion chromatograph of
 α , methoxy ω amino terminated poly(ethylene glycol):

$M_n=9500$, $M_w=10100$, $PI=1.07$ intrinsic viscosity 0.192 dl/g in THF at 30 °C
Amino functionality > 90%.