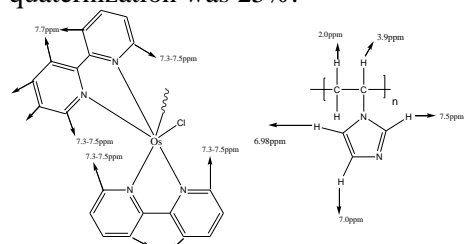




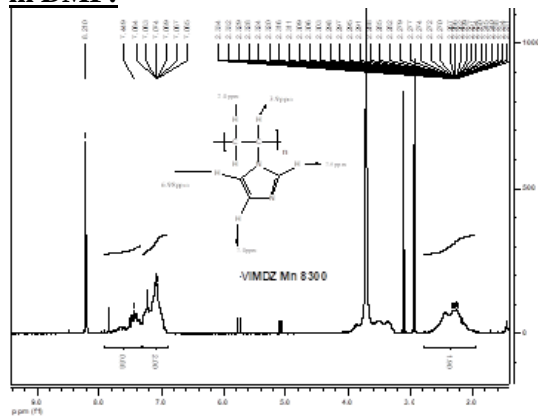
### Degree of quaternization:

From the yield of the polymer after reaction with osmium salt was calculated and found the % of quaternization was 25%.

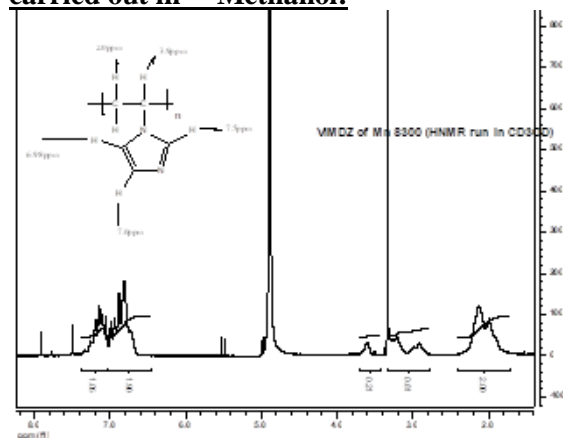


HNMR of the polymer after quaternization also illustrates about 25% degree of quaternization with osmium salt. FTIR also illustrates absorbance due to Osmium salt at 1256 and 1116cm<sup>-1</sup>.

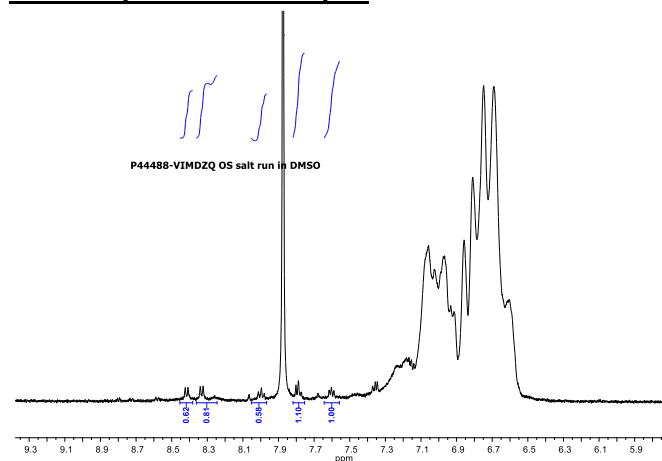
### H NMR spectrum of Poly vinyl imidazole runs in DMF:



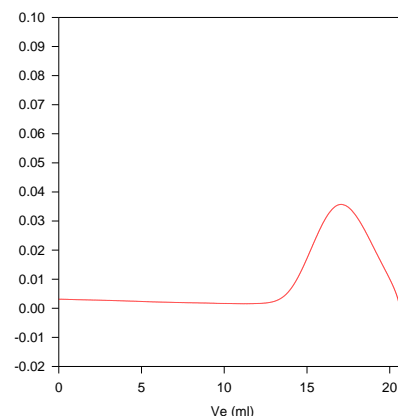
### H NMR spectrum of Poly vinyl imidazole carried out in Methanol:



### HNMR spectrum of Sample:



### SEC profile of Homopolymer (before quaternization):



Size exclusion chromatography of poly(vinylimidazole) with respect to quaternized poly (2 vinyl pyridine) standards:  
Eluent: Water with 0.1% trifluoroacetic acid and 0.2M NaCl  
M<sub>n</sub>=8300 M<sub>w</sub>=12500, PI=1.50

