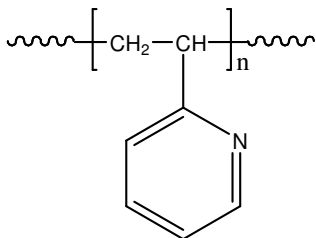


**Sample Name:** Poly(2-vinyl pyridine)

**Sample #:** P19937-2VP

**Structure:**

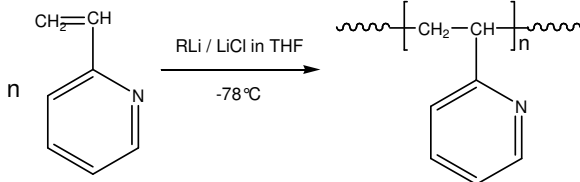


**Composition:**

Mn x 10 <sup>3</sup>	PDI
121.0	1.07

**Synthesis Procedure:**

Poly(2-vinyl pyridine) is obtained by living anionic polymerization of 2-vinyl pyridine using an adduct of Sec. butyllithium and diphenyl ethylene-LiCl. Polymerization is carried out in THF at -78 °C. Polymerization reaction is terminated using degassed methanol. The reaction scheme is illustrated as follows:



**Characterization:**

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co.

Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The glass transition temperature (T<sub>g</sub>) of the polymer was measured at a scan rate of 10°C/min shortly after creating thermal history of the sample.

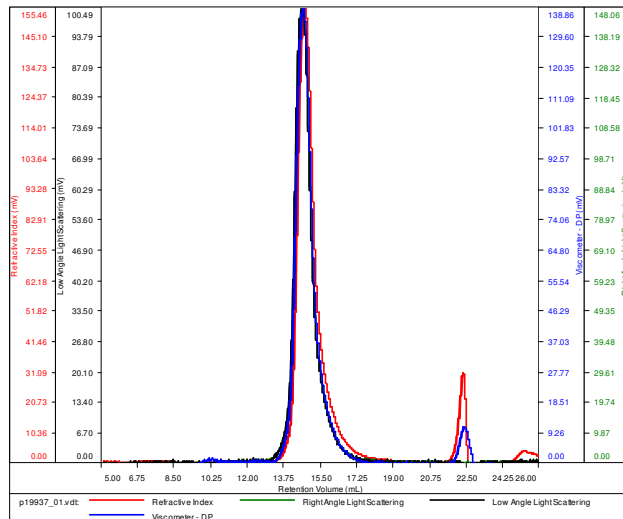
**Solubility:**

Poly(2-vinylpyridine) is soluble in DMF, THF, toluene, methanol, ethanol and CHCl<sub>3</sub>. It precipitates from water and hexanes, ether.

**SEC elugram of the polymer :**

**P19937-2VP**

Conc (mg/mL)	4.0084
dn/dc (mL/g)	0.1530
Method	PS80k-May-25-2016-0000.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
p19937_01.vdt	121,025	129,735	132,289	1.072	0.3848

**Relationship between T<sub>g</sub> and Mn of P2VP:**

