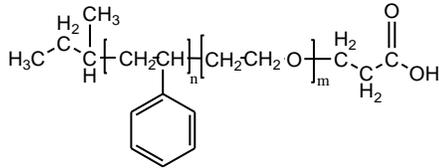


Sample Name: Carboxylic acid end functionalized Poly(styrene-b-ethylene oxide)

Sample #: P40940-SEOCOOH

Structure:



Composition:

Mn x 10 ³ S-b-EO	5.0-b-2.2
PDI	1.08
COOH functionality by HNMR/titration	> 98 %

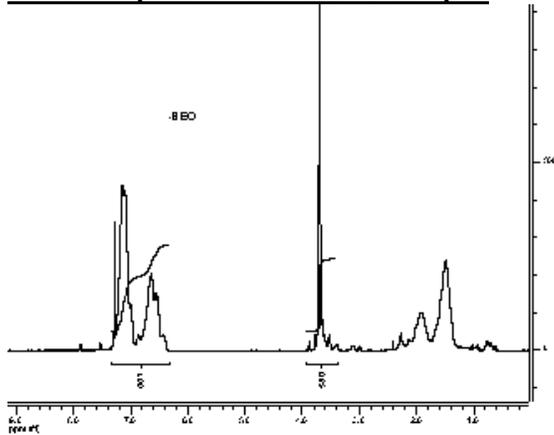
Synthesis Procedure:

Carboxylic acid end functionalized Poly(styrene-b-ethylene glycol) was synthesized by living anionic polymerization of styrene and ethylene oxide monomer, followed by the conversion of hydroxyl end group into COOH.

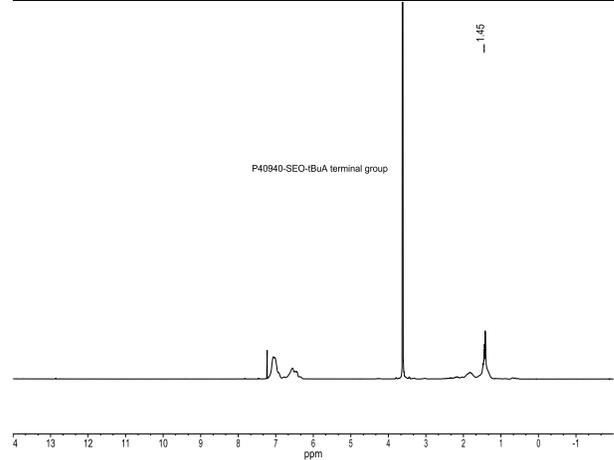
Characterization:

The product was characterized by size exclusion chromatography (SEC), and ¹H NMR.

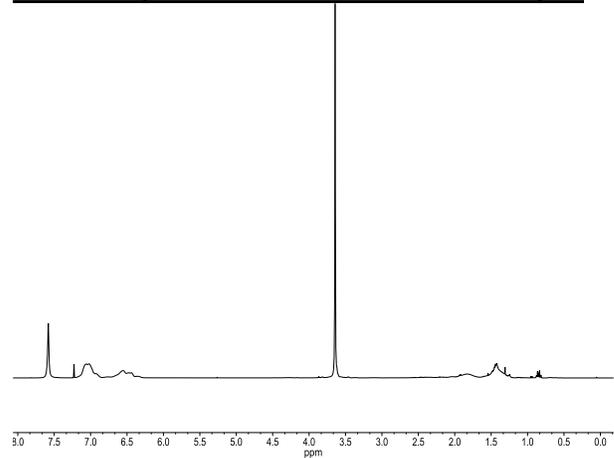
¹H NMR spectrum of the SEO sample:



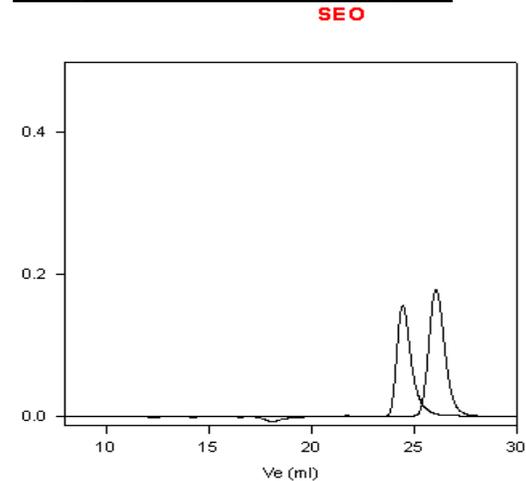
HNMR spectrum of SEO-terminated with tBuA:



¹H NMR spectrum of the SEOCOOH sample:



SEC profile of the block copolymer



Size Exclusion Chromatography:
 — Polystyrene, M_n=5,000, M_w=5,300, PDI=1.05
 — Block Copolymer Polystyrene-b-Poly(ethylene oxide)
 M_w: PS(5,000)-b-PEO(2,200), PDI=1.08