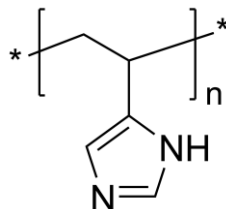


Product Name: Poly(4-(5)vinyl imidazole)

Sample ID # P43907-4-(5)VIMDZ

Structure:

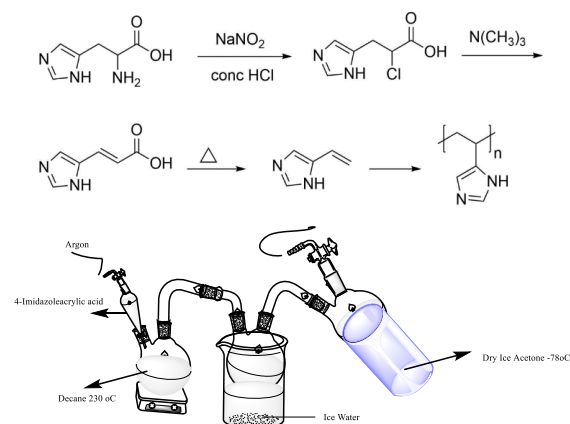


Composition:

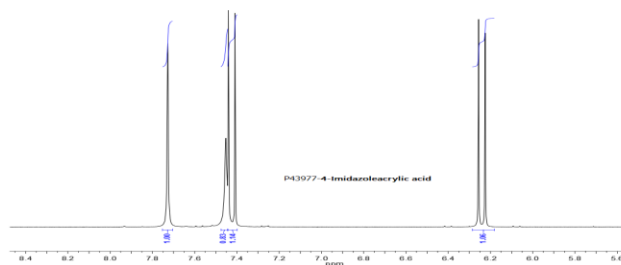
$M_n \times 10^3$ (g/mol)	$M_w \times 10^3$ (g/mol)	Mw/Mn
159.0	392.0	2.45

Synthesis procedure:

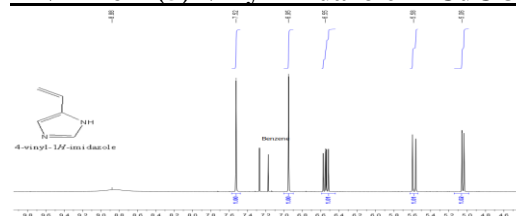
Synthesis of Monomer:



HNMR of 4-Imidazoleacrylic acid ion DMSO:



HNMR of 4(5)-Vinyl imidazole in CdCl_3 :



Characterization:

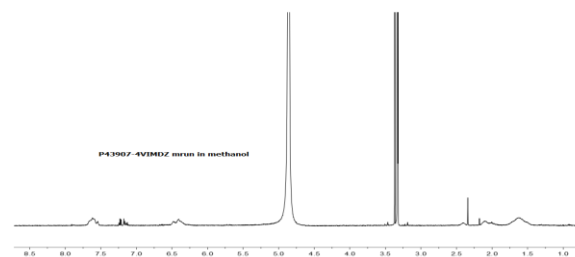
The molecular weight of poly(4-(5)vinyl imidazole) calculated using PEG reference material.

The method is as followed:

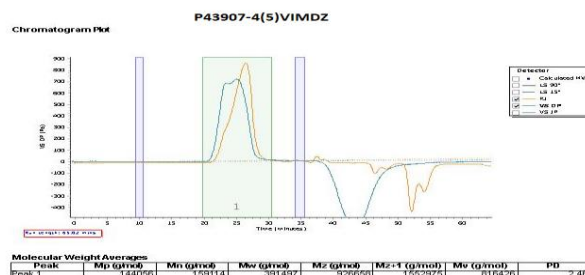
Instrument from Agilent Technologies 1260 infinity equipped with triple detectors; RI, Viscosity and light scattering flow rate 0.7 ml/min and eluent is Water Millipore contain 0.1 M NaNO_3 and 2% acetic acid (v/v%) temperature of column 30 oC and three columns: An aqueous GPC column from Supelco (G5000 PWXL, 4000 and 2000) were used.

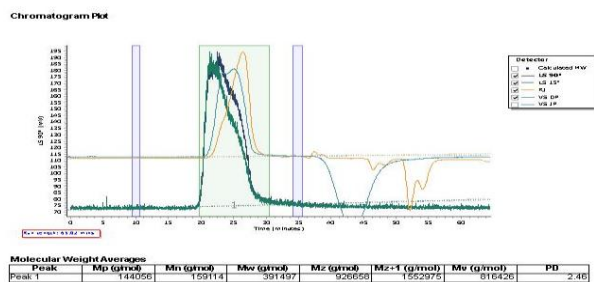
dn/dc was used in calculation 0.220ml/g as reported in the literature.

HNMR spectrum of the Sample:



SEC elugram of the Sample:





Conformational changes of (PVIMDZ) in water occur but also in Methanol water mixture, these were explained by intrachain hydrogen bonds between protonated and unprotonated imidazole rings. (macromolecules, 1980,13,13750)