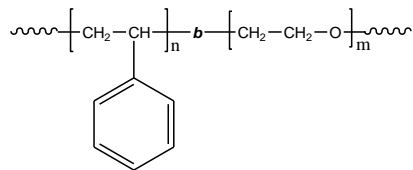


Sample Name: Poly (styrene-b-ethylene oxide)

Sample #: P41085-SEO

Structure:



Composition:

Mn x 10 ³	PDI
5.2-b-6.5	1.09

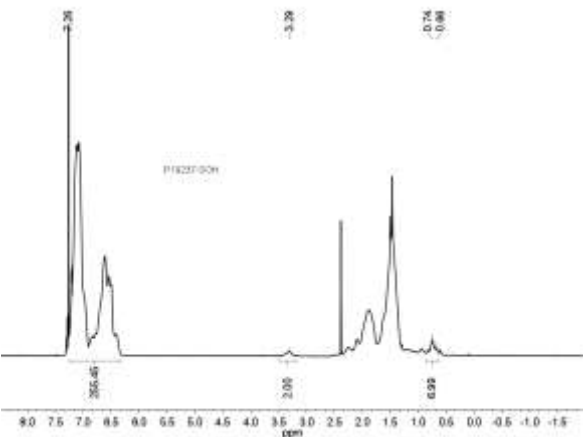
Synthesis Procedure:

Poly (styrene-b-ethylene oxide) diblock copolymer is prepared by living anionic polymerization.

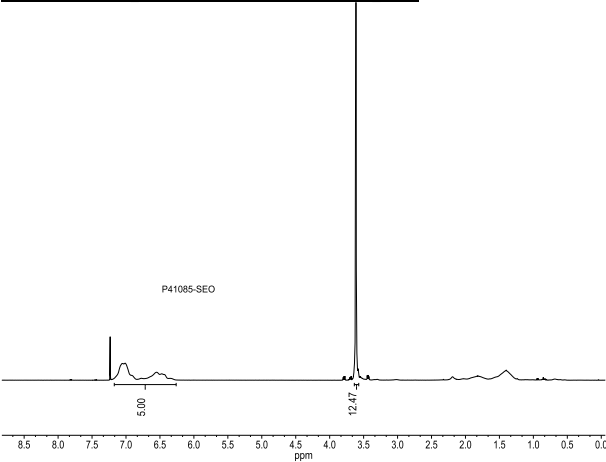
Characterization:

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

¹H NMR spectrum of the SOH sample:



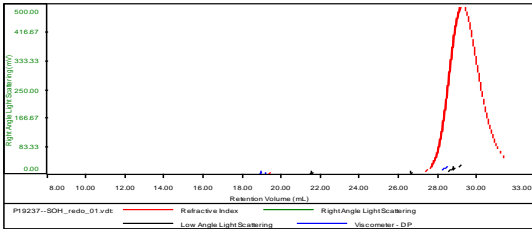
¹H NMR spectrum of the sample:



SEC of Sample: SOH terminated used :

Sample ID:P19237-SOH

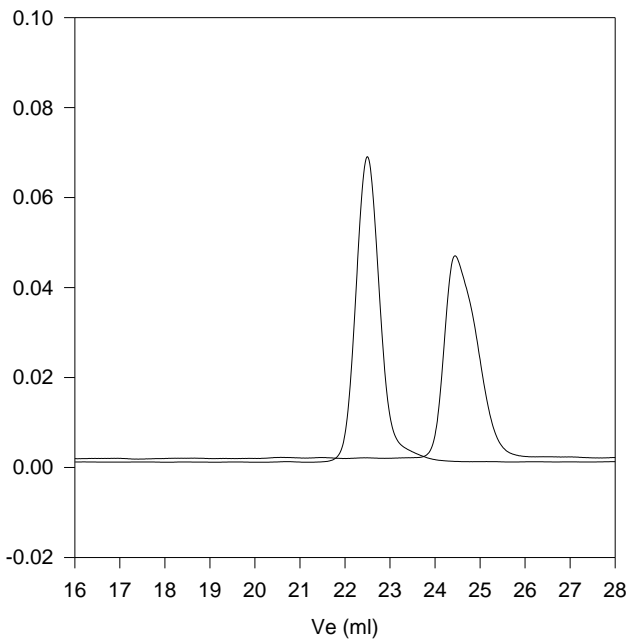
Concentration (mg/mL)	2.7122
Sample dv/dc (mL/g)	0.1850
Method File	PS80K-April 13-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19237-SOH_redo_01.vdt	5,153	5,467	4,911	1.061	0.1620

SEC profile of the block copolymer:

P41085-SEO



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

- Poly(styrene), M_n=5,200, M_w=5,600, PI=1.07
 - Block Copolymer PSt(5,200)-b-PEO(6,500), PI=1.09
- Composition from H NMR

Thermal analysis results

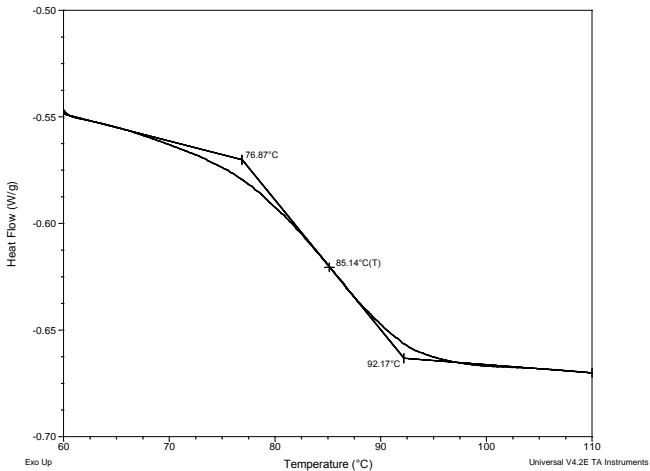
Thermal analysis was done on a TA Q100 differential scanning calorimeter at a heating rate of 20°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

The melting temperature (T_m) was taken as a maximum of the endothermic peak.

For PS block T_g : 85°C	
For PEO block	
T_g : -63°C	T_m : 61°C

DSC curves are presented on the next page.

Tg curve for PS block:

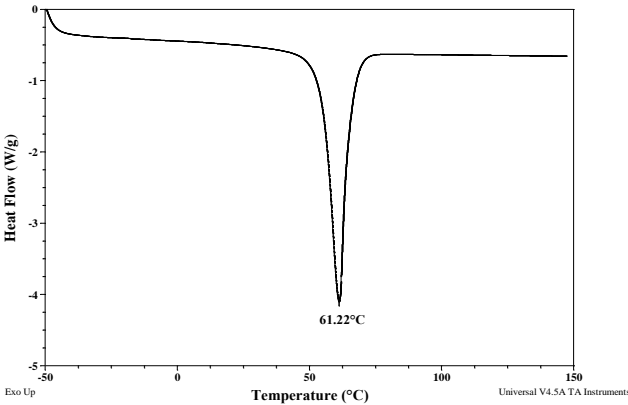


DSC thermogram of P41085-SEO:

Tm curve for PEO block:

Size: 10.5000 mg

DSC



Tg curve for PEO block:

