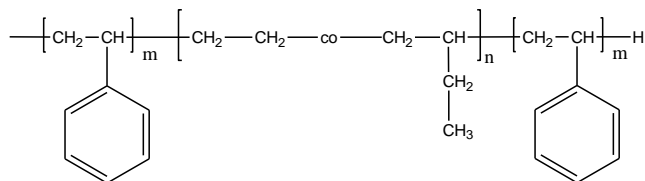


**Sample Name:**

**Poly(Styrene-b-ethylene /butylene-b-Styrene)**  
**Obtained from Hydrogenation of SBdS**  
 triblock copolymer where Poly butadiene rich  
 in 1,4 microstructure

**Sample #: P5999B-SEBS****Structure:****Composition:**

Mn x 10 <sup>3</sup> (S-b-Bd-S)	PDI
12.0-b-57.0-b-12.0	1.20

**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:

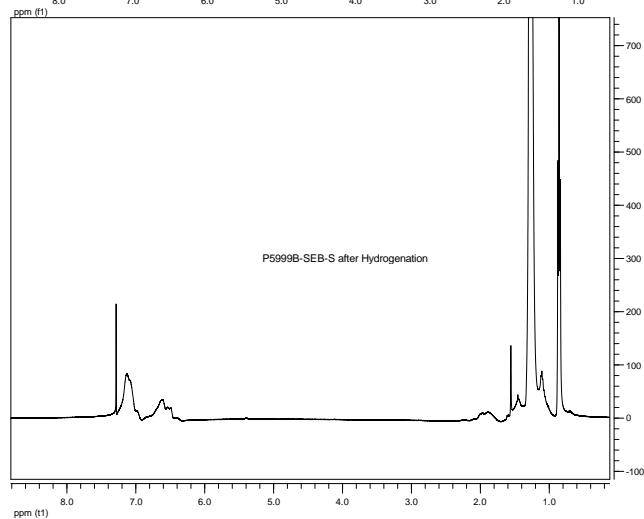
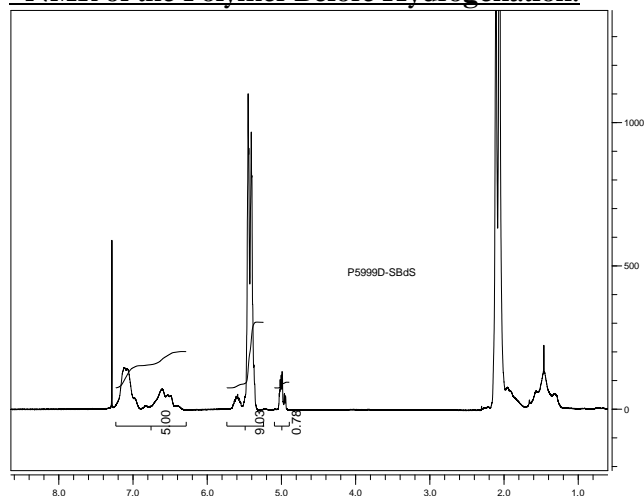
The obtained polymer was filter to remove the catalyst.

**Characterization:**

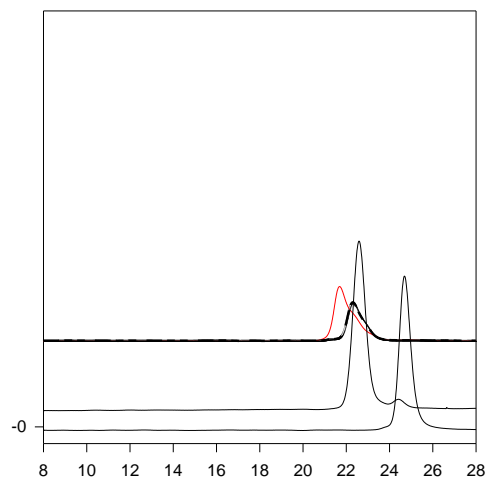
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

**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 of the Polymer Before Hydrogenation:****SEC of Sample:**

**SBdS precursor for P5999B-SEBS**



Size Exclusion Chromatography of:

— PS block, M<sub>n</sub>=12000, Mw: 12,600 PI=1.05

- - - SBd, the diblock PS(12000)-b-PBd(27,500), PI=1.07

— SBdS, triblock PS(12000)-b-PBd(55,000)-b-PS(12000), PI=1.2

After Hydrogenation: 12000-b-57000-b-12000 Mw/Mn 1.2

The Elution counts was found lower than its precursor SBdS triblock copolymer