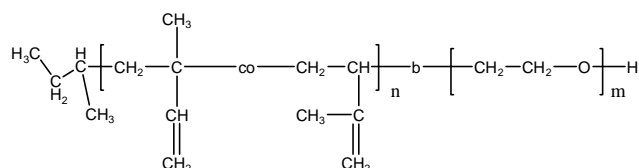


Sample Name: Poly(Isoprene-b-ethylene oxide)

Sample #: P18838A-IPEO

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



Composition:

Mn × 10 ³ PIP-b-EO	Mw/Mn (PDI)
27.5-b-9.5	1.03

Synthesis Procedure:

By anionic Process

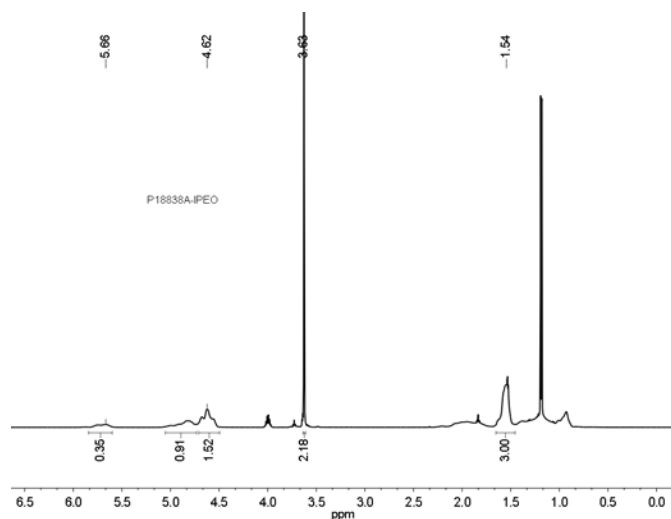
Characterization:

By size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from ¹HNMR spectroscopy by comparing the peak area of the vinylic butadiene protons at about 5.4 ppm with the ethylene oxide protons at 3.6 ppm. Block copolymer PDI is determined by SEC.

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.

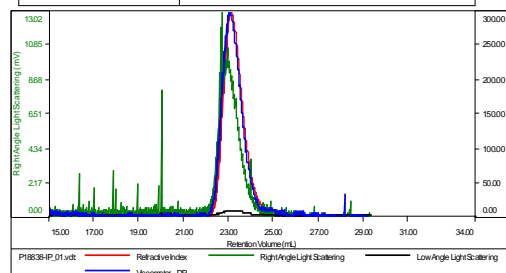
¹H NMR spectrum of the polymer:



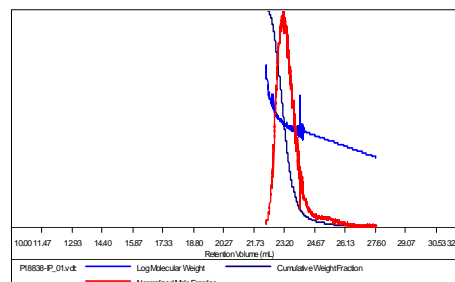
SEC elugram of polyisoprene block:

Sample ID: P18838-IPOH

Concentration (mg/mL)	0.1814
Sample ch/dt (mL/g)	0.1350
Method File	PS80K-July11-2014-0000.vcm
Column Set	3x PL 11136300
Solvent	THF



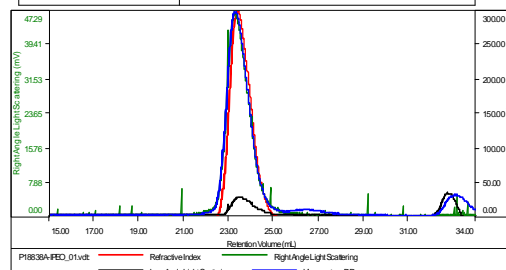
Sample	Mh	Mw	Mp	Mw/Mh	IV
P18838IP_01.vdt	27,441	30,087	27,888	1.095	2.2423



SEC elugram of PI-PEO diblock copolymer:

Sample ID: P18838A-IPEO

Concentration (mg/mL)	7.1150
Sample ch/dt (mL/g)	0.1195
Method File	PS80K-august 12-2014-0000.vcm
Column Set	3x PL 11136300
Solvent	THF



Sample	Mh	Mw	Mp	Mw/Mh	IV
P18838A-IPEO_01.vdt	35,725	32,779	35,584	0.893	0.3417

