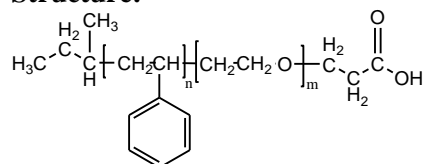


Sample Name: Carboxylic acid end functionalized Poly (styrene-b-ethylene oxide)

Sample #: P40941-SEOCOOH

Structure:



Composition:

Mn x 10 ³ S-b-EO	10.0-b-4.1
PDI	1.09
COOH functionality by HNMR/titration	> 98 %

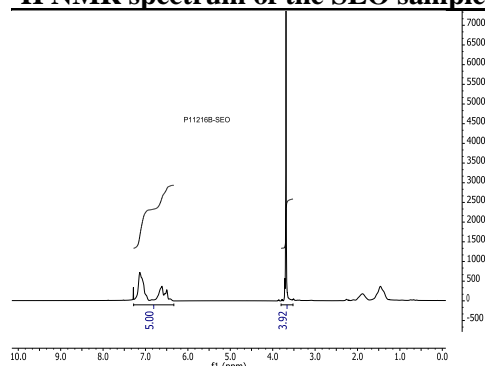
Synthesis:

COOH 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

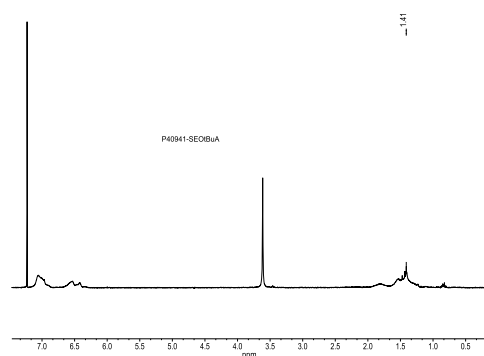
Characterization:

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

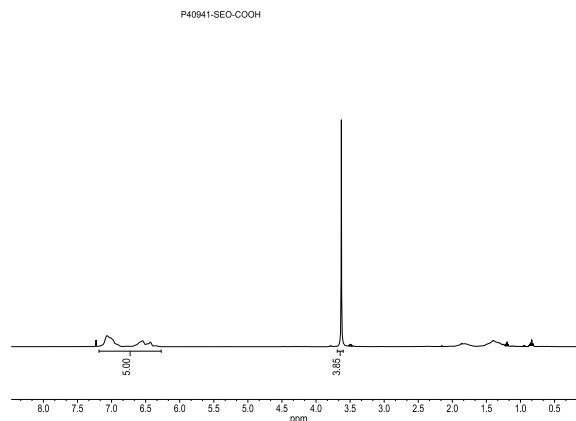
¹H NMR spectrum of the SEO sample:



HNMR spectrum of SEO-terminated with tBuA:

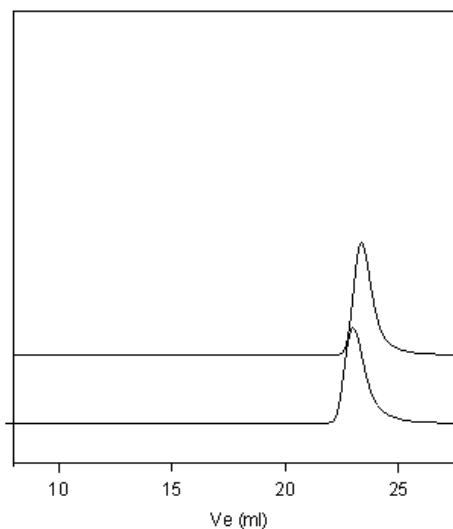


¹H NMR spectrum of the SEOCOOH sample:



SEC profile of the block copolymer

SEO



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

— Poly(styrene), M_n=10,000, M_w=10,600, PI=1.06
— Block Copolymer PSt(10,000)-b-PEO(4,100), PI=1.09
The composition determined from HNMR.

FTIR of functionalized polymer: Ps-Eo-tBuA terminated and after hydrolysis of tert BuA terminal unit to COOH:

