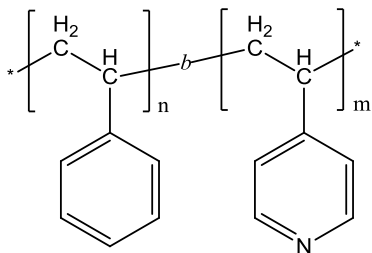


Sample Name: Poly (styrene-*b*-4-vinyl pyridine)

Sample #: P5570-S4VP

Structure:



Composition:

$M_n \times 10^3$ S-b-4VP	PDI
337.0–b–31.5	1.16

Synthesis Procedure:

Poly (styrene-*b*-4-vinyl pyridine) is prepared by living anionic polymerization in THF at -78°C in the presence of LiCl as an additive.

Characterization:

The product was characterized by SEC and by ^1H -NMR.

Purification of the obtained polymer:

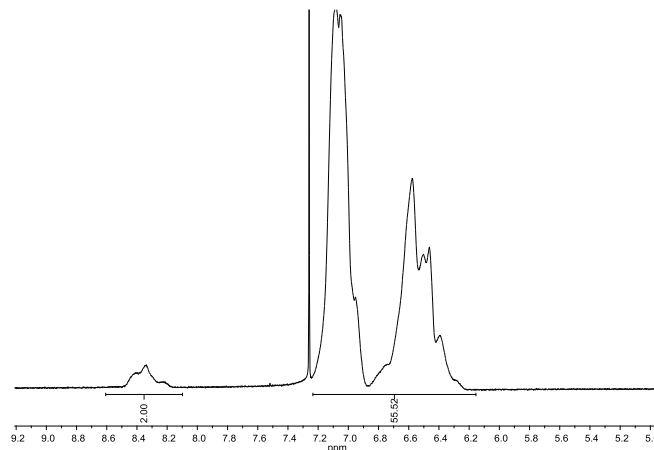
Purification of the obtained polymer was carried out rigorously as follows to ensure the removal of the catalyst side product:

1. Dissolved the polymer in CHCl_3 and wash with de-ionized distilled water to remove any soluble organic catalyst side product.
2. Polymer was extracted from water with chloroform.
3. Polymer solution in CHCl_3 was dried over anhydrous sodium sulfate.
4. Solution was filtered and then was passed through a column packed with basic Al_2O_3 .
5. Solution was concentrated on rota-evaporator
6. Solution was precipitated in cold hexane and redissolved in benzene and freeze dried.
7. Dried under vacuum for 48h at 50°C .

References:

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

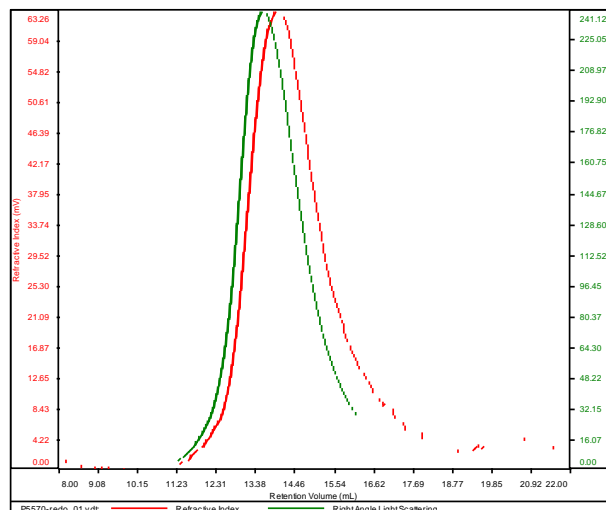
^1H NMR spectrum of the diblock polymer:



SEC of the diblock copolymer:

P5570-S4VP

Conc	3.7443
dn/dc	0.1650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS-80K_2018-04-02-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P5570-redo_01.vdt	368,529	426,797	442,286	1.158	0.8243