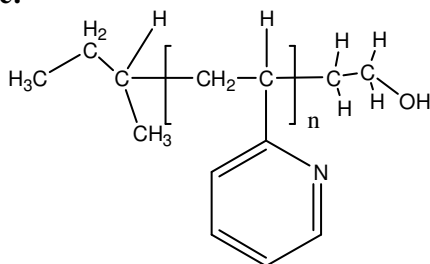


**Sample Name:**

Poly(2-vinyl pyridine -b- ethylene oxide)

**Sample # 19525A-2VPEO****Structure:****Composition:**

$M_n \times 10^3$ P2VP-b-PEO	Mw/Mn
2.8–b–35.0	1.20

**Synthesis procedure:**

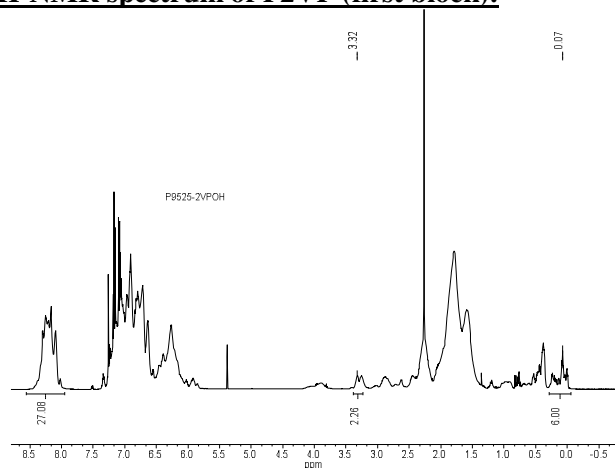
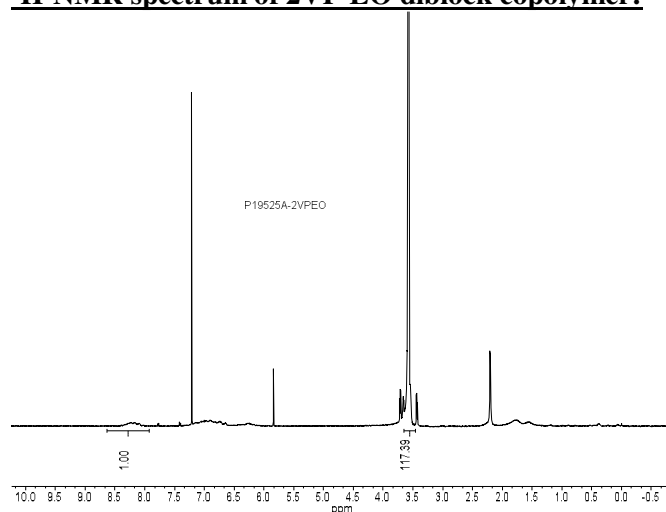
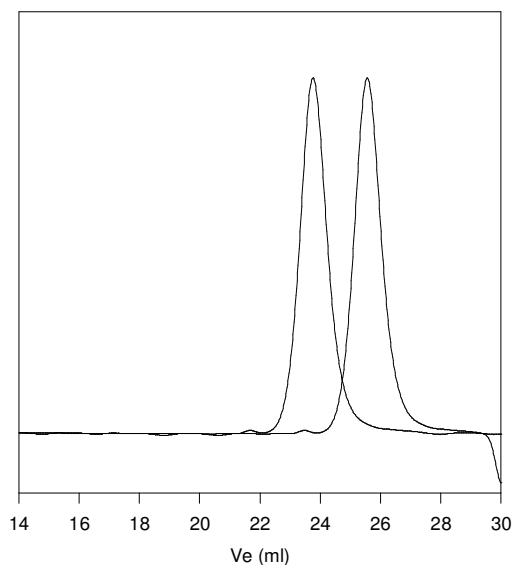
The polymer was synthesized by anionic process.

**Characterization:**

An aliquot of the hydroxyl terminated poly(2-vinyl pyridine) was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from  $^1\text{H-NMR}$  spectroscopy by comparing the peak area of the 2-vinyl pyridine proton at about 8.2 ppm with the peak area of the ethylene oxide protons at about 3.6 ppm. Block copolymer PDI is determined by SEC.

**Solubility:**

Poly(2-vinyl pyridine -b- ethylene oxide) is soluble in THF, chloroform, ethanol, DMF. It precipitates from hexanes.

 **$^1\text{H-NMR}$  spectrum of P2VP (first block):** **$^1\text{H-NMR}$  spectrum of 2VP-EO diblock copolymer:****SEC of the block copolymer:****P19525A-2VPEO**

Size exclusion chromatography of poly(2-vinylpyridine)-b-poly(ethylene oxide):

— Poly(2-vinylpyridine),  $M_n=2,500$ ,  $M_w=3,000$ ,  $PI=1.2$

— Block Copolymer P2VP(2,500)-b-PEO(35,000),  $PI=1.20$