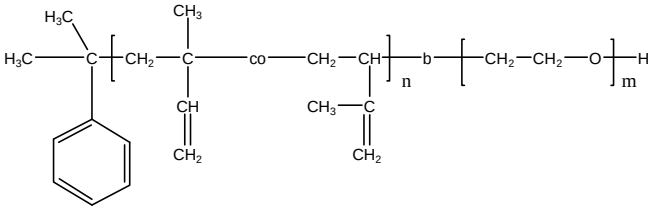
Sample Name: Poly(Isoprene-b-ethylene oxide)

Sample #: P18841-IPEO
(poly isoprene block rich in 1,2 & 3,4 microstructure)



Composition:

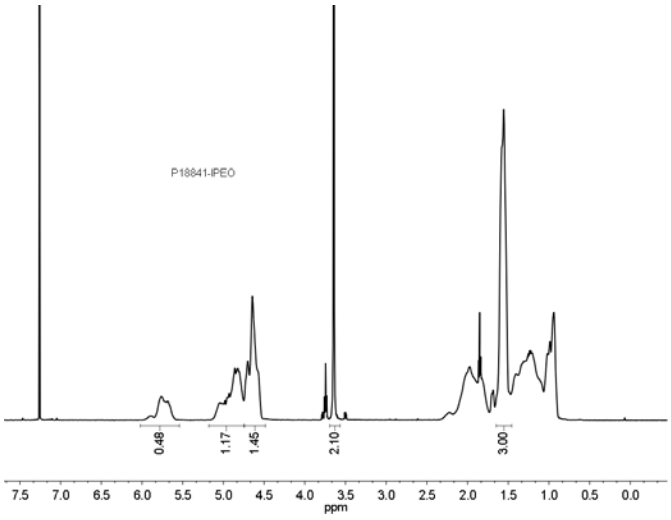
$Mn \times 10^3$ PIP-b-EO	Mw/Mn (PDI)
90.5-b-31.5	1.10

Synthesis Procedure:
Poly(isoprene-b-ethylene oxide) was prepared by anionic polymerization process.

Characterization:
OH terminated isoprene was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from ^{1}HNMR 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, $CHCl_3$, and toluene. The polymer has variable solubility in hexane, methanol, ethanol and water depending on its composition.

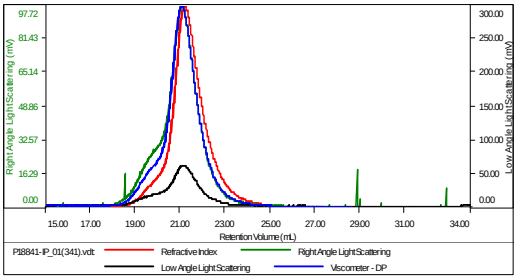
^{1}H NMR spectrum of the sample



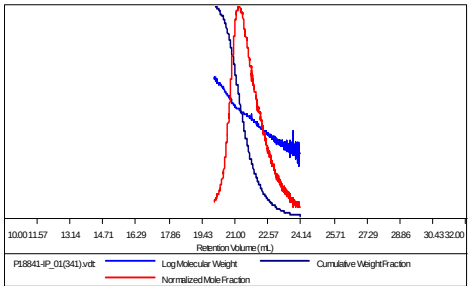
SEC elugram of polyisoprene block:

Sample ID: P18841-IP

Concentration (mg/mL)	6.7598
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-august 12-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



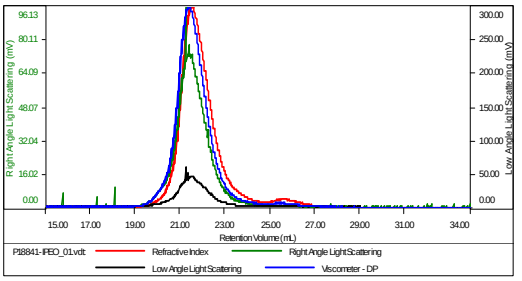
Sample	Mn	Mw	Mp	Mw/Mn	IV
P18841-IP_01(341).vdt	93,475	103,539	105,760	1.108	0.6890



SEC elugram of PI-PEO diblock copolymer:

Sample ID: P18841-IPEO

Concentration (mg/mL)	5.4161
Sample dn/dc (mL/g)	0.1100
Method File	PS80K-august 12-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18841-IPEO_01.vdt	122,289	134,769	136,723	1.102	0.7607