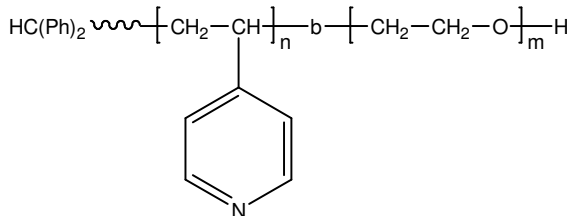


**Sample Name:** Poly(4-vinyl pyridine -b- ethylene oxide)

**Sample #:** P19947-4VPEO

**Structure:**

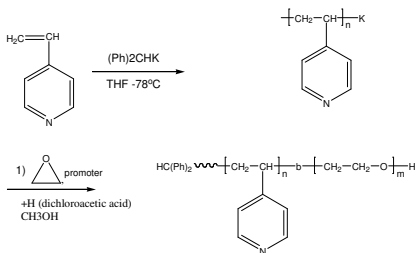


**Composition:**

Mn x 10 <sup>3</sup> P4VP-b-PEO	PDI
5.0-b-8.0	1.17

**Synthesis Procedure:**

Poly(4-vinyl pyridine -b- ethylene oxide) is prepared by living anionic polymerization of ethylene oxide using potassium salt based initiator. The reaction scheme is shown below:



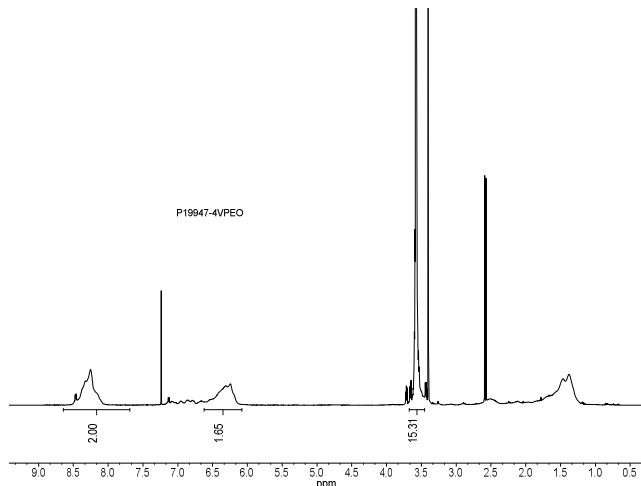
**Characterization:**

The polymer was characterized by SEC in DMF and <sup>1</sup>H NMR.

**Solubility:**

Poly(4-vinyl pyridine -b- ethylene oxide) is soluble in ethanol, DMF, chloroform, and THF (hot). Hexanes are its non-solvent.

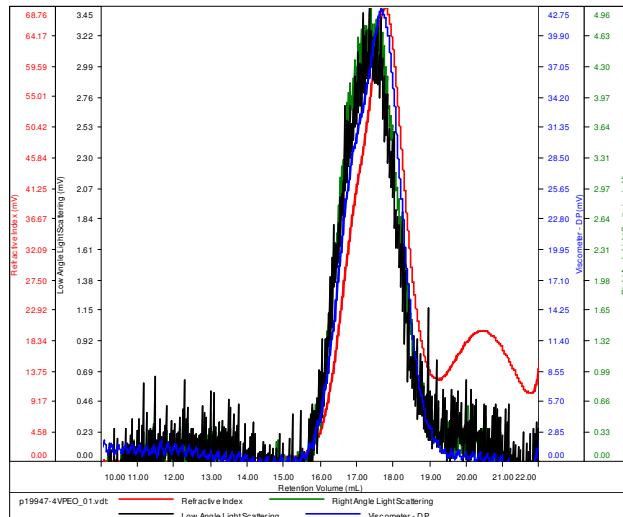
**H-NMR Spectrum of the block copolymer:**



**SEC elugram of the polymer:**

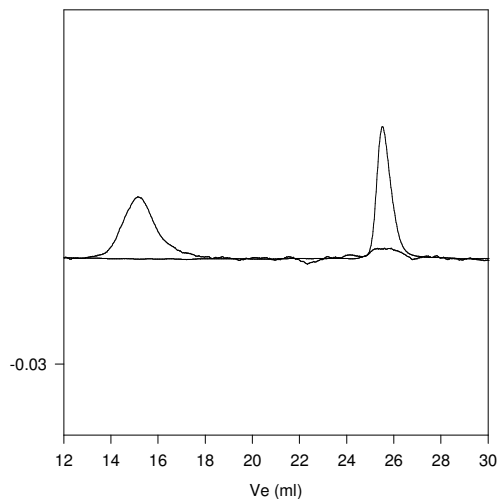
**P19947-4VPEO**

Conc (mg/mL)	4.4589
dn/dc (mL/g)	0.0980
Method	PS80k-May-25-2016-0000.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
p19947-4VPEO_01.vdt	12,872	15,111	12,281	1.174	0.1802

**P19947-4VPEO**



Size exclusion chromatography of poly(4-vinylpyridine)-b-poly(ethylene oxide): in THF at 35 0C.

— Poly(ethylene glycol methyl ether), M<sub>n</sub>=5000, M<sub>w</sub>=5300, PI=1.05

— Block Copolymer PEO-b-P4VP: (5000)-b-(8000), PI=1.17 composition from HNMR In THF product exhibit the micellization behavior. THE SEC profile indicate the absence of homoPEG polymer