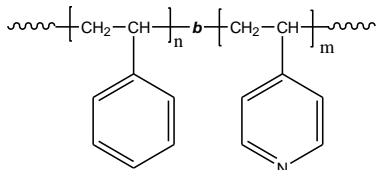


Sample Name: Poly (styrene-*b*-4-vinyl pyridine)

Sample #: P41321-S4VP

Structure:



Composition:

Mn x 10 ³ PS- <i>b</i> -4VP	PDI
48.0- <i>b</i> -20.0	1.05
T _g for PS block: 105°C	T _g for 4VP block: 133°C

Synthesis Procedure:

The polymer was synthesized by anionic polymerization process.

Characterization:

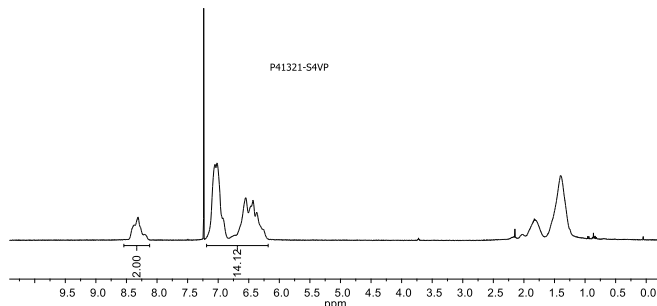
The polymer was characterized by SEC and ¹H NMR. The composition of the block copolymer can also be determined by titration in acetic acid/HClO₄ using crystal violet indicator. Copolymer PDI is determined by SEC.

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 CHCl₃ and DMF.

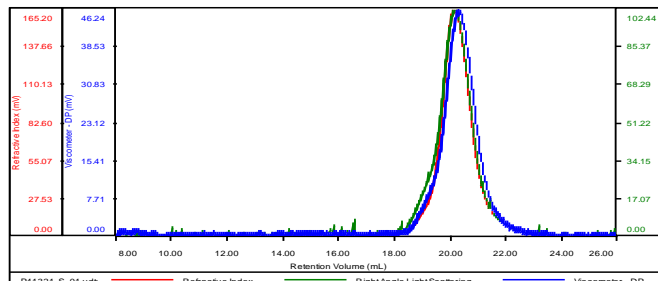
¹H NMR spectrum of the polymer:



SEC elugram of the PS block:

P41321-S

Concentration (mg/mL)	6.8120
Sample dn/dc (mL/g)	0.1850
Method File	PS100K-August-2018-2019.vcm
Column Set	3x PL 1113-6300
Solvent	THF

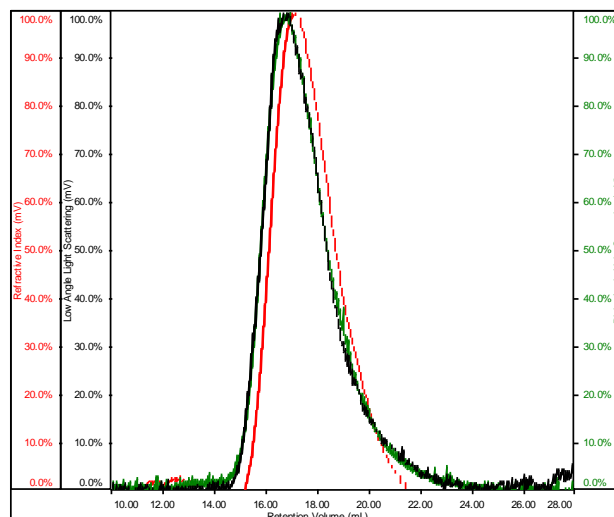


Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P41321-S_01.vdt	47,827	48,856	1.022	0.4426	44,356

SEC elugram of the Sample:

P41321-S4VP

Conc	2.0468
dn/dc	0.1580
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k_2018-04-02-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P41321-S4VP_01.vdt	67,964	71,824	67,803	1.057	0.1437

References:

- (1). S. K. Varshney, X. F. Zhong & A. Eisenberg *Macromolecules*, **1993**, 26, 701-706.
- (2). Z.Gao, S. K. Varshney, S. Wong, A. Eisenberg *Macromolecules*, **1994**, 27, 7923-7927.