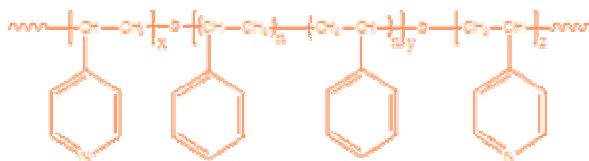


**Sample Name:** Poly(4-vinyl pyridine-b-styrene-b-4-vinyl pyridine)

**Sample #:** P1645-4VPS4VP

**Structure:**



**Composition:**

$M_n \times 10^3$ 4VP-b-PS-b-4VP	PDI
8.0-b-54.2-b-8.0	1.18
$T_g$ for PS block: 107°C	$T_g$ for 4VP block: 144°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.

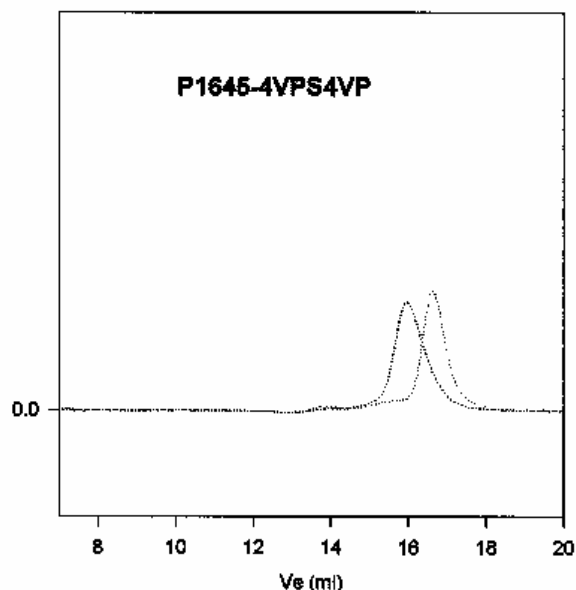
**Thermal analysis:**

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-b-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:**



Size exclusion chromatography of poly(4VP-S-4VP) in DMF

----- Polystyrene,  $M_n=54200$ ,  $M_w=59800$ ,  $PI=1.10$

----- Block Copolymer P4VP(8000)-b-PS(54200)-b-P4VP(8000),  $PI=1.18$

**DSC thermograms for the sample:**

