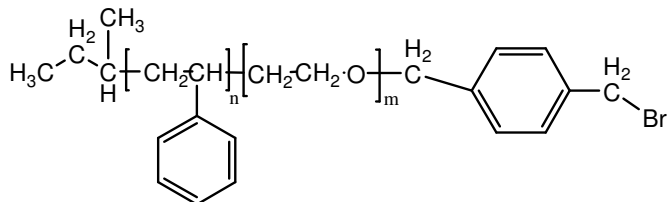


Sample Name:

**Benzyl Bromide end functionalized  
Poly(styrene-b-ethylene oxide)**

Sample #: **P18779-SEO BzBr**

Structure:



Composition:

Mn x 10 <sup>3</sup> S-b-EO	PDI
12.5-b-25.5	1.15
BzBr functionality by HNMR/titration	> 80 %

**Synthesis Procedure:**

By anionic process .

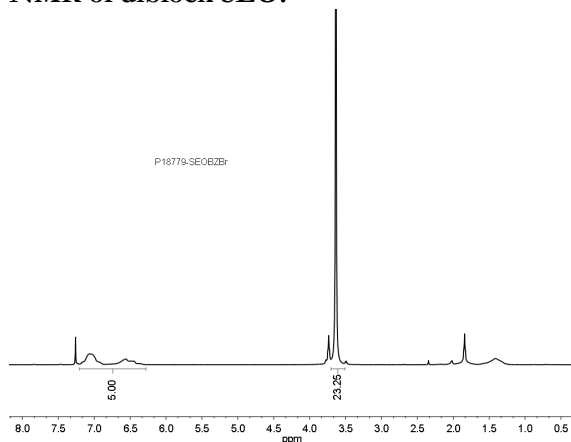
**Characterization:**

The diblock polymer was first analyzed by size exclusion and chromatography (SEC) and <sup>1</sup>H-NMR to obtain the composition molecular weight and polydispersity index (PDI). The functionality of the resulted polymer was confirmed by <sup>1</sup>H-NMR spectroscopy using CH<sub>2</sub> group adjacent to COOH.

**Solubility:**

Functionalized poly(styrene-ethylene oxide) is soluble in CHCl<sub>3</sub>, THF, and precipitated out from hexane or cold diethyl ether.

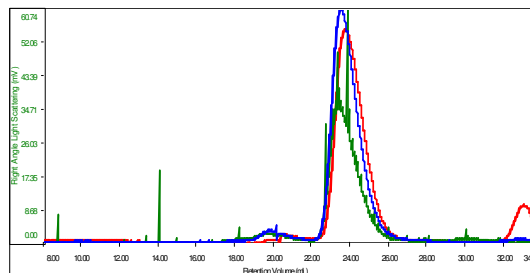
**NMR of diblock SEO:**



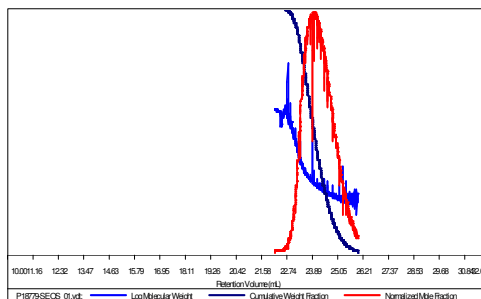
**SEC of the diblock polymer:**

Sample ID: **P18779-SEO**

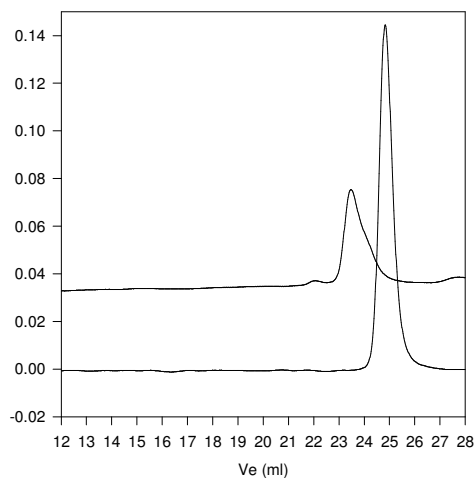
Concentration (mg/mL)	0.8821
Sample dn/dc (mL/g)	0.1240
Method File	PS80K-July11-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn	Mw	MP	Mw/Mn	IV
P18779-SEOS_01.vdt	38,944	44,827	41,265	1.151	3.3417



**P18779-SEOBzBr**



Size exclusion chromatography of poly(styrene-b-ethylene oxide)

— Poly(styrene), M<sub>n</sub>=12,500, M<sub>w</sub>=13,000, PI=1.05

— Block Copolymer PSt(12,500)-b-PEO(25,000), PI=1.15