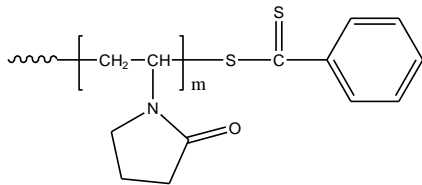


**Sample Name:** Poly(N-Vinyl Pyrrolidinone)

**Sample #:** P18235C-NVP

**Structure:**

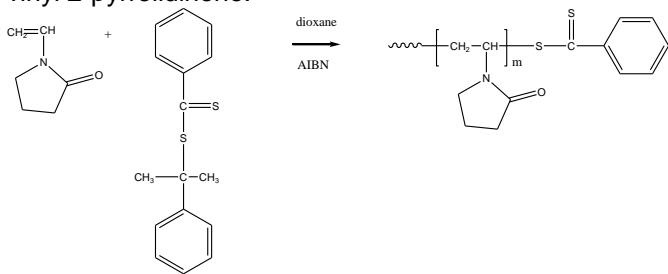


**Composition:**

Mn x 10 <sup>3</sup>	Mw/Mn (PDI)
220.0	2.1

**Synthesis Procedure:**

Polymer is synthesized by RAFT polymerization of N-vinyl 2-pyrrolidinone:

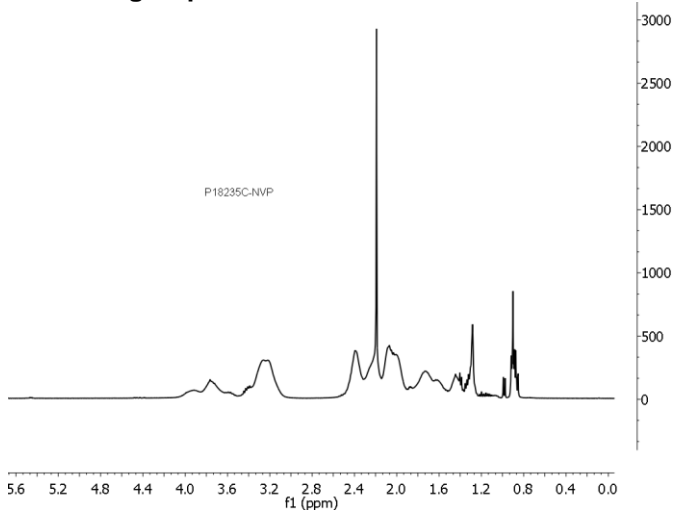


**Characterization:**

Polymer analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI) using water containing 0.1M NaNO<sub>3</sub> and 0.01M NaH<sub>2</sub>PO<sub>4</sub> as eluent. The Mn was then also calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area of the terminal end groups protons at about 3.6 ppm and 1.2 ppm and of pyrrolidinone units at 3.2 ppm to 2.0 ppm polymer molecular weight distribution is determined by SEC.

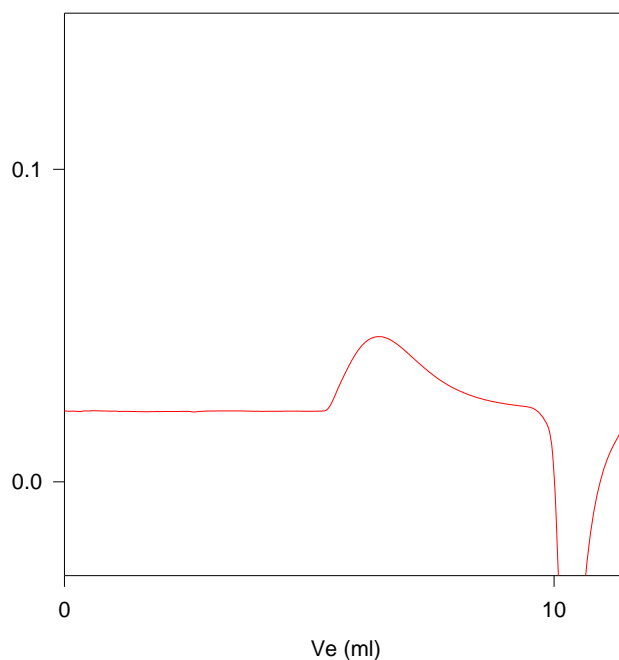
**Solubility:** Polymer is soluble in water.

**<sup>1</sup>H-NMR Spectrum of polymer bearing terminal Xanthate group:**



**SEC of Sample of the block copolymer:**

**P18235C-NVP**



Size Exclusion Chromatography of Poly(N-vinylpyrrolidone)

M<sub>n</sub>=220,000, M<sub>w</sub>=462,000, PI=2.1