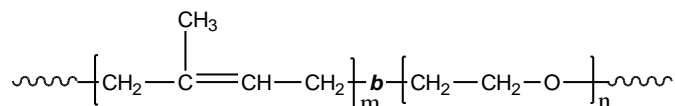


Sample Name:
Poly(1,4-isoprene)-b-poly (ethylene oxide)

Sample #: **P42016B-IPEO**

Structure:



Composition:

Mn $\times 10^3$ PIP-b-EO	Mw/Mn (PDI)
48.0-b-10.5	1.01

Synthesis Procedure:

Poly(Isoprene 1,4 addition or 1,2 addition)-b-ethylene oxide) can be prepared by anionic polymerization process.

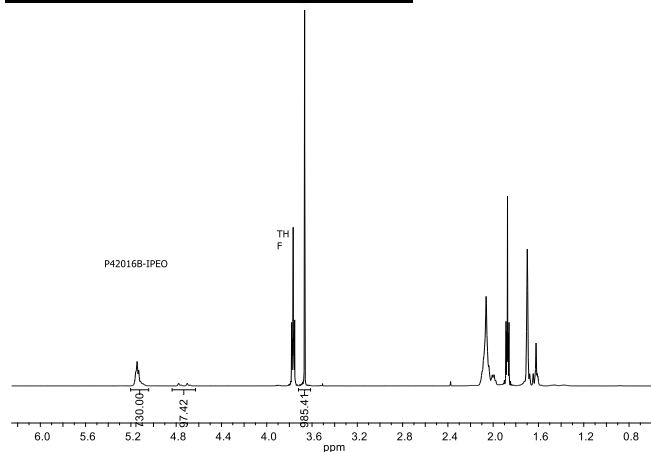
Characterization:

The product was characterized by size exclusion chromatography (SEC) and ^1H NMR.

Solubility:

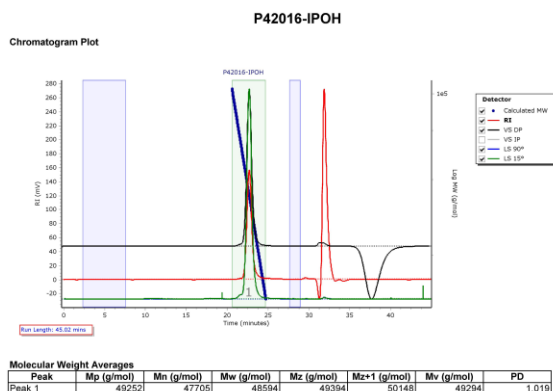
Poly (isoprene-b-ethylene oxide) is soluble in THF, and CHCl_3 .

HNMR of the Block Copolymer:



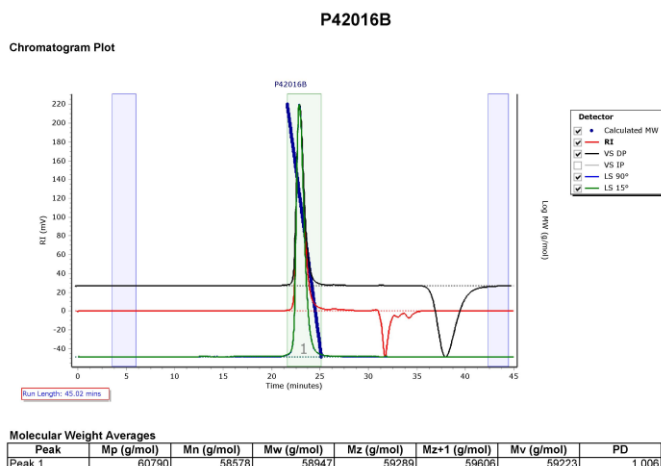
SEC elugram of the first Block:

Agilent GPC/SEC Software



SEC elugram of the block copolymer:

Agilent GPC/SEC Software



Thermal analysis of the sample# P42016B-IPEO

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of $10^\circ\text{C}/\text{min}$. 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).

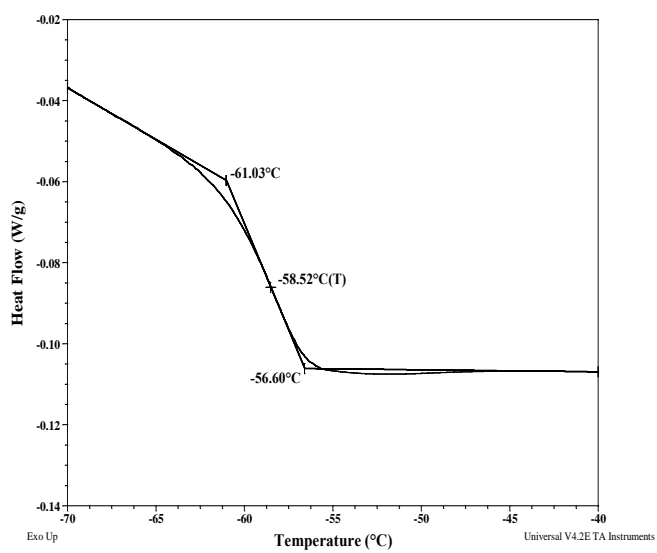
Melting and crystallization curve for the sample

The melting temperature (T_m) was taken as the maximum of the endothermic peak whereas the crystallization temperature (T_c) was considered as the minimum of the exothermic peak.

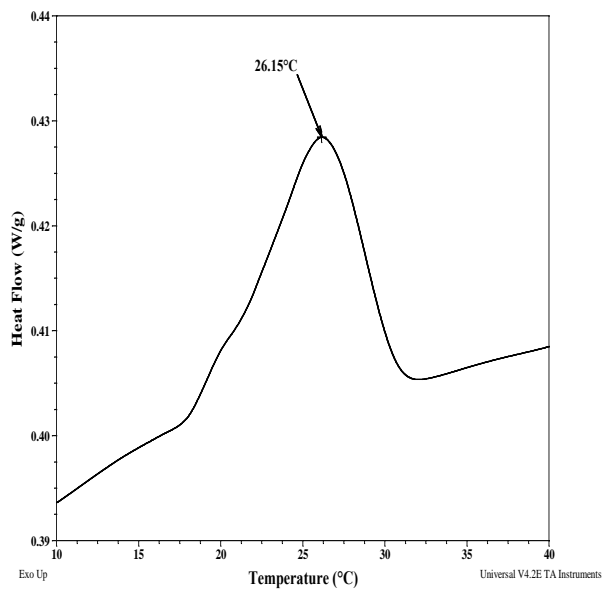
Thermal analysis results at a glance:

Sample	T _m (°C)	T _c (°C)	T _g (°C)
EO	49	26	-
IP	-	-	-59

Thermogram for Ip block:



Crystallization curve for PEO block:



Melting curve for PEO block:

