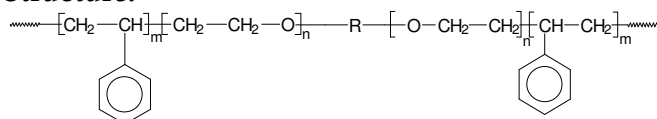


**Sample Name:**

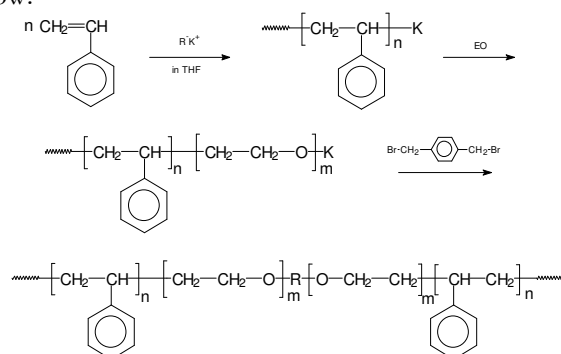
Poly(styrene-b-ethylene oxide-b-styrene))

**Sample #: P18609-SEOS****Structure:****Composition:**

Mn x 10 <sup>3</sup> S-b-EO-b-S	PDI
12.5-b-50.0-b-12.5	1.18

**Synthetic Procedure:**

The detailed synthesis of this polymer has been reported.<sup>1</sup> The triblock copolymer was prepared by coupling reaction of poly(styrene-b-ethylene oxide) anion with  $\alpha$ - $\omega$ -dibromoxylene. The scheme of the reaction is presented below:

**Characterization:**

Polymer was analyzed by size exclusion chromatography (SEC) and by NMR.

**Solubility:**

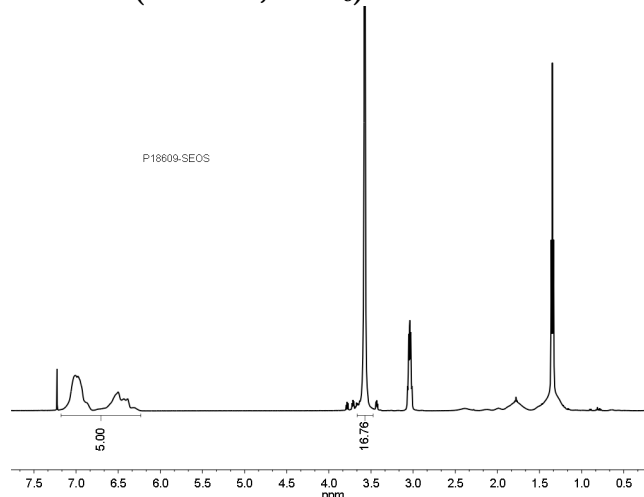
The polymer is soluble in THF, toluene, and CHCl<sub>3</sub>.

**Purification of the polymer to remove unlinked fraction:**

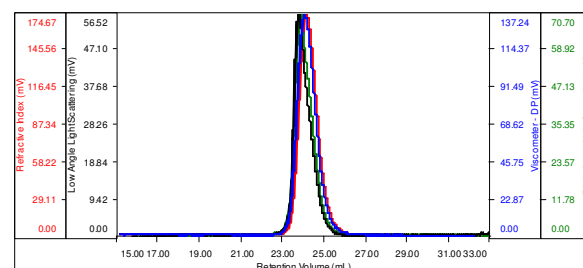
Product was purified to remove the unlinked fraction of the diblock copolymer by passing the polymer solution (by taking different solvent mixture) through Silica column to remove unlinked fraction of Poly(St-b-EO).

**References:**

1. S.K. Varshney, Xing Fu, Zhong, P. Kesani, N.Varshney; "Architecturally control polymers from Academia to the Industry"; ACS-Symposium, Orlando, August, 1996.

**<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)****SEC:****Sample ID: P18609-SEO**

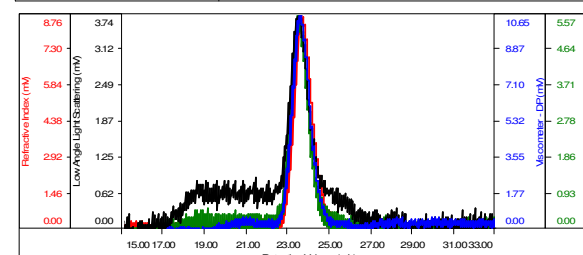
Concentration (mg/mL)	3.9825
Sample dn/dc (mL/g)	0.1090
Method File	PS80K-March13-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18609-SEO_01.vdt	37,528	47,872	38,205	1.276	0.7154

**Sample ID: P18609-SEOS**

Concentration (mg/mL)	0.1991
Sample dn/dc (mL/g)	0.1090
Method File	PS80K-March13-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18609-SEOS-Ord_01.vdt	70,813	84,011	77,097	1.186	1.1068