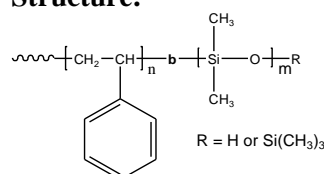


**Sample Name:** Poly (styrene-b-dimethyl siloxane)

**Sample #:** P41350M-SDMS (R=H)

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> S-b-DMS	Mw/Mn (PDI)
30.0-b-37.0	1.35
Tg for PS block: 83 °C	Tg for DMS block: -127°C (Lit. value)

**Synthesis:**

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.

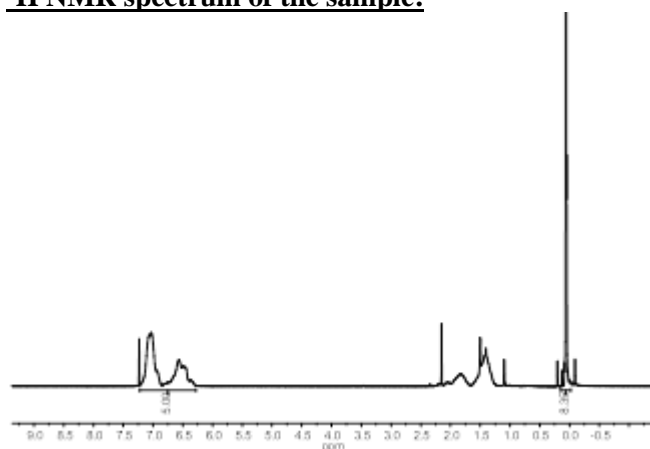
**Characterization:**

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

**Solubility:**

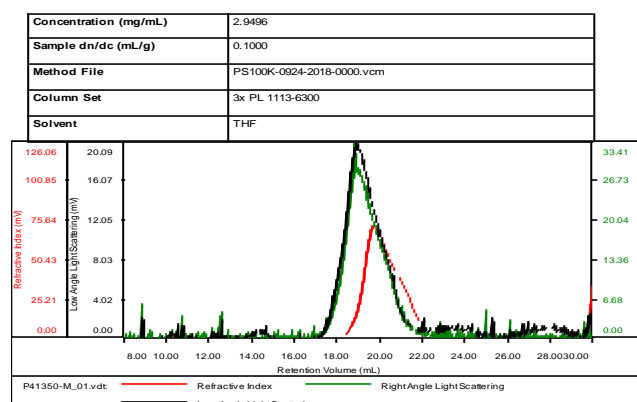
Poly(styrene-b-dimethyl siloxane) is soluble in CHCl<sub>3</sub>, toluene, and THF.

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

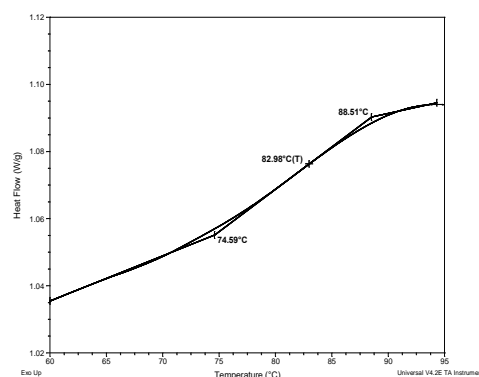


**SEC profile of the block copolymer:**

**P41350M-SDMS**



**Thermogram for PS block:**



**References:**

A) 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. B) 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. (C) 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. D). 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.