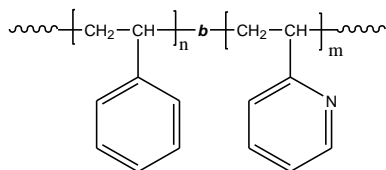


Sample Name:
Polystyrene-*b*-poly (2-vinyl pyridine)

Sample #: **P40092-S2VP**

Structure:



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

| $M_n \times 10^3$ (g/mol) | PDI |
|---------------------------|------|
| 170.0- <i>b</i> -767.0 | 1.11 |

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.

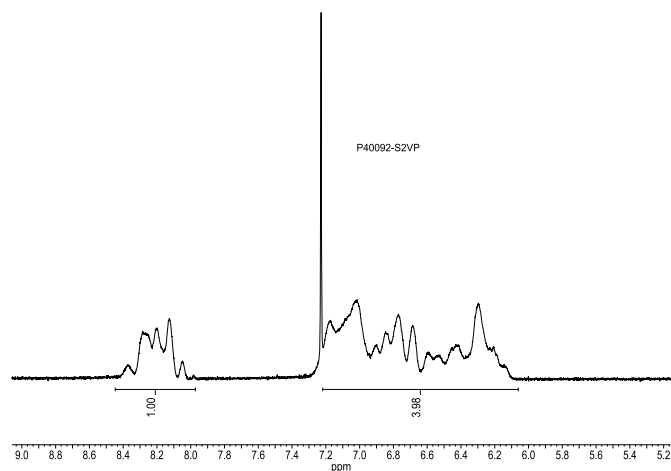
Characterization:

The product was characterized by size exclusion chromatography (SEC) and ^1H NMR.

Solubility:

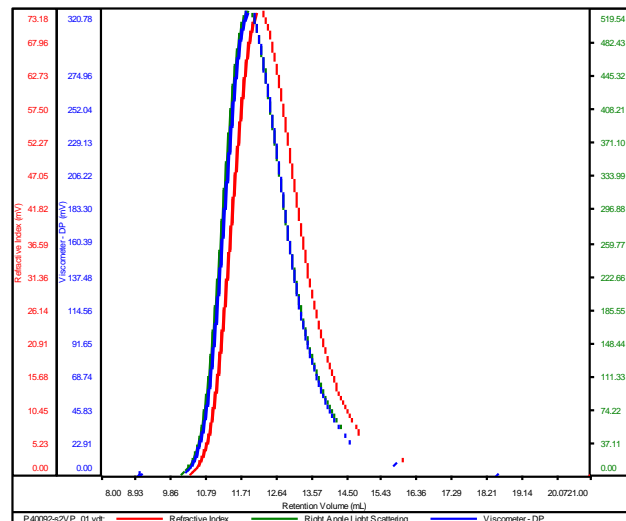
Poly (styrene-*b*-2 vinylpyridine) is soluble in THF, toluene, and CHCl_3 . The diblock copolymer can also be solubilized in methanol, ethanol depending on its composition. The polymer readily precipitates from hexanes, ether and water.

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



SEC elugram of PS-*b*-P2VP:
P40092-S2VP

| | |
|-----------|----------------------------|
| Conc | 4.0319 |
| dn/dc | 0.1550 |
| Solvent | DMF w 0.023M LiBr |
| Flow Rate | 0.7000 |
| Method | PS100k_2017-Oct11-0000.vcm |



| Sample | Mn | Mw | Mp | Mw/Mn | IV |
|--------------------|---------|-----------|-----------|-------|--------|
| P40092-s2VP_01.vdt | 936,969 | 1.042 e 6 | 1.022 e 6 | 1.112 | 1.7660 |

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.