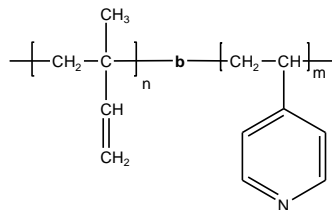


## SEC profile of the block copolymer P18243-Ip4Vp in DMF at 60 °C.

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

**Sample #:** P18243-IP4VP

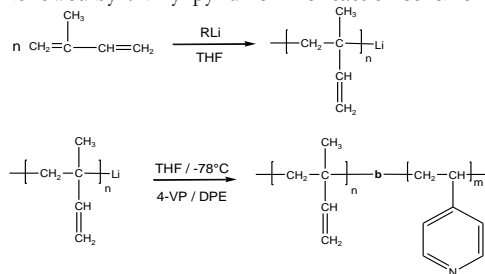
**Structure:**



**Composition:**

Mn × 10 <sup>3</sup> Ip-b-4VP	Mw/Mn (PDI)
9.0-b-16.5	1.10
T <sub>g</sub> for Ip block: -03°C	T <sub>g</sub> for 4VP block: Not distinct

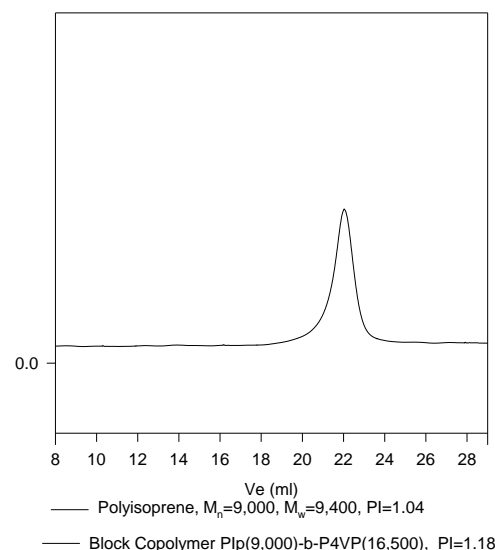
**Synthesis Procedure:** Poly(1,2-isoprene-b-4-vinyl pyridine) is prepared by living anionic polymerization with sequence addition of isoprene followed by 4-vinyl pyridine. The reaction scheme is shown below:



**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<sub>g</sub>) of the sample has been considered.

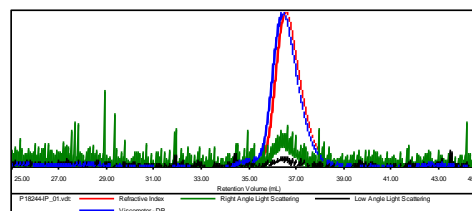
**Solubility:**

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



**Sample ID: P18244-IP**

Concentration (mg/mL)	3.1494
Sample dn/dc (mL/g)	0.1250
Method File	P18244-IP-2013-0003.vom
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18244-IP_01.vcl	9,134	11,300	10,141	1.237	0.2234

