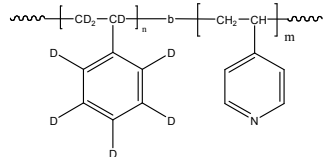


Sample Name:
Deuterated Polystyrene (d₈)- 4 vinyl pyridine (protonated)

Sample #: **P40502-dPS4VP**

Structure:



Composition:

Mn x 10 ³ (dPS-b-4VP)	PDI
11.5-b-11.3	1.04
T _g for dPS block	104°C
T _g for 4Vp block	149 oC

Synthesis Procedure:

Deuterated poly(styrene-b-4-vinyl pyridine) diblock copolymer is prepared by living anionic polymerization.

Characterization:

The product was characterized by size exclusion chromatography (SEC).

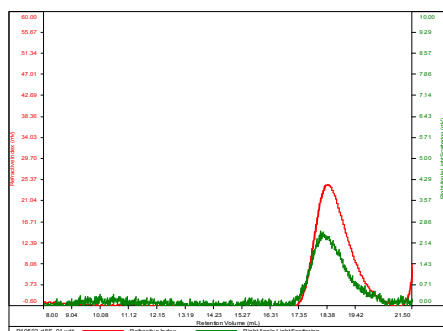
Thermal analysis

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).

SEC elugram of the dPS Block:

P40502-dPs block

Conc	1.1797
dn/dc	0.1650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-March2017-0002.vcm

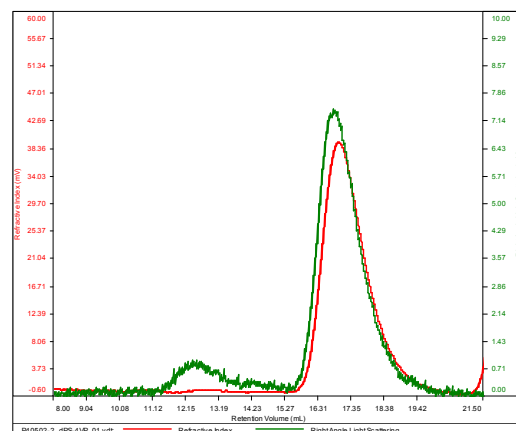


Sample	Mn	Mw	Mp	Mw/Mn	IV
P40502-dPS_01.vdt	11,277	11,739	10,855	1.041	0.0585

SEC elugram of the product:

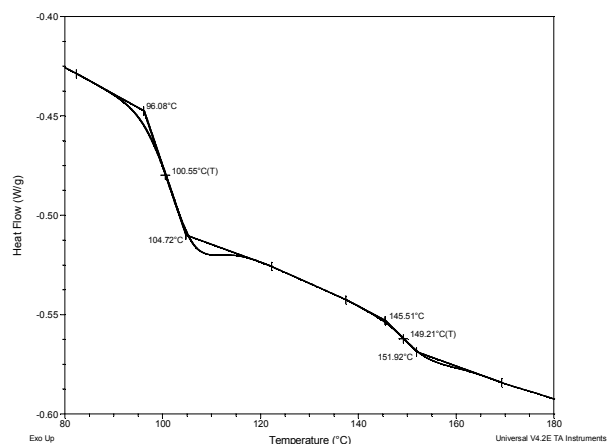
P40502-dPS-4VP

Conc	2.5135
dn/dc	0.1520
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-March2017-0002.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40502-2_dPS-4VP_01.vdt	22,791	23,799	23,158	1.044	0.0839

DSC thermogram for dPS block:



References for further information:

1. S. K. Varshney, R. Fayt, Ph. Teyssie, and J.P. Hautekeer US Patent 5,264,527 (1993)
2. S. K. Varshney, Jian-Xin Zhang. US Patent 7009,033 B3 2006.