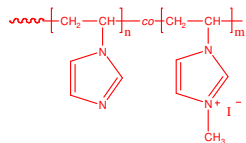


Sample Name:
Poly(N-vinyl imidazole-partially quaternized with CH₃I)
Sample #: P2020-VIMDZQ

Structure:

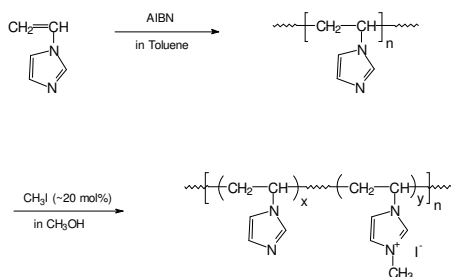


Composition:

| | |
|---|-----|
| Mn x 10 ³ | PDI |
| 16.5 (Degree of quaternization is ca. 20.7%) | 1.5 |

Synthesis Procedure:

Poly(N-vinyl imidazole) is synthesized by free-radical polymerization in toluene using AIBN as the initiator. The partially quaternization was performed in methanol with iodomethane. The reaction scheme is shown below.

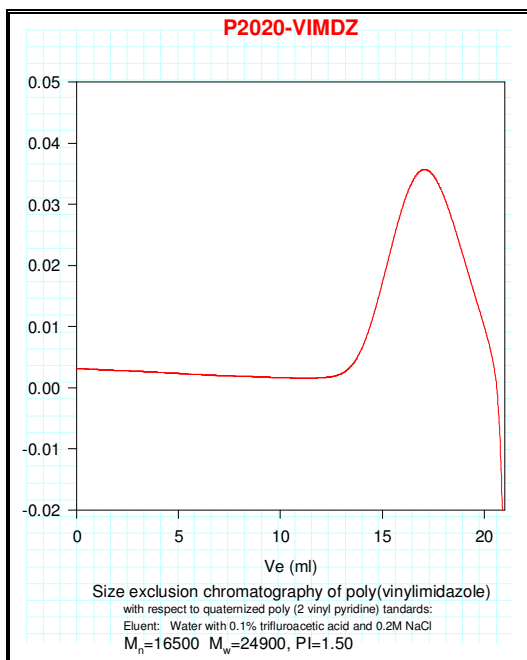


Characterization:

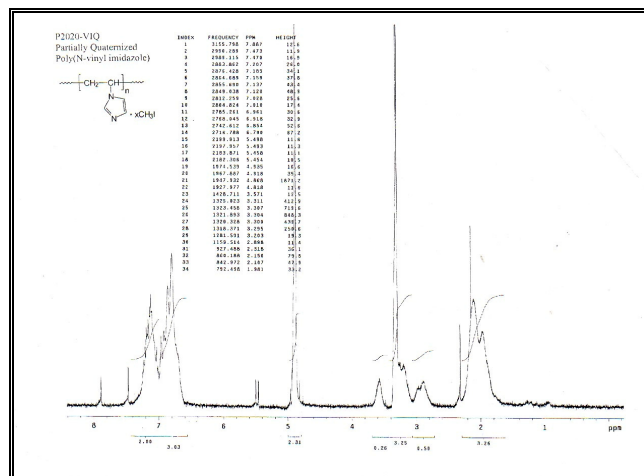
The molecular weight and polydispersity index (PDI) of Poly(N-vinyl imidazole) are obtained by size exclusion chromatography using water with 0.1%TFA and 0.2M NaCl as eluent. The degree of quaternization is calculated based on the results of element analysis. NMR spectrum was recorded on Varian 500 in deuterated methanol.

Solubility: Polymer is soluble in methanol, ethanol. Toluene is the non-solvent.

SEC of Homopolymer (before quaternization):



NMR Spectrum:



Element Analysis:

