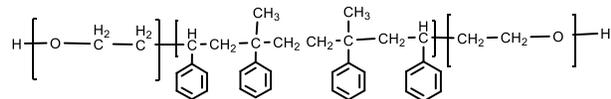


**Sample Name:** Poly(ethylene oxide-b-styrene-b-ethylene oxide)

**Sample #:** P44119-EOSEO

**Structure:**

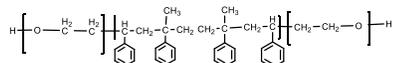
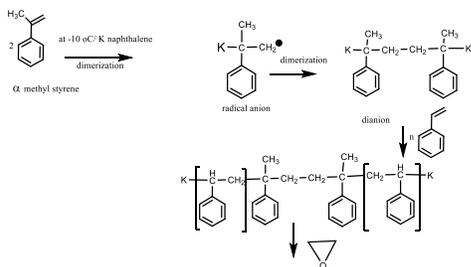


**Composition:**

$M_n \times 10^3$ EO-b-S-b-EO	PDI
8.0-b-65.0-b-8.0	1.09

**Synthesis Procedure:**

Poly(ethylene oxide-b-styrene-b-ethylene oxide) is prepared by living anionic polymerization with sequence addition of styrene followed by ethylene oxide. The scheme of the reaction is illustrated below:



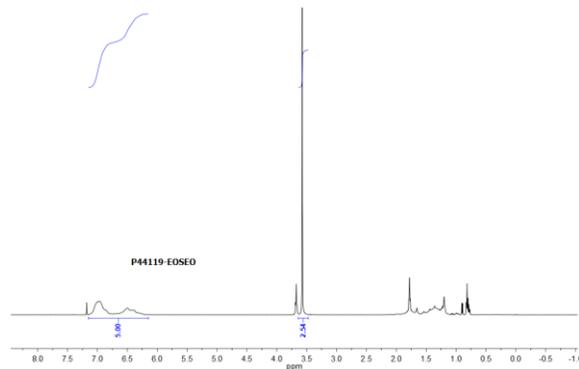
**Characterization:**

Polymer analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The composition of the block copolymers was calculated by taking the ratio of the peak area of aromatic protons at 6.4-7.2 ppm to that of ethylene protons from PEO at 3.65 ppm. The molecular weight of PEO was then calculated from this composition and the molecular weight of PS obtained by SEC.

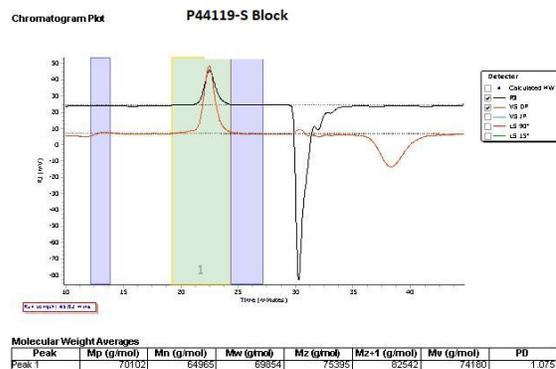
**Solubility:**

The polymer is soluble in THF, toluene, and  $\text{CHCl}_3$ . The triblock copolymer can also be solubilized in methanol and ethanol depending on its composition. The polymer readily precipitates from hexanes, ether, and water.

**HNMR spectrum of the polymer:**



**SEC elugram of the PS Block:**



**SEC elugram of the Sample:**

