

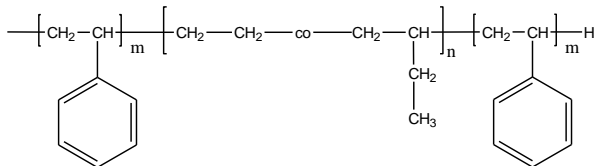
Sample Name:

**Poly(Styrene-b-ethylene/butylene-b-Styrene)**

Obtained from Hydrogenation of SBdS triblock copolymer where Poly butadiene rich in 1,2 microstructure

Sample#: **P42543A-SEBS**

**Structure:**



**Composition: PS: 35 wt%**

Mn x 10 <sup>3</sup> (S-b-EB-b-S)	PDI
15.0-b-60.0-b-15.0	1.02

**Synthesis Procedure:**

Poly(styrene-b-butadiene-b-styrene) is prepared by living anionic polymerization with sequence addition of styrene followed by butadiene and then styrene again. Polymerization carried out in THF. The obtained polymer hydrogenated in presence of Pd/CaCO<sub>3</sub>/Wilkinson catalyst.

Purification after the Hydrogenation:

The obtained polymer was filtered to remove the catalyst.

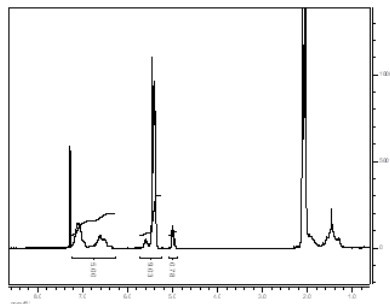
**Characterization:**

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

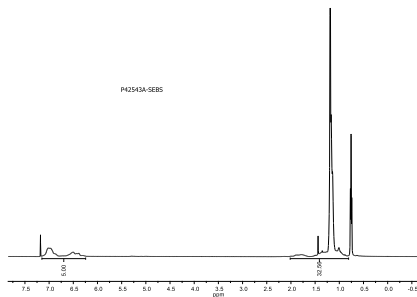
**Solubility:**

Polymer is soluble in THF, toluene and CHCl<sub>3</sub>. It precipitates from methanol, ethanol, water and hexanes (depending on the compositions).

**<sup>1</sup>H-NMR spectrum of the Polymer Before Hydrogenation:**

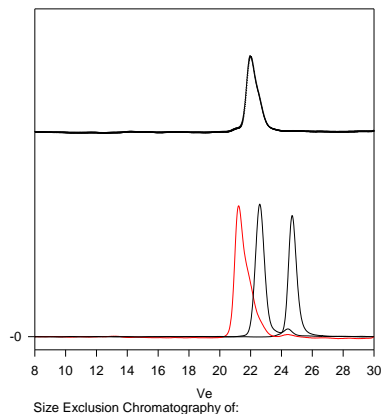


**<sup>1</sup>H-NMR spectrum of the product after Hydrogenation:**



**SEC chromatograms:**

**SBdS Precursor for P42543A-SBES**



Size Exclusion Chromatography of:

— PS block, M<sub>n</sub>=15,000, M<sub>w</sub>: 15,600 PI=1.05  
--- SBd, the diblock PS(15000)-b-PBd(30,000), PI=1.07  
— SBdS, triblock PS(15000)-b-PBd(70,000)-b-PS(15000), PI=1.04  
After Hydrogenation: 15000-b-60000-b-15000 PI: 1.02  
The Elution count after Hydrogenation was found lower than its SBdS triblock copolymer

Agilent GPC/SEC Software

