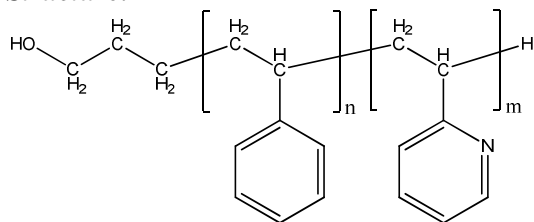


**Sample Name: Hydroxy terminated Poly(styrene-b-2 vinyl pyridine)**

**Sample #: P19890- HOS2VP**

**Structure:**

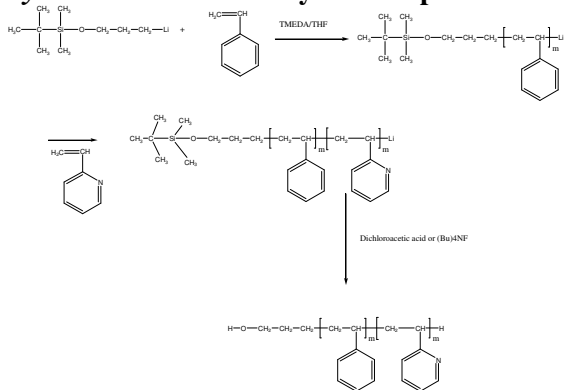


**Composition:**

Mn x 10 <sup>3</sup> S-b-2VP	PDI
34.0-b-4.0	1.15

T <sub>g</sub> for PS block: 102°C	
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**Synthesis Procedure: By anionic process**



**Characterization:**

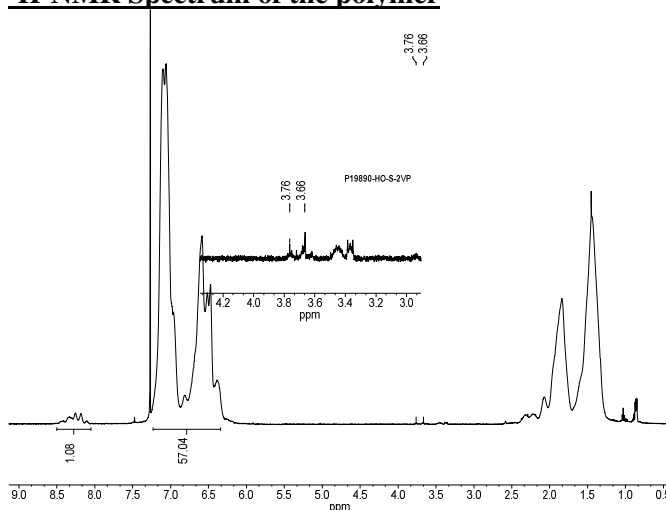
The polymer was characterized by GPC and <sup>1</sup>H NMR.

**Purification:**

Purification of the obtained polymer was carried out rigorously as follows to ensure the removal of the catalyst side product:

1. Polymer first soxhlet in cyclohexane to remove trace amount of homopolystyrene fraction if any present.
2. Dissolved the polymer in CHCl<sub>3</sub> and wash with de-ionized distilled water to remove any soluble organic catalyst side product.
3. Polymer extracted from water with chloroform.
4. Polymer solution in CHCl<sub>3</sub> was dried over anhydrous sodium sulfate.
5. Solution filtered and then passed through a column packed with basic Al<sub>2</sub>O<sub>3</sub>.
6. Solution concentrated on rota-evaporator
7. Solution precipitated in cold hexane
8. Final dried under vacuum for 48h at 5<sup>00</sup>C:

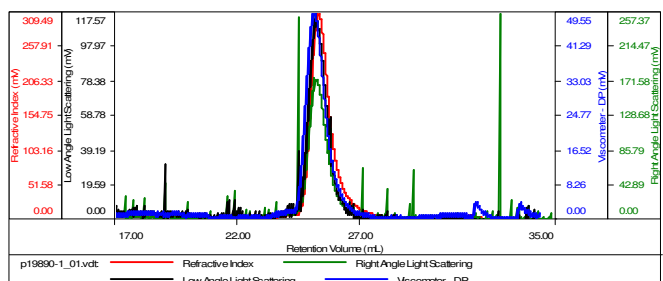
**<sup>1</sup>H-NMR Spectrum of the polymer**



**SEC elugram of the polymer:**

**Sample ID:P19890-1**

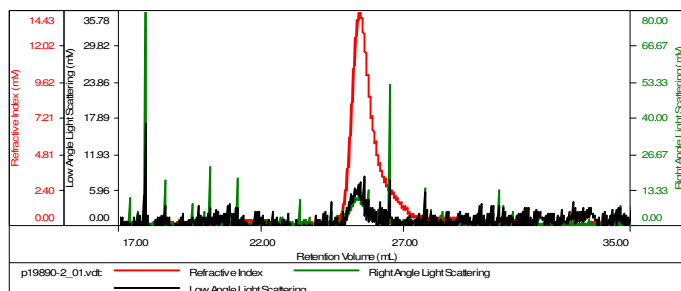
Concentration (mg/mL)	3.8637
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-May112016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
p19890-1_01.vdt	34,718	37,505	1.080	0.4808	37,704

**Sample ID:P19890-OHS-2VP**

Concentration (mg/mL)	0.1882
Sample dn/dc (mL/g)	0.1700
Method File	PS80K-May112016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
p19890-2_01.vdt	38,573	44,343	1.150	6.8208	45,310