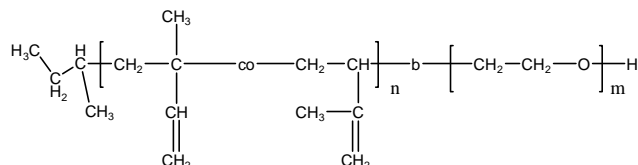


Sample Name: Poly(Isoprene-b-ethylene oxide)

Sample #: P18839-IPEO

(poly isoprene block rich in 1,2 & 3,4 microstructure)



Composition:

Mn × 10 ³ PIP-b-EO	Mw/Mn (PDI)
21.5-b-7.5	1.09

Synthesis Procedure:

Buy anionic process using Cumyl Potassium initiator.

Characterization:

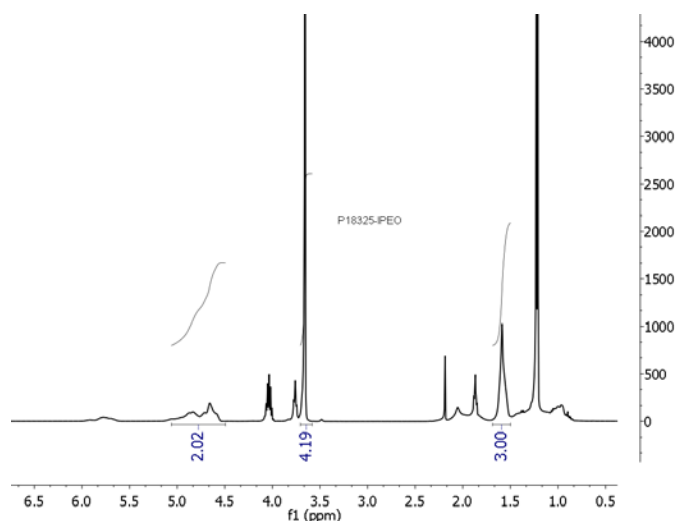
By size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI).

The final block copolymer composition was calculated from ¹H NMR spectroscopy by comparing the peak area of the vinylic butadiene protons at about 5.4 ppm with the ethylene oxide protons at about 3.6 ppm with the ethylene oxide protons at 3.6 ppm.

Solubility:

Poly(isoprene-b-ethylene oxide) is soluble in THF, CHCl₃, and toluene. The polymer has variable solubility in hexane, methanol, ethanol and water depending on its composition.

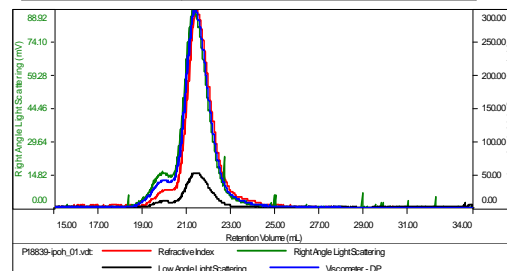
¹H NMR spectrum of the polymer:



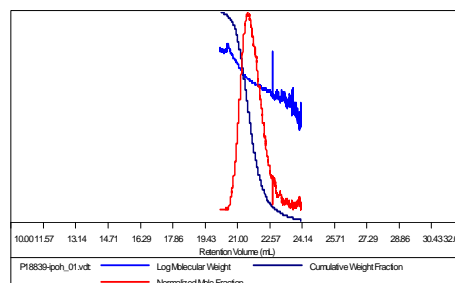
SEC elugram of polyisoprene block:

Sample ID: P18839-ipoh

Concentration (mg/mL)	23.996
Sample dn/dc (mL/g)	0.1250
Method File	PS80K.august 5.20140000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



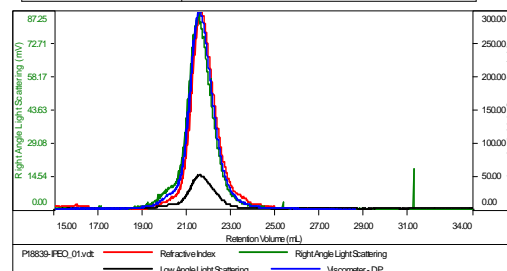
Sample	Mn	Mw	Mp	Mw/Mn	IV
P18839-ipoh_01.vcl	22,412	24,049	23,363	1.073	0.1623



SEC elugram of PI-PEO diblock copolymer:

Sample ID: P18839-IPEO

Concentration (mg/mL)	24.305
Sample dn/dc (mL/g)	0.1100
Method File	PS80K.august 5.20140000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18839-IPEO_01.vcl	27,978	30,337	29,000	1.084	0.1733

