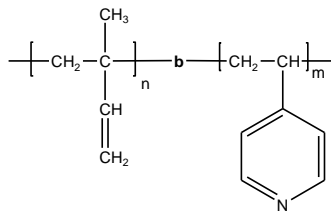


Sample Name: Poly(1,2-isoprene-b-4-vinyl pyridine)

Sample #: P18240-IP4VP

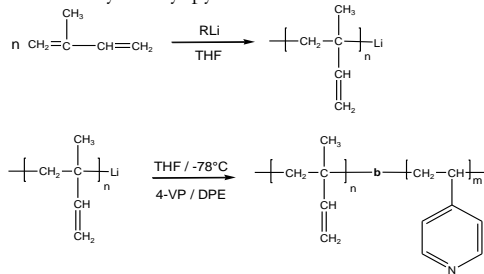
Structure:



Composition:

$M_n \times 10^3$ Ip-b-4VP	M_w/M_n (PDI)
7.0-b-15.0	1.10
T_g for Ip block: -03°C	T_g for 4VP block: Not distinct

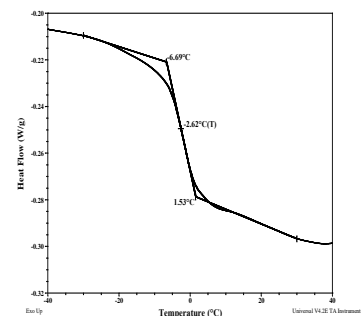
Synthesis Procedure: Poly(1,2-isoprene-b-4-vinyl pyridine) is prepared by living anionic polymerization with sequence addition of isoprene followed by 4-vinyl pyridine. The reaction scheme is shown below:



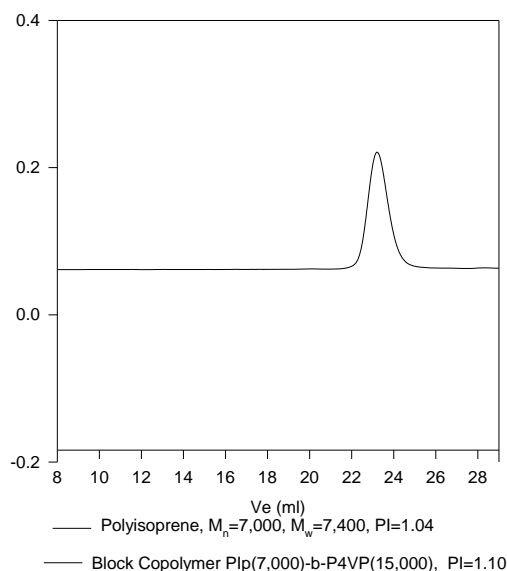
Characterization: An aliquot of the anionic poly(1,2-isoprene) block was terminated before addition of 4VP and analyzed by size exclusion chromatography (SEC) in DMF at 60 °C to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from $^1\text{H-NMR}$ spectroscopy by comparing the peak area of the vinylic isoprene proton at about 5.1 ppm with 4-vinyl pyridine protons at 8.5 ppm. Block 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(1,2-isoprene-b-4-vinyl pyridine) is soluble in THF, chloroform and toluene.

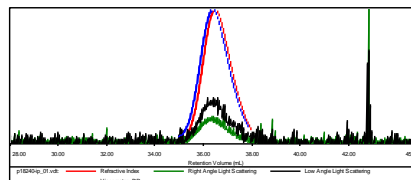


SEC profile of the block copolymer P18240-IP4VP in DMF at 60 °C.



Sample ID: P18240-IP

Concentration (mg/mL)	18.1824
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-OC1-2013-0003.vcm
Column Set	3x PL 1113-6000
System	System 1



Sample	M_n	M_w	M_p	M_w/M_n	IV
p18240-IP_01.vcl	6,861	7,188	6,931	1.048	0.1774

