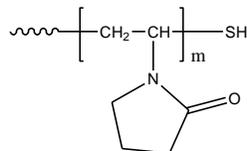


Sample Name: Thiol terminated Poly(N-vinylpyrrolidone)

Sample #: P7337-NVPSH

Structure:

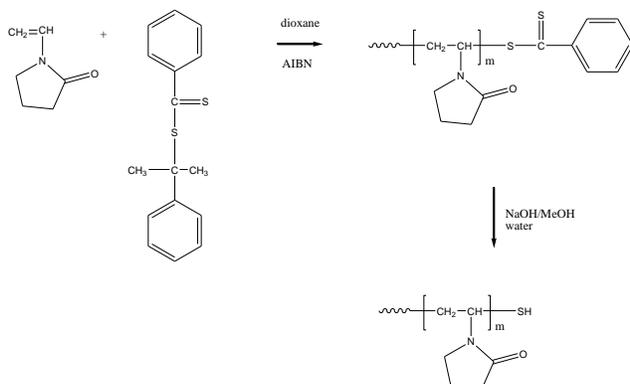


Composition: (functionality: 60%mol)

Mn x 10 ³	PDI
1.5	1.2

Synthesis Procedure:

The polymer was prepared by reversible addition-fragmentation chain transfer polymerization (RAFT) of N-vinyl pyrrolidone with a AIBN as initiator and cumyl dithiobenzoate as chain-transfer agent, followed by hydrolysis. The scheme of the reaction is illustrated below:



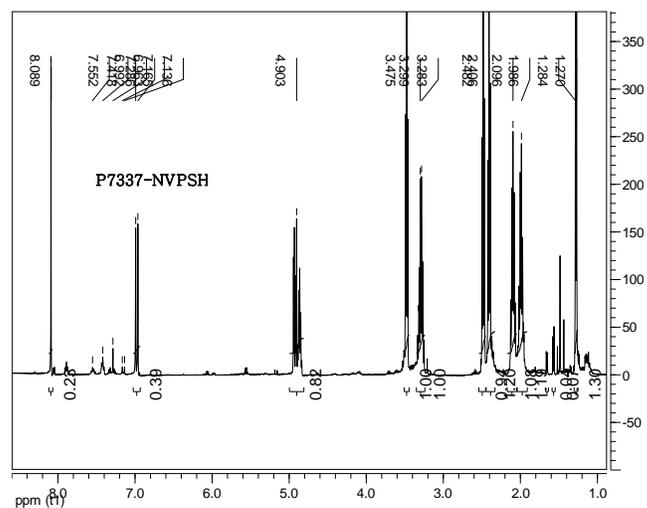
Characterization:

The molecular weight and polydispersity was determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector and DMF containing 0.05M LiBr salt as eluent.

Solubility:

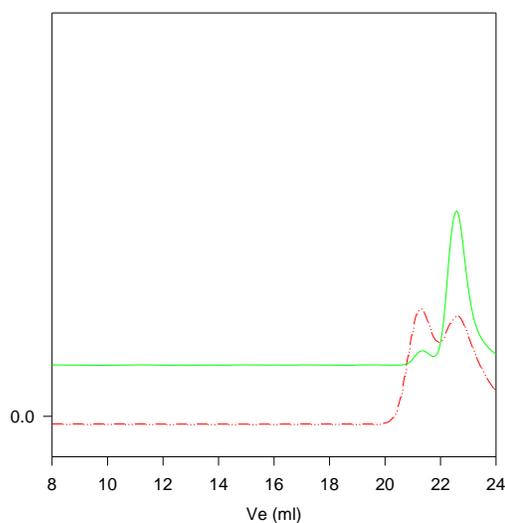
The polymer is soluble in water methano, ethanol, DMF, and dioxane, not soluble in hexane.

NMR of sample



SEC of Sample:

P7337-NVPSH



Size exclusion chromatography(DMF eluent 0.05M LiBr):

- After oxidation in DMF with I as oxidation agent, PNVP-S-S-PNVP area oxidized : area unoxidized = 7:10 , 60% of the polymers are terminated with thiol
- Thiol ended Poly(N-vinylpyrrolidone), Mn=1500, Mw=1800, PI=1.2 The Mn was determined by standard PNVP