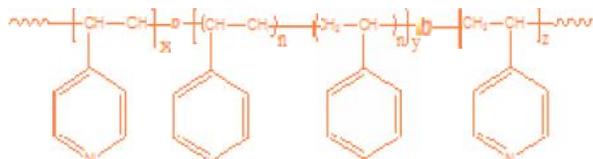


Sample Name: Poly(4-vinyl pyridine-b-styrene-b-4-vinyl pyridine)

Sample #: P9731-4VPS4VP

Structure:



Composition:

$M_n \times 10^3$ 4VP-b-PS-b-4VP	PDI
6.0-b-75.0-b-6.0	1.18
T_g for PS block: 102°C	T_g for 4VP block: 135°C

Synthesis Procedure:

Poly(4-vinyl pyridine-b-styrene-b-4-vinyl pyridine) is prepared by living anionic polymerization using a bifunctional initiator with sequence addition of styrene followed by 4-vinylpyridine (4VP).

Characterization:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

Thermal analysis:

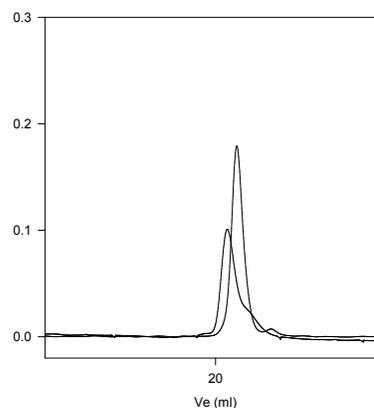
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Poly(4-vinyl pyridine-styrene-b-4-vinyl pyridine) is soluble in DMF, $CHCl_3$. The polymer can also be solubilized in THF depending on its chemical composition. The polymer readily precipitates from hexanes and diethyl ether.

SEC of the polymer:

P9731-4VPS4VP



— SEC profile in DMF at 30 °C.
Polystyrene, $M_n=75,000, M_w= 81,000$ PI=1.08
— Block Copolymer 4VP (6,000)-PS(75,000)-b-P4VP(6,000), PI=1.18
(composition by titration and by H NMR)

DSC thermograms for the sample:

