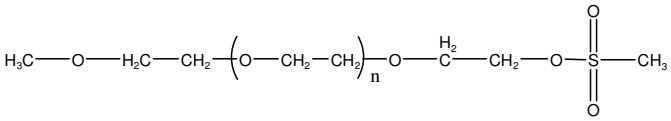
Sample Name:
∝ Methoxy ω-mesylate end functionalized Poly(ethylene glycol)

Sample #: **P16092-EGOCH3mesylate**

Structure:



Composition:

Mn x 10^3	PDI	Functionality (SO3CH3)
8.5	1.07	> 80%

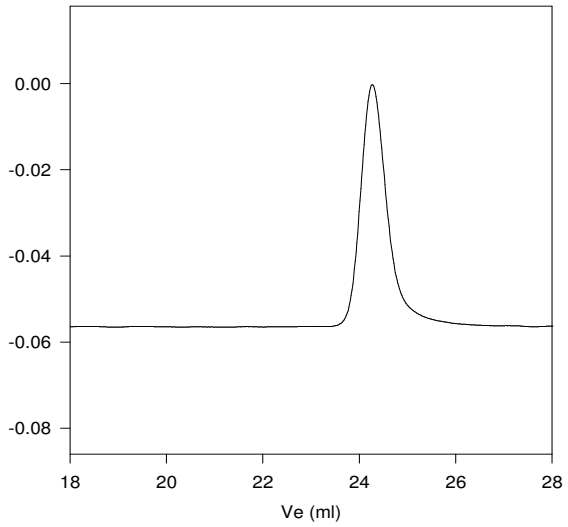
Synthesis Procedure:
Mesylate end functionalized Poly(ethylene glycol) methyl ether is prepared by living anionic polymerization of ethylene oxide followed by reaction of OH terminated polymethylene glycol methyl ether with methanesulfonyl chloride (mesyl chloride).

Characterization: The polymer was characterized by SEC and ^{1}H NMR.

Solubility:
Functionalized poly(ethylene oxide) is soluble in water.

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

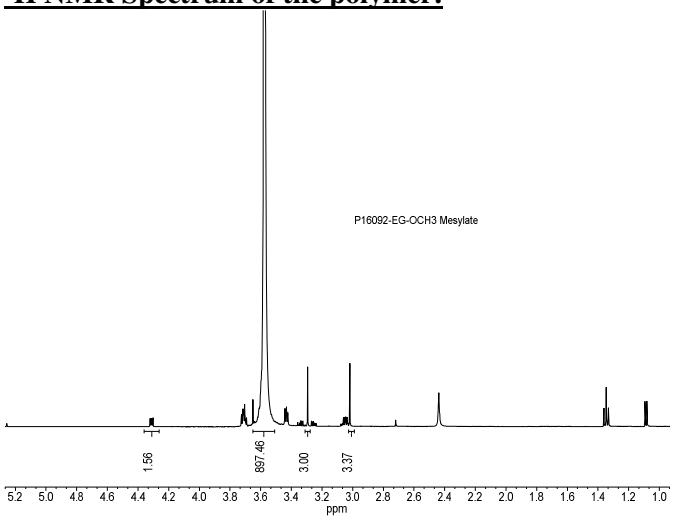
P16092-EGOCH3



Size Exclusion Chromatography of Poly(ethylene glycol) mono-methyl ether

M_n=8500, M_w=9000, PI=1.07

^{1}H NMR Spectrum of the polymer:



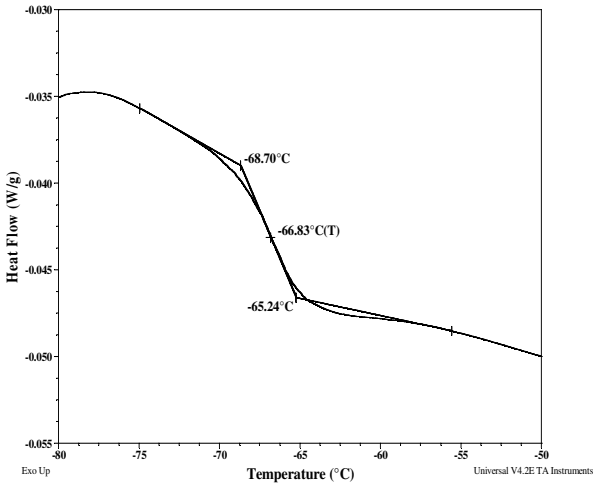
Thermal analysis of the sample# P16092 - EGOCH3mesylate
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min.The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Melting and crystallization curve for the sample
The melting temperature (T_m) was taken as the maximum of the endothermic peak where as the crystallization temperature (T_c) was considered as the minimum of the exothermic peak.

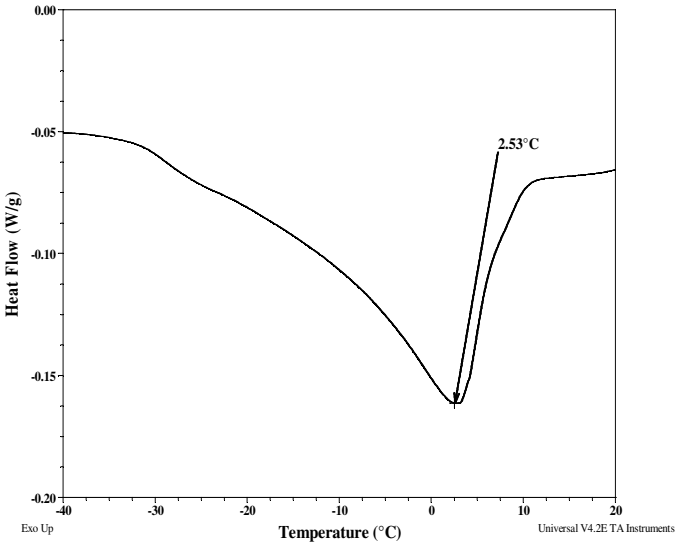
Thermal analysis results at a glance

Sample	T_m (°C)	T_c (°C)	T_g (°C)
EGTMS	03	-03	-67

DSC thermogram for the polymer:



Melting curve for the sample:



Crystallization curve for the sample: