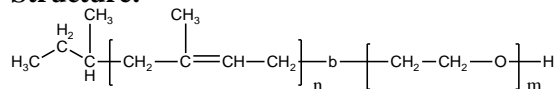


Sample Name:  
**Poly(1,4-isoprene)-b-poly(ethylene oxide)**

Sample #: **P18864E-IPEO**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> PIP-b-EO	Mw/Mn (PDI)
18.5-b-6.5	1.35

**Synthesis Procedure:**

Poly(Isoprene 1,4 addition or 1,2 addition)-b-ethylene oxide) can be prepared by the different routes as reported in the literature (Ref: *Macromolecules* 1996, 29, 6994). The direct synthesis of diblock copolymer using lithium counter ion in the presence of Phosphazene Base *t*-BuP<sub>4</sub> is interesting as reported in *Macromolecules*, **32** (8), 2783 -2785, 1999. These polymers can also be successfully synthesized using different end functionalized polymers as investigated in our laboratory which are proprietary.

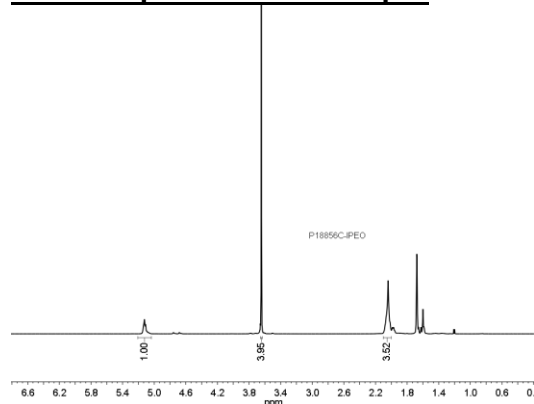
**Characterization:**

By SEC and HNMR.

**Solubility:**

Poly(isoprene-b-ethylene oxide) is soluble in THF, CHCl<sub>3</sub>, and toluene. The polymer has variable solubility in hexane, methanol, ethanol and water depending on its composition.

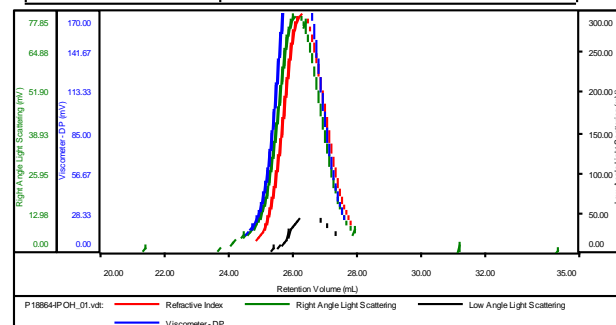
**<sup>1</sup>H NMR spectrum of the sample:**



**SEC profile of the block copolymer:**

**Sample ID: P18864-IPOH**

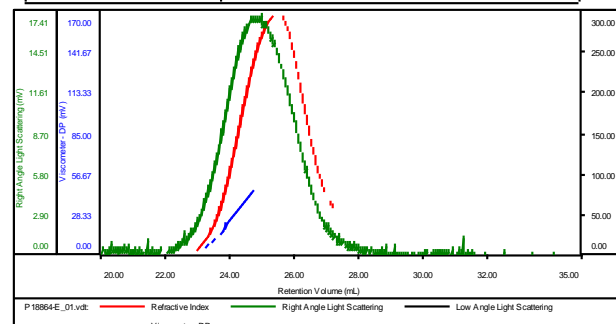
Concentration (mg/mL)	18.9229
Sample dn/dc (mL/g)	0.1200
Method File	PS80K-0903-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispers	Intrinsic Viscosity (dL/g)
P18864-IPOH_01.vdt	18,682	20,988	18,505	1.123	0.3962

**Sample ID: P18864-E-IPEO**

Concentration (mg/mL)	6.0673
Sample dn/dc (mL/g)	0.0950
Method File	PS80K-0903-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispers	Intrinsic Viscosity (dL/g)
P18864-E_01.vdt	22,614	30,605	26,270	1.353	0.3738