

## SEC of Homopolymer: used for Quaternization with CH<sub>3</sub>Br Sample ID: P18148-2VP

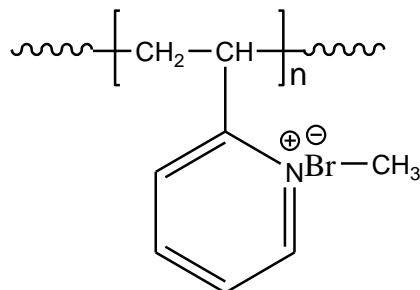
Sample Name:

**Poly(2-vinyl N-methylpyridinium Bromide)**

Sample #: P18445-2VPQ.CH<sub>3</sub>Br

Degree of Quaternization : >70%

**Structure:**



**Composition:**

Mn × 10 <sup>3</sup>	PDI
22.0	1.06
After Quaternization	
36.0	1.06

**Synthesis Procedure:**

70% quaternization of Poly 2VP was carried out in DMF/THF mixture at 0 °C by adding CH<sub>3</sub>Br (B.P 4 °C) quantitatively to get 70% degree of quaternization. Polymer was washed with cold THF and dried under vacuum at 50 °C.

From the yield of the polymer also reveals 70% quaternization.

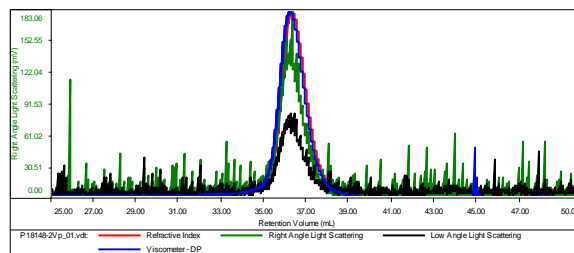
**Characterization:**

The molecular weight and polydispersity index (PDI) of poly(2-vinyl pyridium) are obtained by size exclusion chromatography. The quaternization is confirmed by FTIR.

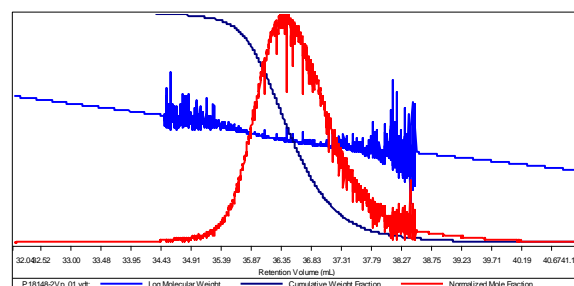
**Solubility:**

Polymer is soluble in methanol, ethanol and precipitate out from hexane, ether.

Concentration (mg/mL)	15.0290
Sample dn/dc (mL/g)	0.1670
Method File	PS80K-Aug15-2013-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18148-2VP_01.vdt	22,051	23,402	22,370	1.061	0.1594



**FTIR of the Polymer:**

