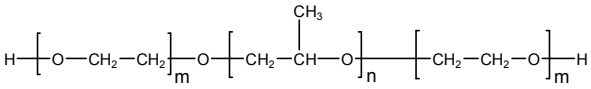
Sample Name:
Poly(ethylene oxide-b- propylene oxide -b-ethylene oxide)

Sample #: P3504-EOPOEO

Structure:

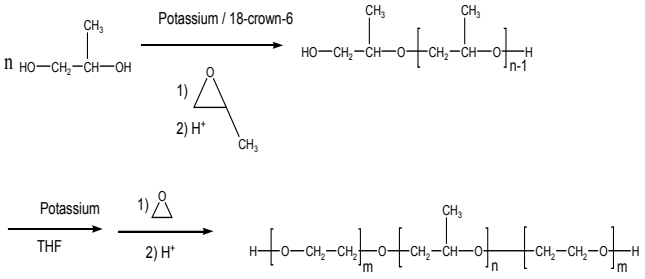


Composition:

Mn x 10^3	PDI
5.5-b-2.6-b-5.5	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:



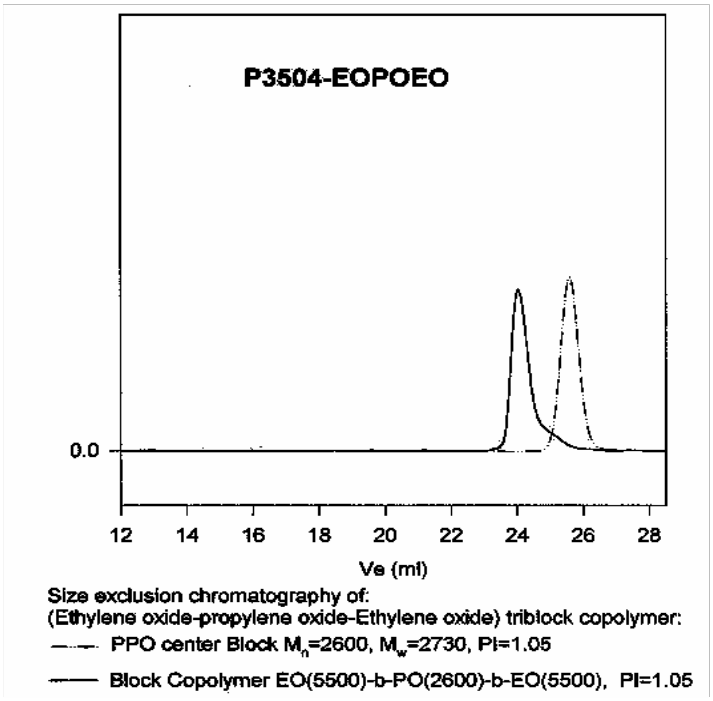
Characterization:

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.

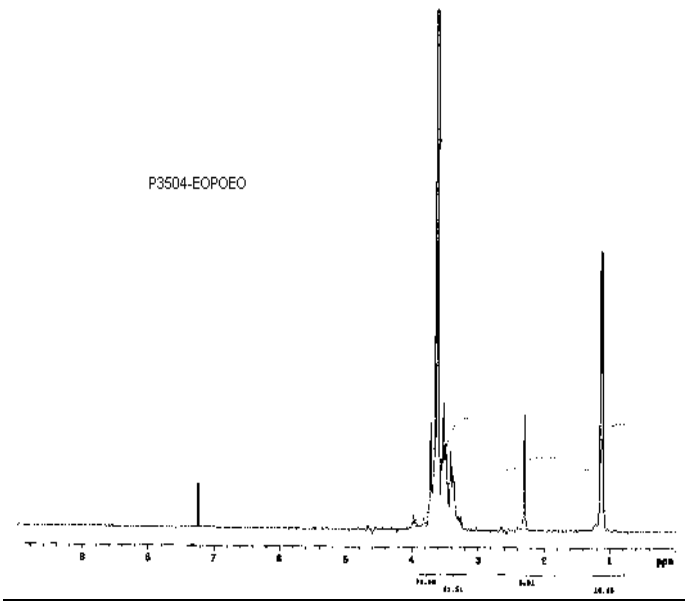
Solubility:

Polymer is soluble in THF, $CHCl_3$ and toluene.

SEC of Sample:



^{H}NMR for the polymer:



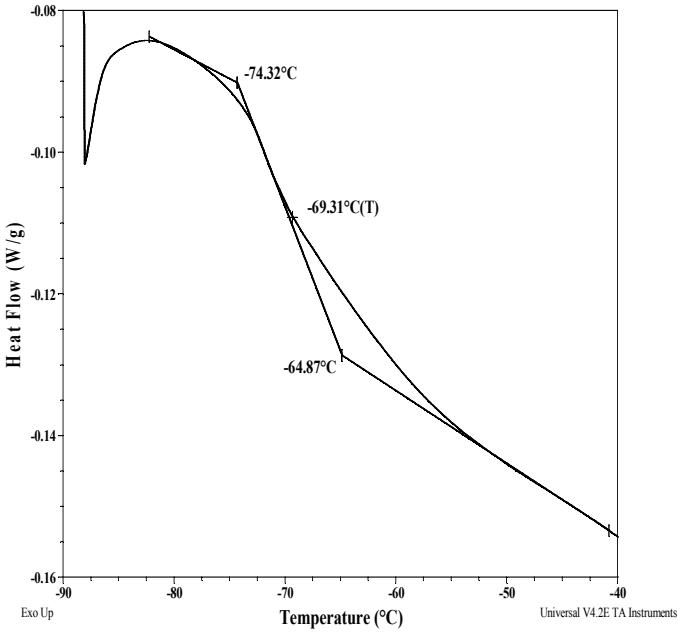
Thermal analysis of the sample# P3504-EOPOEO

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	48	21	-69
PO block		-	-69

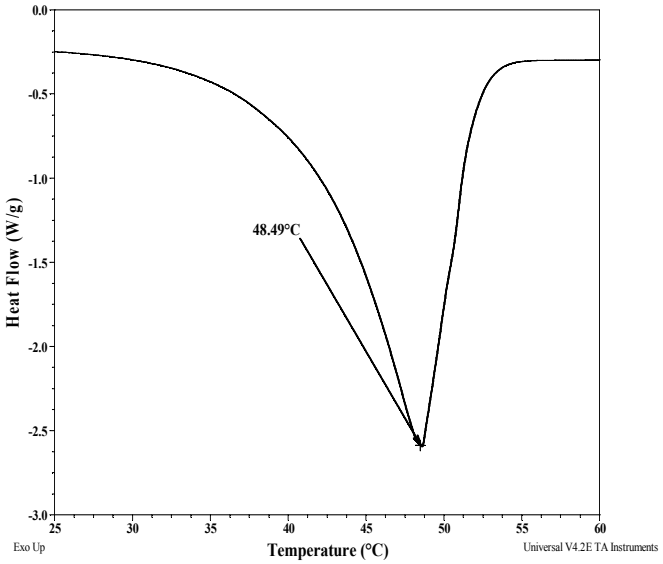
Typical thermogram for the PO-EO block



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: