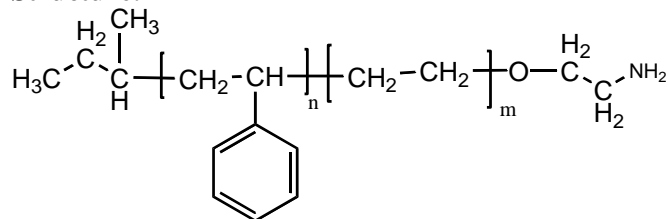


**Sample Name:**  $\omega$ - Amino end functionalized Poly (styrene-*b*-ethylene oxide)

**Sample #:** P41000B-SEO-NH2

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> S-b-EO	PDI
1.6-b-5.0	1.10

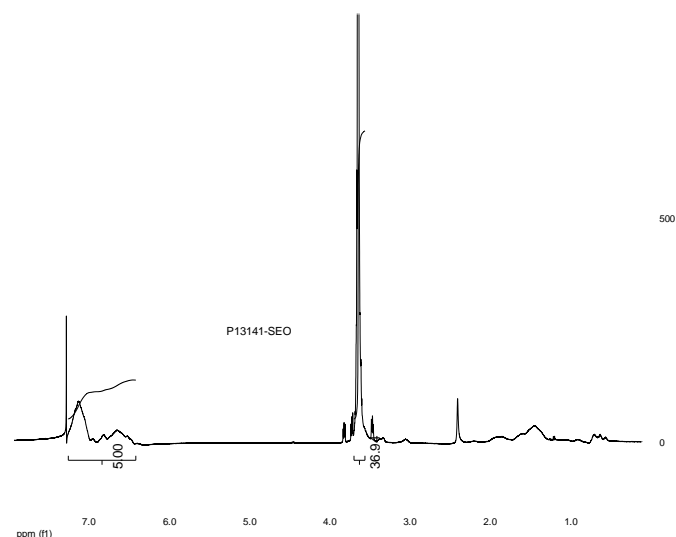
**Synthesis Procedure:**

The polymer is prepared by living anionic polymerization process and the modification of terminal OH to NH2.

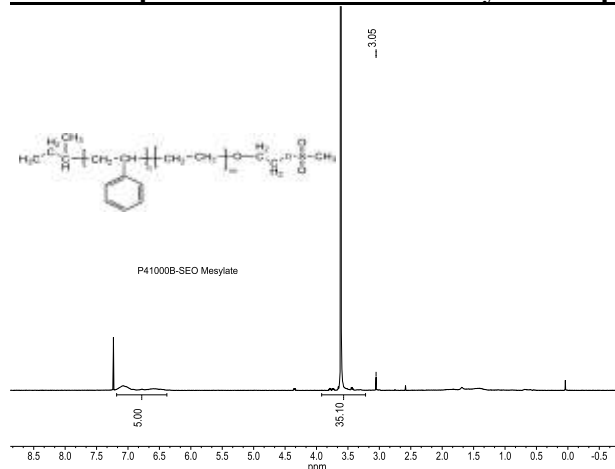
**Characterization:**

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

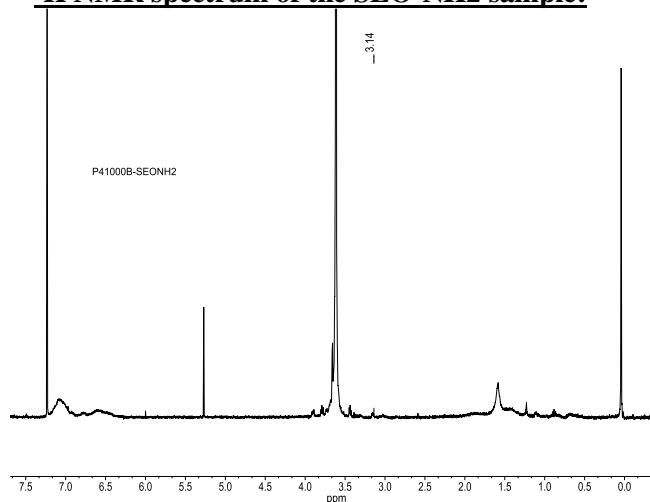
**<sup>1</sup>H NMR spectrum of the SEO sample:**



**<sup>1</sup>H NMR spectrum of the of SEO-Mesylate sample:**

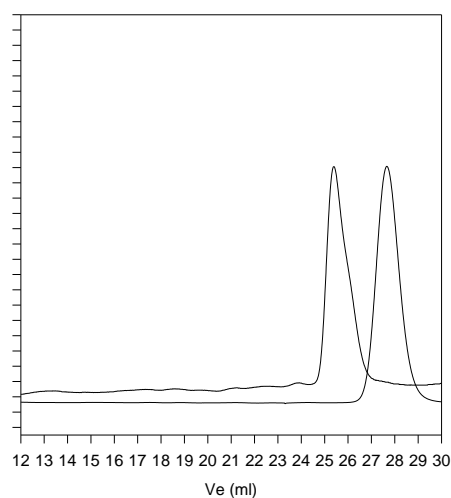


**<sup>1</sup>H NMR spectrum of the SEO-NH2 sample:**



**SEC profile of the block copolymer**

**P41000B-SEO-NH2**



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

— Poly(styrene), M<sub>n</sub>=1600, M<sub>w</sub>=1800, PI=1.12  
— Block Copolymer PSt(1600)-*b*-PEO(5000), PI=1.10  
The composition determined from HNMR.

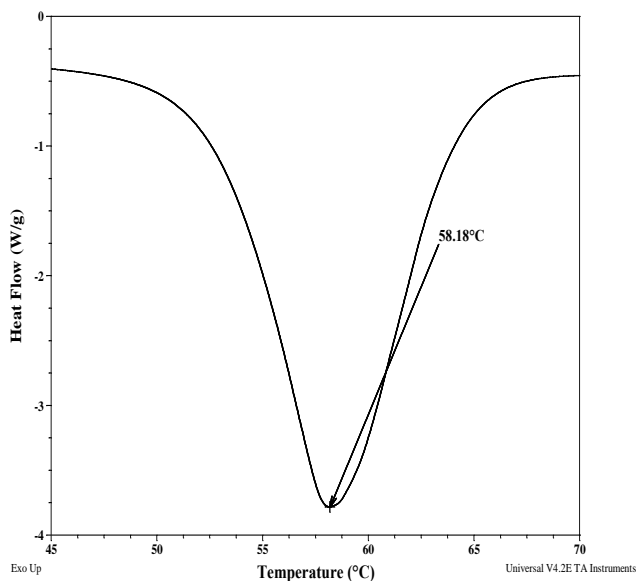
### Thermal analysis of the SEO sample used:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°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 ( $T_g$ ).

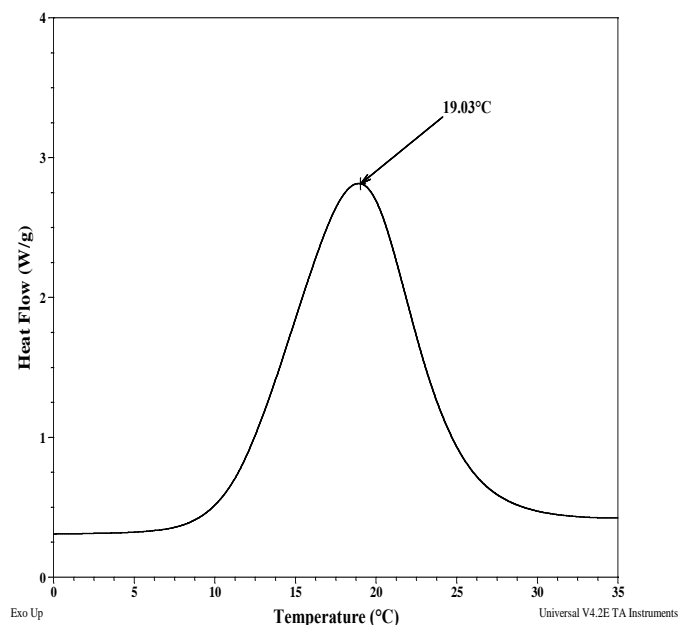
### **Melting and crystallization curve for the PEO block**

The melting temperature ( $T_m$ ) was taken as the maximum of the endothermic peak where as the crystallization temperature ( $T_c$ ) was considered as the minimum of the exothermic peak.

### **Melting curve for PEO block:**



### **Crystallization curve for PEO block:**



### **Thermal analysis results at a glance**

For PS block $T_g$ : Not distinct		
For PEO block		
$T_g$ : Not distinct	$T_m$ : 58 °C	$T_c$ : 19 °C