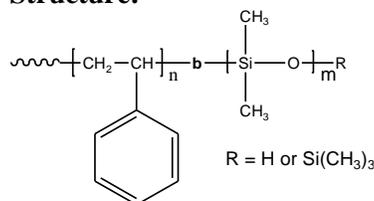


Sample Name:

**Poly(styrene-b-dimethyl siloxane)**

Sample #: **P206-SDMS (R=H)**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> S-b-DMS	Mw/Mn (PDI)
313.0-b-5.7	1.18

**Synthesis Procedure:**

Poly(styrene-b-dimethyl siloxane) is prepared by living anionic polymerization with sequence addition of styrene followed by hexamethyl cyclotrisiloxane. For the details please consult the references.

**Characterization:**

The polymer was characterized by SEC and <sup>1</sup>H NMR

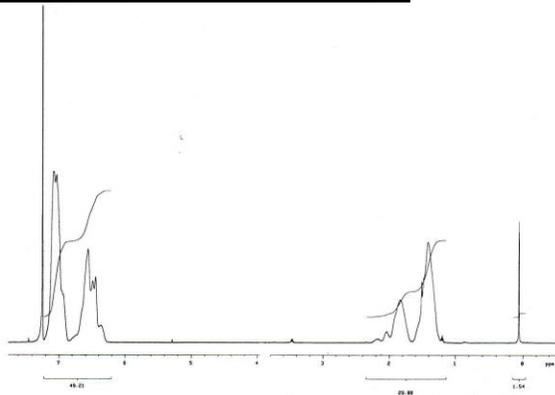
**Thermal analysis**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 20°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>).

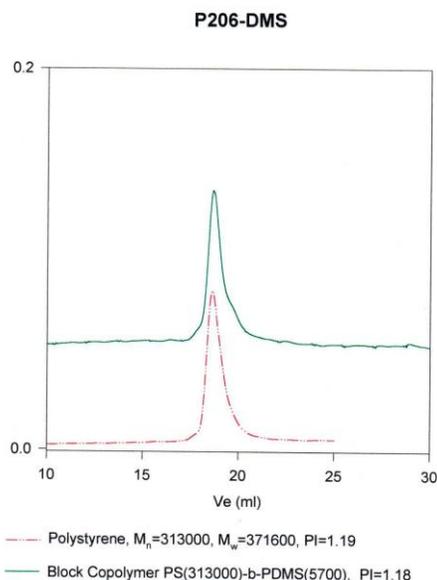
**Solubility:**

Poly(styrene-b-dimethyl siloxane) is soluble in CHCl<sub>3</sub>, toluene, THF.

**<sup>1</sup>H NMR spectrum of the Sample:**



**SEC profile of the block copolymer:**



**References:**

- S. K. Varshney, D. N. Khanna "Hexamethylcyclotrisiloxane-Styrene Block Copolymers and their Chemical Composition" *CA Vol. 093, 26, 240325, J. Appl. Polym. Sci., 1980, 25, 2501-2511.*
- P. Bajaj, S. K. Varshney, "Morphology and Properties of Poly(Dimethylsiloxane-b-Styrene-b-Dimethylsiloxane) Polymers" *CA Vol. 093, 02, 008652, Polymer, 1980, 21, 201-206.*
- S. K. Varshney, C. L. Beatty "Synthesis and Characterization of Polymethylmethacrylate and Polydimethylsiloxane Block Copolymers Polymerizes with an Organometallic Initiator" *Org. Coat. Appl. Polym. Sci., 1981, 45, 151-157.*
- S. K. Varshney, C. L. Beatty, and P. Bajaj "Morphology and Properties of Styrene and Dimethylsiloxane Triblock and Multiblock Copolymers" *CA Vol. 098, 139, 017855, Am. Chem. Soc. Polym. Prepr., 1981, 22, 321-323.*