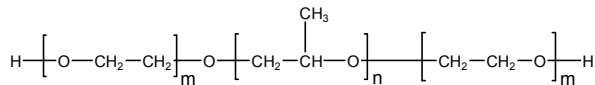


**Sample Name:**

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

**Sample #: P3751-EOPOEO**

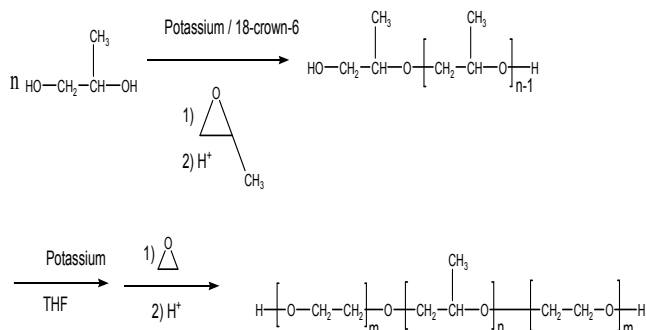
**SEC of Sample:**

**Structure:****Composition:**

Mn x 10 <sup>3</sup>	PDI
3.1-b-2.0-b-3.1	1.08

**Synthesis Procedure:**

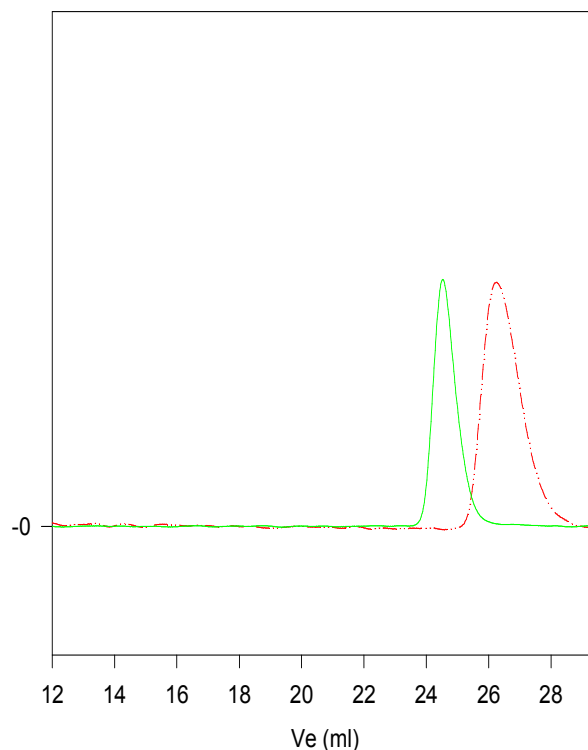
Poly(ethylene oxide-b-propylene oxide-b-ethylene oxide) is prepared by living anionic polymerization with sequence addition of propylene oxide followed by ethylene oxide. The scheme of the reaction is illustrated below:

**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<sub>3</sub> and toluene.

**P3751-EOPOEO**

Size exclusion chromatography of:

(Ethylene oxide-propylene oxide-Ethylene oxide) triblock copolymer:

--- PPO center Block M<sub>n</sub>=2000, M<sub>w</sub>=2400, PI=1.2

— Block Copolymer EO(3100)-b-PPO(2000)-b-EO(3100), PI=1.08

Dp: EO(70)-b-PPO(34)-b-EO(70)



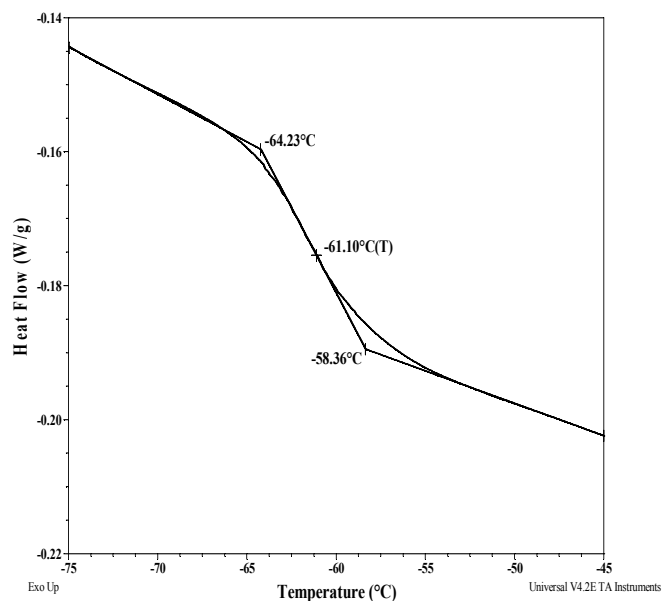
## Thermal analysis of the sample# P3751-EOPOEO

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	52	25	-61
PO block		-	-61

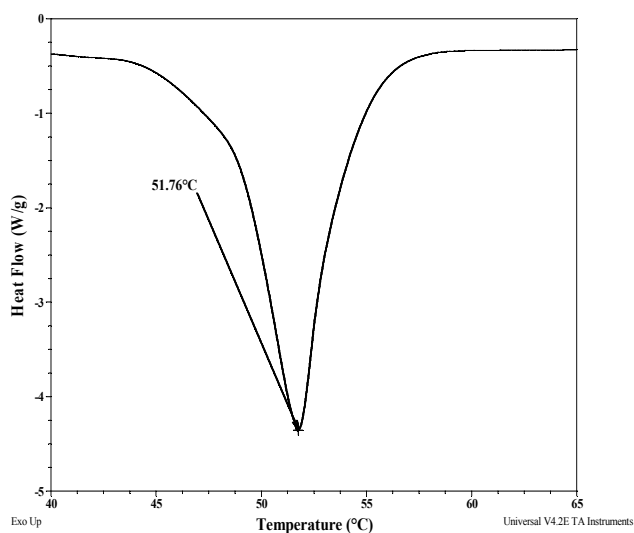
### Typical thermogram for the PO-EO block



## 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:

