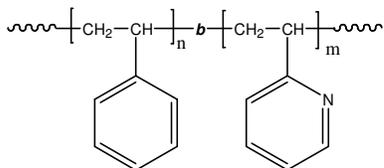


Sample Name:  
**Polystyrene-*b*-poly (2-vinyl pyridine)**

Sample #: **P19915-S2VP**

**Structure:**



**Composition of PS-*b*-P2VP diblock copolymer:**

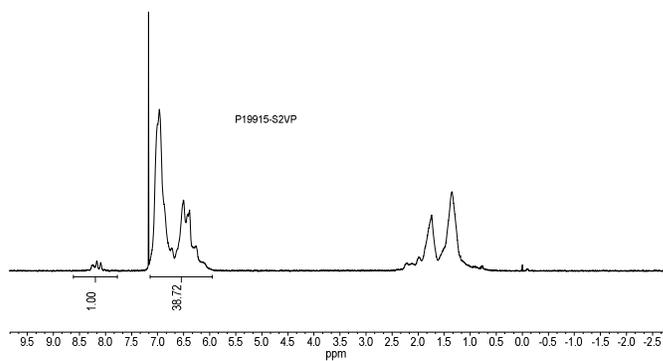
$M_n \times 10^3$ (g/mol)	PDI
110.0- <i>b</i> -15.0	1.29

**Synthesis:**

Polystyrene-*b*-poly (2-vinyl pyridine) was prepared by living anionic polymerization in THF at  $-78^\circ\text{C}$  in the presence of LiCl as an additive.

**Characterization:** Polymer was analyzed by size exclusion chromatography (SEC) to obtain its molecular weight and polydispersity index (PDI). The block copolymer composition was calculated from its  $^1\text{H-NMR}$  spectrum by comparing the peak area of the 2VP protons (at 8.2 ppm) with the peak area of the aromatic protons of polystyrene (at 6.3–7.2 ppm). The composition of the block copolymer can also be determined by titration PS-*b*-P2VP in acetic acid/ $\text{HClO}_4$  using crystal violet indicator. PDI of block copolymer was determined by SEC.

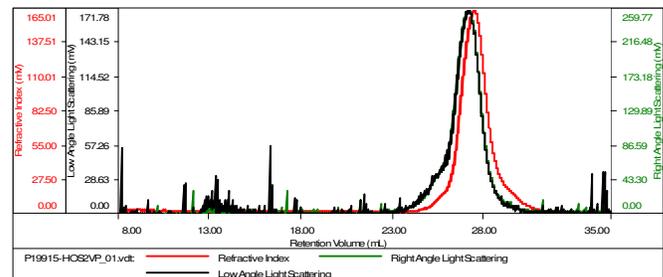
**$^1\text{H NMR}$  spectrum of PS-*b*-P2VP:**



**SEC elugram of PS-*b*-P2VP:**

**Sample ID: P19915-S2VP**

Concentration (mg/mL)	5.3634
Sample dn/dc (mL/g)	0.1350
Method File	PS80K-April-18-2016-0001.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P19915-HOS2VP_01.vc	124,789	161,559	1.295	0.6593	151,289

**References:**

1. S. K. Varshney, X. F. Zhong and A. Eisenberg *Macromolecules* **1993**, 26, 701–706.
2. Z. Gao, S. K. Varshney, S. Wong, A. Eisenberg *Macromolecules* **1994**, 27, 7923–7927.