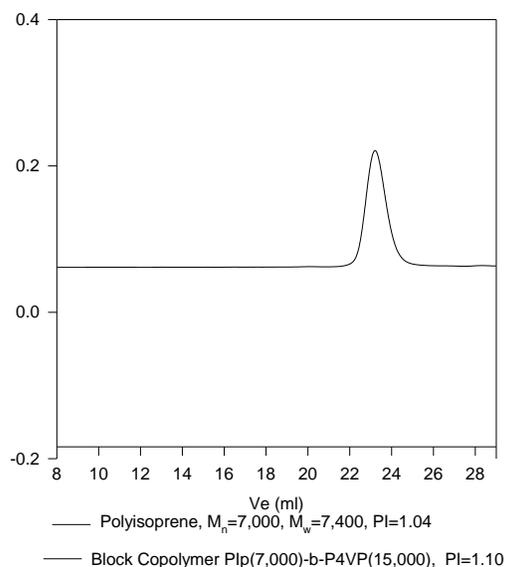


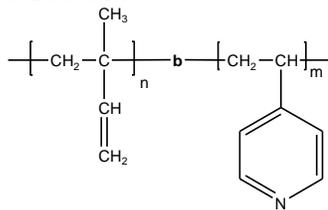
SEC profile of the block copolymer  
P18240-Ip4Vp in DMF at 60 °C.



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

**Sample #:** P18240-IP4VP

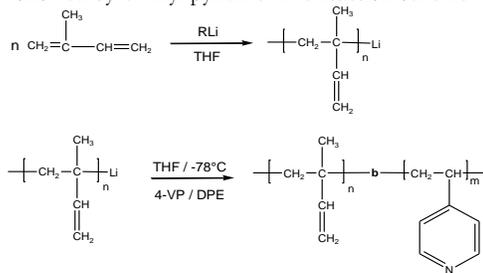
**Structure:**



**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

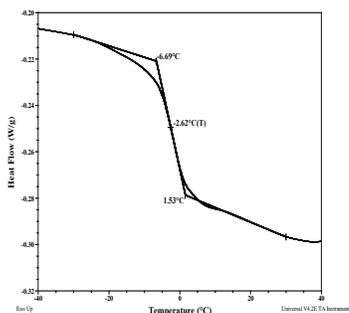
**Synthesis Procedure:** Poly(1,2-isoprene-b-4-vinyl pyridine) is prepared by living anionic polymerization with sequence addition of isoprene followed by 4-vinyl pyridine. The reaction scheme is shown below:



**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 <sup>1</sup>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.

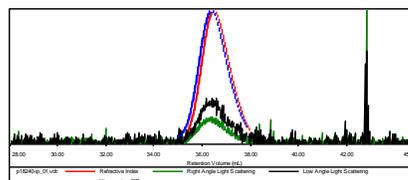
**Solubility:**

Poly(1,2-isoprene-b-4-vinyl pyridine) is soluble in THF, chloroform and toluene.



Sample ID: P18240-IP

Concentration (mg/mL)	18.8284
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-OCI-2013-0003.vcm
Column Set	Sty PL 1113-0300
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

