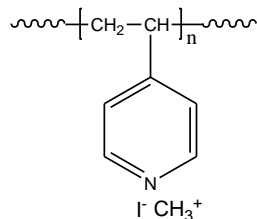


Sample Name:
Poly (4-vinyl N-methylpyridinium iodide)

Sample #: **P231-4VPQ**

Structure:

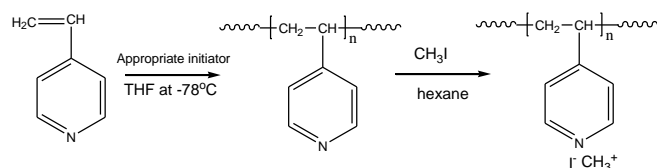


Composition:

$M_n \times 10^3$	PDI
54.0	1.2
$T_g (^{\circ}\text{C})$	146

Synthesis Procedure:

Poly(4-vinyl N-methyl pyridinium iodide) is obtained by anionic polymerization of 4-vinyl pyridium followed by stirring with distilled CH_3I in an 8:2 mixture of THF / DMF and precipitation from hexanes. The reaction scheme is illustrated below:



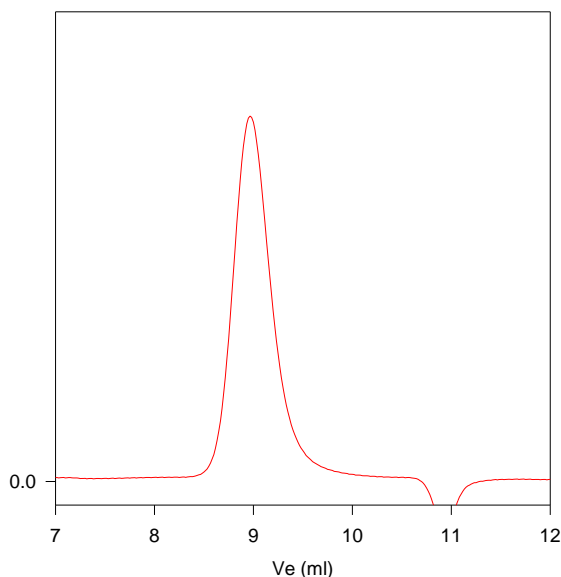
Characterization:

The molecular weight and polydispersity index (PDI) of poly (4-vinyl pyridium) are obtained by size exclusion chromatography. The quaternization is confirmed by FTIR with the disappearance of the -N= absorbance peak at 1412 cm^{-1} and the degree of quaternization is generally over 98%.

Solubility:

Poly (4-vinyl N-methyl pyridinium iodide) is soluble in methanol, ethanol and precipitate out from hexane, ether.

SEC profile of Homopolymer:
(precursor of P231-4VPQ)



Size Exclusion Chromatography of Poly(4-vinyl pyridine)
(Precursor of P231P4VPQ)

$M_n=23000$, $M_w=27600$, $PI=1.20$

After quaternization: $M_n: 54,000$ M_w/M_n 1.20

DSC thermogram for the sample:

