

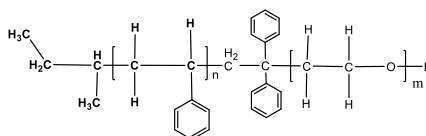
Product Profile

Identification

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

Product Lot Number: P44891-SEO

Product Chemical Architecture:



Composition:

| | |
|-----------------------------|---------------------------------------|
| Composition (S-b-EO) | 3,800-b-6,500 |
| Mn (g/mole) | 10,300 |
| Mw (g/mole) | 11,400 |
| Mw/Mn | 1.09 |
| | S₃₇EO₁₄₄ |

Method of Synthesis The polymer is synthesized by anionic polymerization process.

Solubility in different solvents:

| | | | |
|-------------|---|-------------------|---|
| THF | √ | DMF | √ |
| Alcohol | X | CHCl ₃ | √ |
| Toluene-Hot | √ | Water | × |

Validation of Architecture

A. Gel Permeation Chromatography (GPC), SEC Profile:

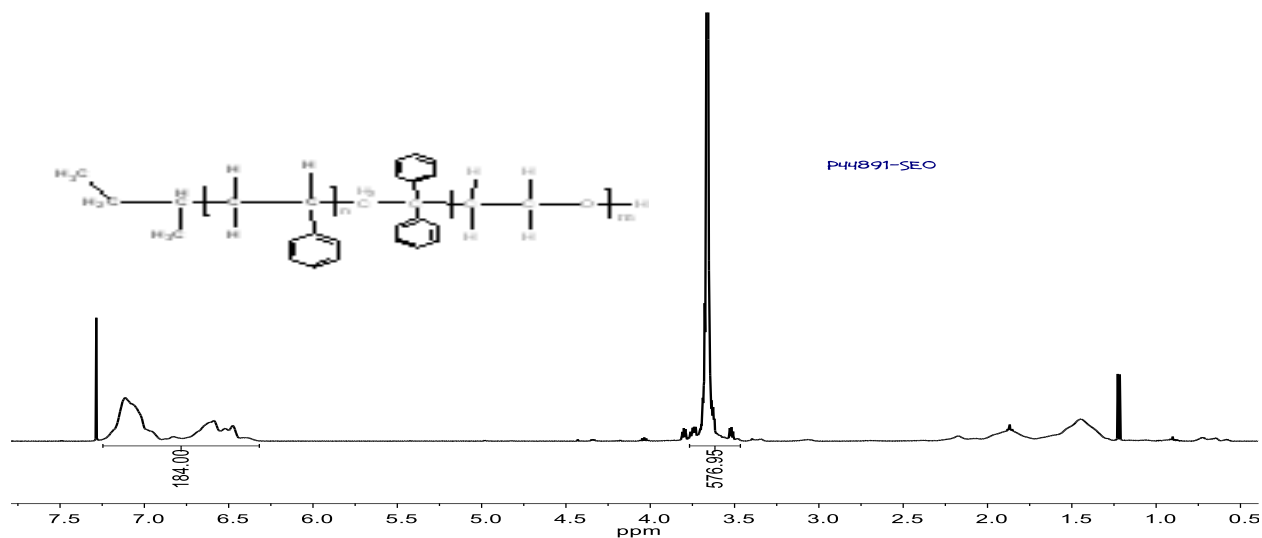
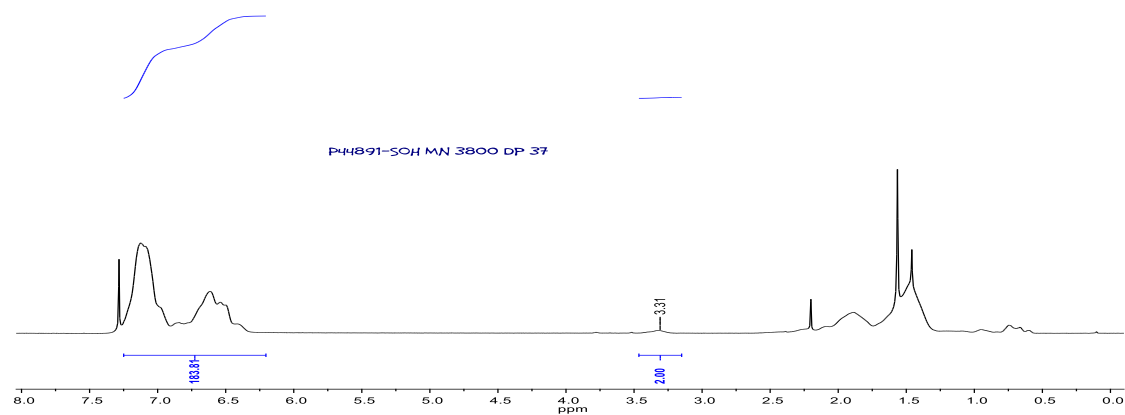
Molecular weights were determined by Agilent Technologie 1260 Infinity II GPC/SEC System equipped with Triple detector (RI, Viscometer, RALS 90° and LS 15°) and three columns (PLgel, 7.5x300 mm, 5µm-10µm, 10⁵-10⁶Å). THF (stabilized BHT) with 1%(v/v%) TEA was the eluent. The flow rate was 1.0 ml/min.

B. NMR (H¹NMR) of S-OH and SEO

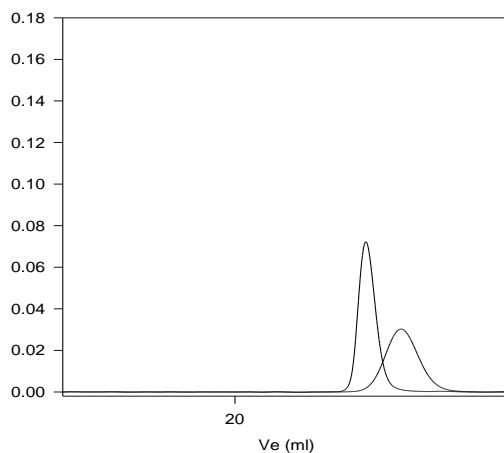
Sample was dissolved in CDCl₃. ¹H NMR spectra was determined using a 500 MHz. Bruker Avance III spectrometer.



Polymer Source,™ Inc.



P44891-SEO



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

— Poly(styrene), $M_n=3,800$, $M_w=4,200$, $PI=1.11$

— Block Copolymer PS(3,800)-b-PEO(6,500), $PI=1.09$

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