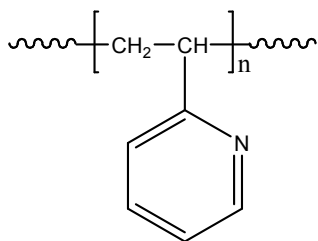


Sample Name: **Poly(2-vinyl pyridine)**

Sample #: **P8101-2VP**

Structure:

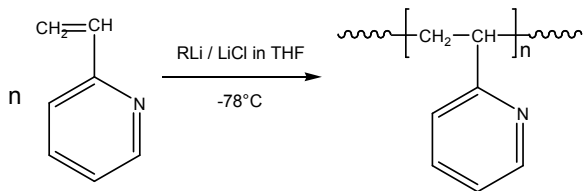


Composition:

Mn x 10 ³	PDI
10.0	1.18

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:

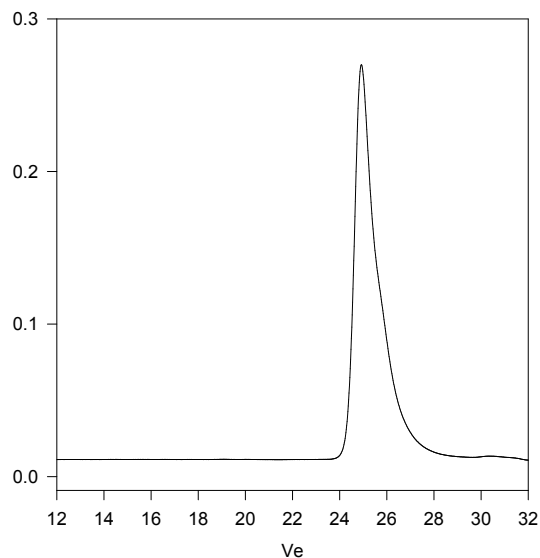
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple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

Solubility:

Poly 2 vinylpyridine is soluble in DMF, THF, toluene, methanol, ethanol and CHCl_3 . It precipitates from water and hexanes, ether.

SEC of Sample :

P8101-2VP



Size exclusion chromatography of poly(2-vinylpyridine) in THF

$M_n=10000$, $M_w=11800$, $PI=1.18$

dn/dc in THF at 35°C : 0.167ml/g

Solution Viscosity in THF at 35°C : 0.113 dl/g

Radius of Gyration in THF at 35°C : 3.64 nm