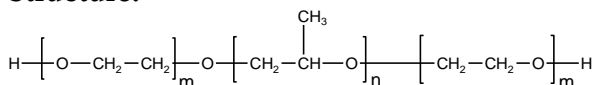


Sample Name:

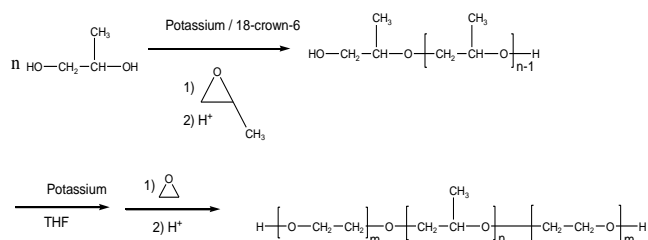
Poly(ethylene oxide-b- propylene oxide -b-ethylene oxide)

Sample #: P6073-EOPOEO**Structure:****Composition:**

$M_n \times 10^3$	PDI
3.9-b-1.8-b-3.9	1.05

Synthesis Procedure:

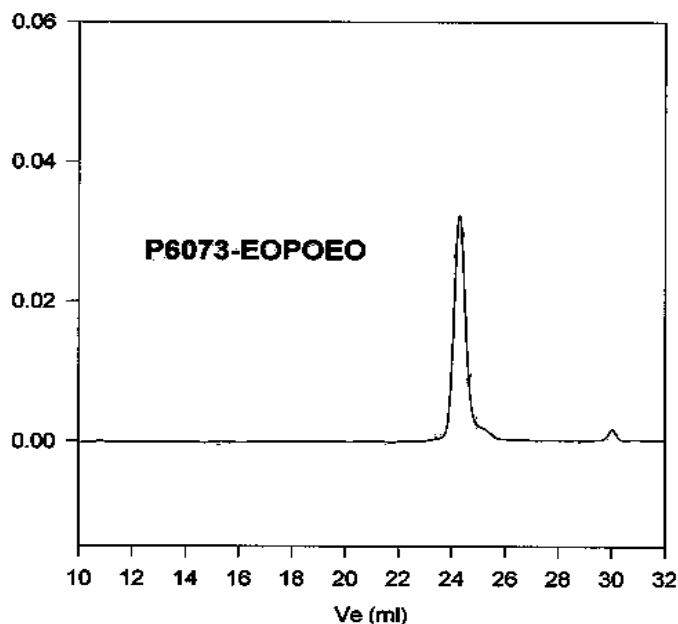
Poly(ethylene oxide-b-propylene oxide-b-ethylene oxide) is prepared by living anionic polymerization with sequence addition of propylene oxide followed by ethylene oxide. The scheme of the reaction is illustrated below:

**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.

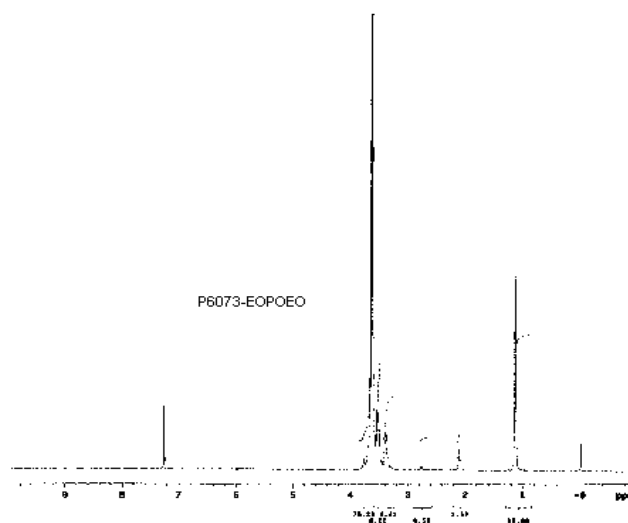
Solubility:

Polymer is soluble in THF, CHCl_3 , and toluene.

SEC of Sample:

Size Exclusion Chromatogram of Hydroxyl terminated Poly(ethylene oxide-b-propylene oxide-b-ethylene oxide)

— PEO-b-PPO-b-PEO: M_n 3900-1800-3900, $M_w/M_n=1.05$

 ^1H NMR of the Polymer:

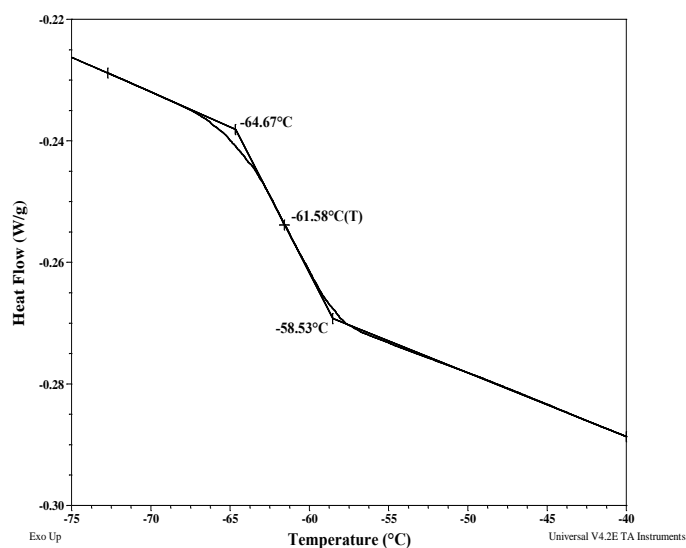
Thermal analysis of the sample# P6073-EOPOEO

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).

Thermal analysis results at a glance (EO-PO-EO)

Sample	T_m (°C)	T_c (°C)	T_g (°C)
EO block	56	33	-62
PO block		-	-62

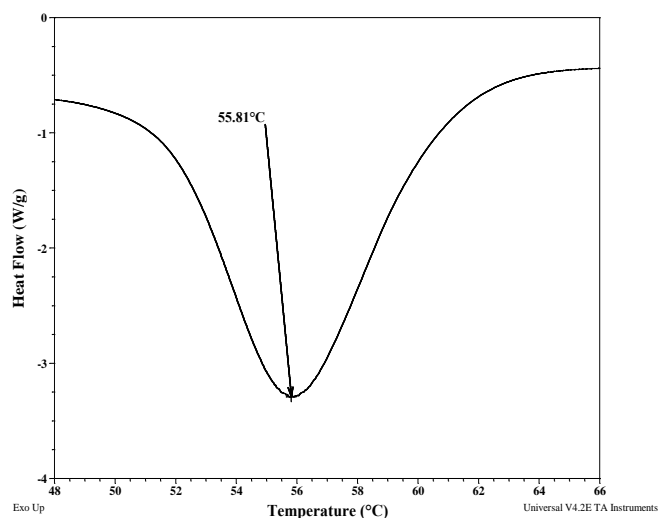
Typical thermogram for the PO-EO block



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.

Melting curve for PEO block:



Crystallization curve for PEO block:

