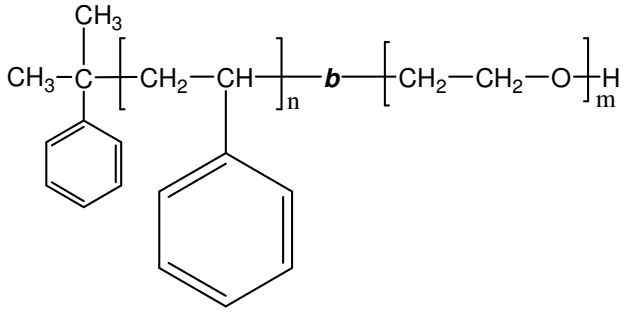
Sample Name: **Poly(styrene-b-ethylene oxide)**

Sample #: **P19993-SEO**

**Structure:**



**Composition:**

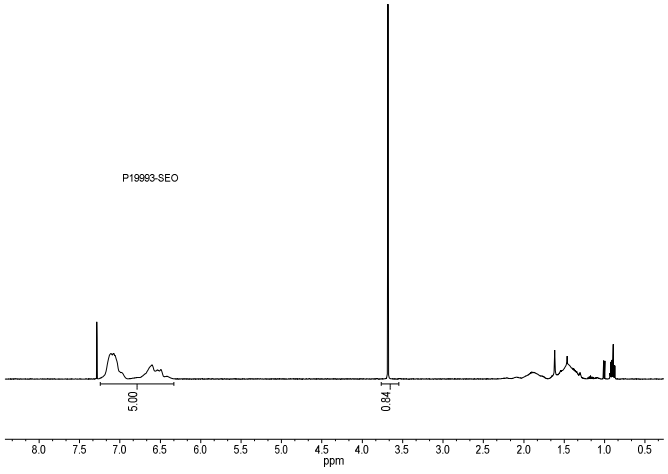
| Mn x $10^3$ | PDI |
|---|---|
| 190.0-b-16.0 | 1.07 |

**Synthesis Procedure:**
Poly(styrene-b-ethylene oxide) diblock copolymer was synthesised by living anionic polymerization.

**Characterization:**
The polymer was characterized by $^1$H NMR and size exclusion chromatography (SEC).

**Solubility:**
The polymer is soluble in THF (at 35 °C), $CHCl_3$, benzene, toluene, dioxane. Low molecular weight SEO with high contents of the polyethylene oxide block can also be solubilized in methanol and water.

**$^1$H NMR spectrum of the sample: SEO**




**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 |

**SEC elugram of the polymer:**