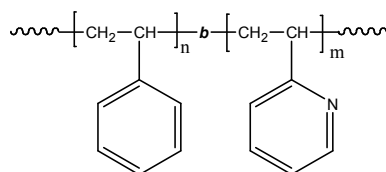


Sample Name:

Polystyrene-*b*-poly (2-vinyl pyridine)

Sample #: P19261-S2VP

Structure:



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

$M_n \times 10^3$ (g/mol)	PDI
23- <i>b</i> -14.0	1.09

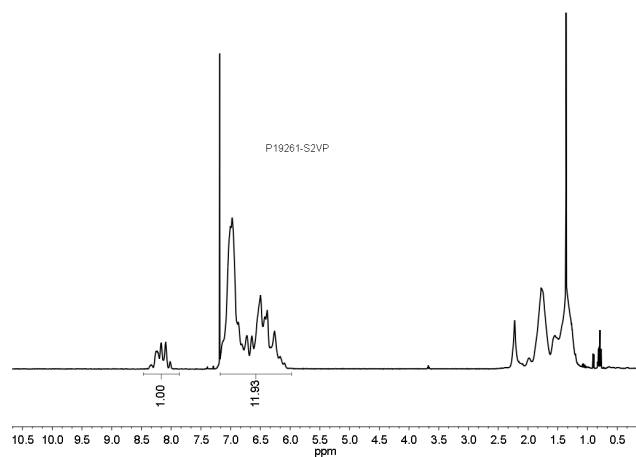
Synthesis:

Polystyrene-*b*-poly (2-vinyl pyridine) was prepared by living anionic polymerization in THF at -78°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 ^1H -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/ HClO_4 using crystal violet indicator. PDI of block copolymer was determined by SEC.

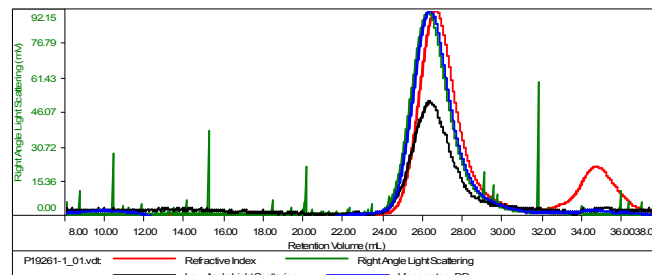
^1H NMR spectrum of PS-*b*-P2VP:



SEC of PS-*b*-P2VP:

Sample ID: P19261-S

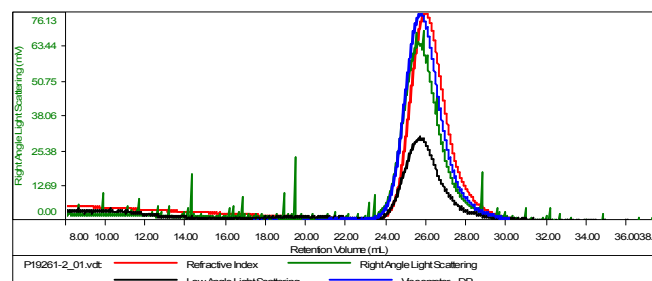
Concentration (mg/mL)	4.0565
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-April29-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19261-1_01.vdt	22,890	25,083	23,267	1.096	0.6065

Sample ID: P19261-S2VP

Concentration (mg/mL)	1.7545
Sample dn/dc (mL/g)	0.1780
Method File	PS80K-April29-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19261-2_01.vdt	36,929	40,183	37,995	1.088	0.7215

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.