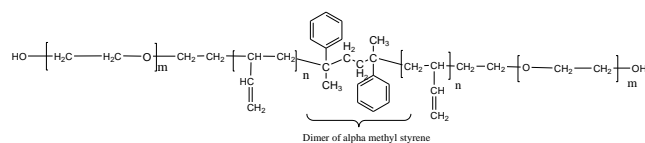


**Sample Name:** Poly (ethylene oxide(or glycol)-b-  
butadiene-b- ethylene oxide (glycol)  
*Polybutadiene, 1,2-rich microstructure*

**Sample #:** P44092-EOBdEO

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI	1,2 addition
0.35-b-1.2-b-0.35	1.02	>85%

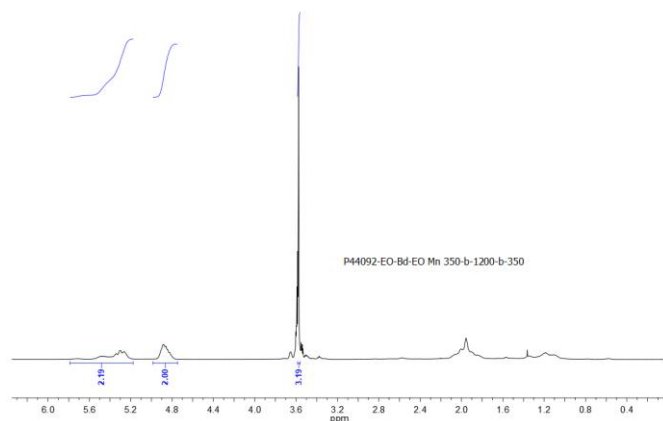
**Synthesis Procedure:**

1,2-rich microstructure addition dihydroxy terminated polybutadiene was prepared by anionic living polymerization (by lithium naphthalene) of butadiene in polar solvent such as THF at 0 °C followed by termination with ethylene oxide and then growing PEO block from its potassium salt.

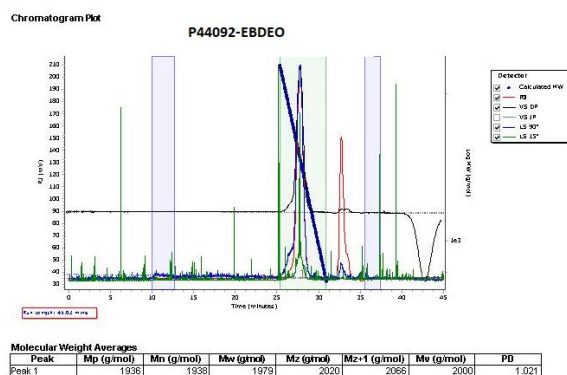
**Characterization:**

The product was characterized by size exclusion chromatography (SEC) and <sup>1</sup>H NMR.

**HNMR spectrum of the Product:**



**SEC of elugram of the Sample:**



## Thermal analysis of the P44092-EOBdEO

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 ( $T_g$ ).

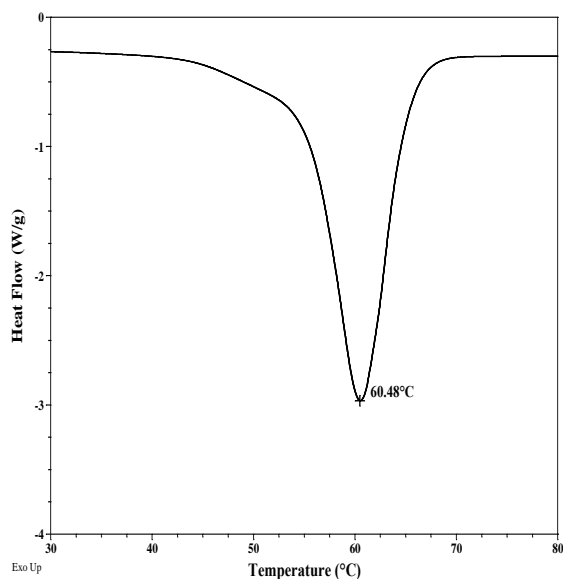
### Melting and crystallization curve for the sample

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)
PBd block	-	-	-
PEO block	60	38	-40

### Melting curve for PEO block



### Crystallization curve for PEO block:

### Glass transition of PEO block:

