

Product Profile

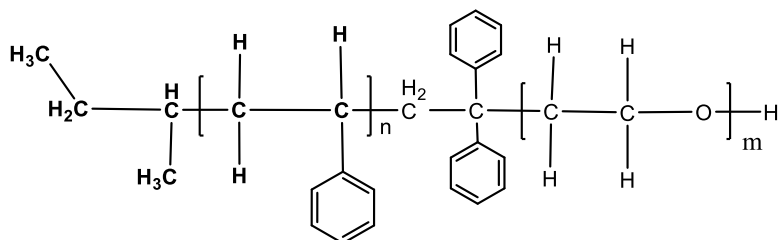
Identification

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

Product Lot Number: P44799-SEO

CAS #: Not Available

Product Chemical Architecture:



Composition:

| Composition (S-b-EO) | 83,000-b-65,000 |
|------------------------------|-----------------|
| EO mole% | 44.1% |
| Mn (g/mole) | 148,000 |
| Mw (g/mole) | 151,000 |
| Mw/Mn | 1.02 |
| dn/dc (mL/g) in THF at 30 °C | 0.133 |

Method of Synthesis

The polymer is synthesized by anionic polymerization process.

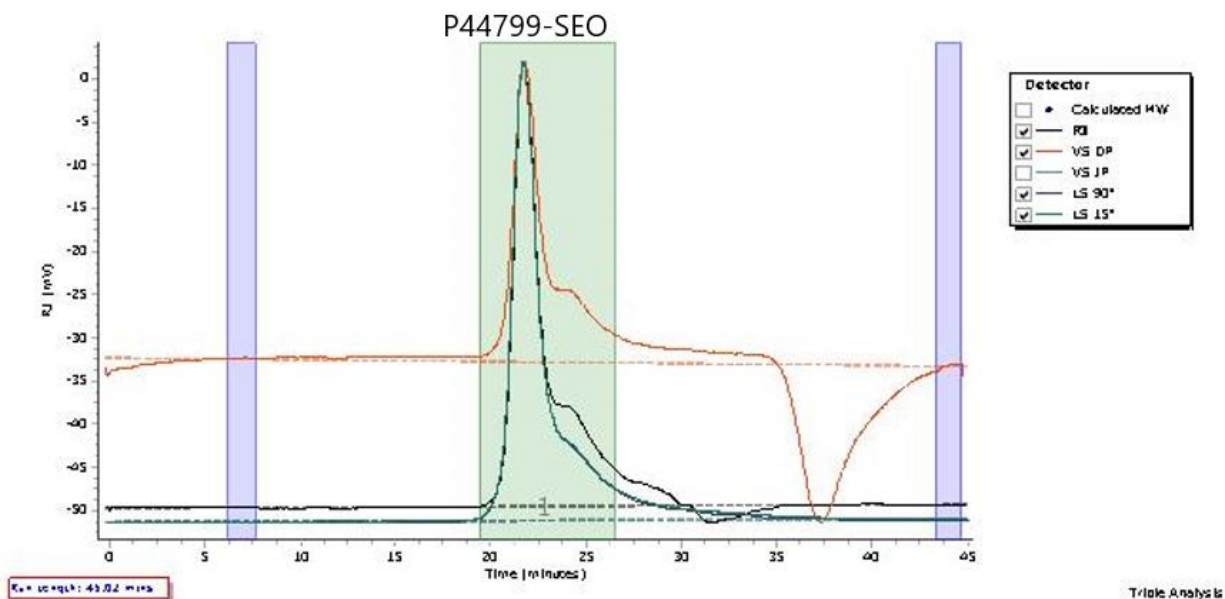
Solubility in different solvents:

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

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.



Molecular Weight Averages

| Peak | Mp (g/mol) | Mn (g/mol) | Mw (g/mol) | Mz (g/mol) | Mz+1 (g/mol) | Mv (g/mol) | PD |
|--------|------------|------------|------------|------------|--------------|------------|------|
| Peak 1 | 163889 | 148053 | 151081 | 153761 | 156101 | 152687 | 1.03 |

B. NMR (^1H NMR) of SMMA

SMMA sample was dissolved in CDCl_3 . ^1H NMR spectra was determined using a 500 MHz. Bruker Avance III spectrometer.

