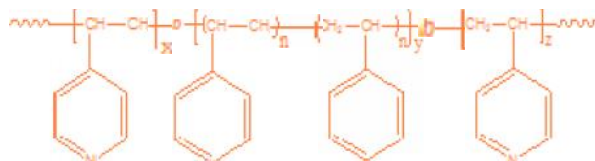


**Sample Name:** Poly(4-vinyl pyridine-b-styrene-b-4-vinyl pyridine)

**Sample #:** P9728-4VPS4VP

**Structure:**



**Composition:**

$M_n \times 10^3$ 4VP-b-PS-b-4VP	PDI
4.5-b-145.0-b-4.5	1.10
$T_g$ 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:**

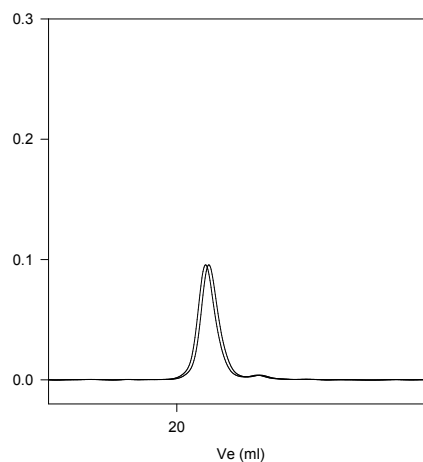
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature ( $T_g$ ).

**Solubility:**

Poly(4-vinyl pyridine-styrene-b-4-vinyl pyridine) is soluble in DMF,  $\text{CHCl}_3$ . 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:**

**P9728-4VPS4VP**



— SEC profile in DMF at 30 °C.  
Polystyrene,  $M_n=145,000$ ,  $M_w$ : 158,600 PI=1.09  
— Block Copolymer 4VP (4500)-PS('145000)-b-P4VP(4500), PI=1.10  
(composition by titration and by H NMR)

**DSC thermograms for the sample:**

