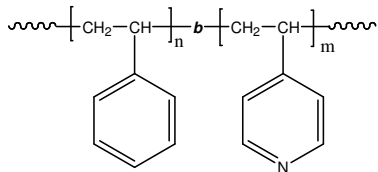


Sample Name: Poly(styrene-b-4-vinyl pyridine)

Sample #: P19970-S4VP

Structure:



Composition:

| | |
|--------------------------------------------------|-------------|
| Mn x 10 ³ PS-b-4VP 206.0-b-16.0 | PDI 1.03 |
|--------------------------------------------------|-------------|

| | |
|------------------------------------|-------------------------------------|
| T _g for PS block: 103°C | T _g for 4VP block: 145°C |
|------------------------------------|-------------------------------------|

Synthesis Procedure:

The polymer was synthesized by anionic process.

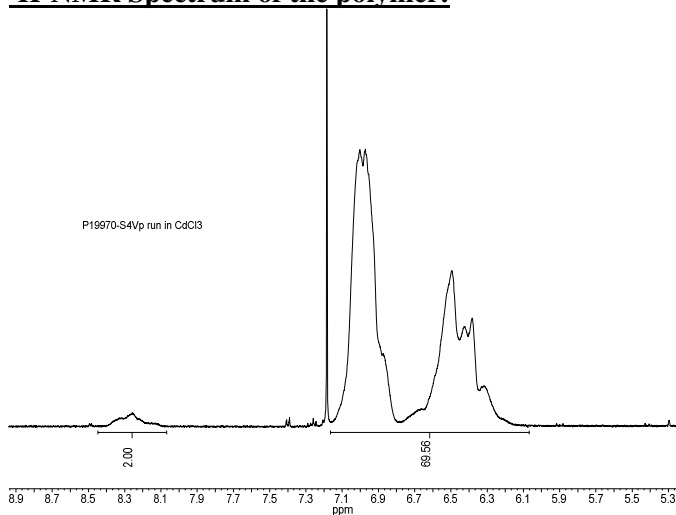
Characterization:

The polymer was characterized by ¹H NMR, SEC. Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 15°C/min. The inflection glass transition temperature (T_g) of the sample has been considered.

Solubility:

Poly(styrene-b-4-vinyl pyridine) is soluble in DMF, CHCl₃. The polymer can also be solubilized in THF depending on its chemical composition. The polymer readily precipitates from hexanes and diethyl ether.

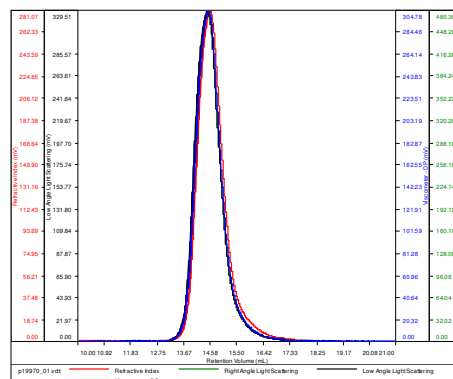
¹H-NMR Spectrum of the polymer:



SEC elugram of the polymer:

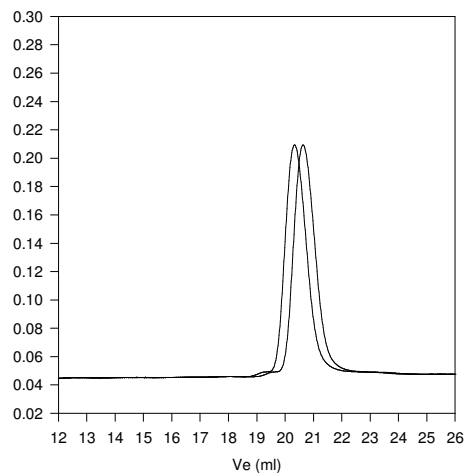
P19970-S4VP

| | |
|--------------|----------------------------|
| Conc (mg/mL) | 6.9825 |
| dn/dc (mL/g) | 0.1600 |
| Method | PS800-May-25-2016-0000.vcm |
| Solvent | DMF w/0.02M LiBr |
| Column | PSS |



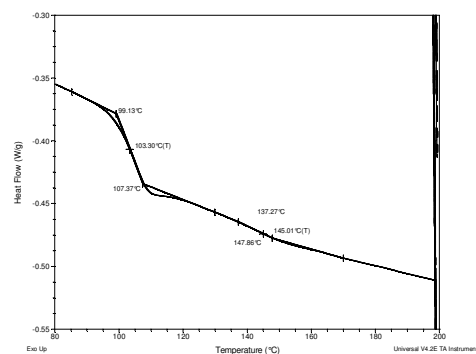
| Sample | Mn | Mw | Mp | Mw/Mn | IV |
|---------------|---------|---------|---------|-------|--------|
| p19970_01.vcl | 222,187 | 230,856 | 230,104 | 1.039 | 0.4929 |

P19970-S4VP



— Polystyrene, M_n=206,000, M_w=217,000, PI=1.06
— Block Copolymer PS(206,000)-b-P4VP(16,000), PI=1.03

Thermogram of the polymer:



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.