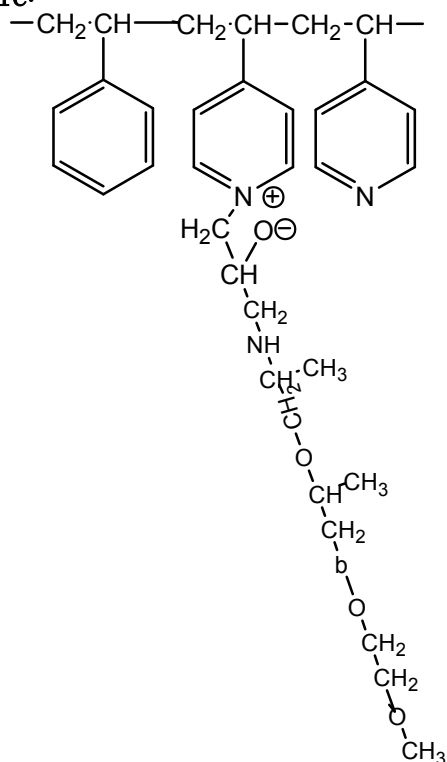


Sample Name: Poly(styrene-co- 4-vinyl pyridine)
quaternized with PEOPO block copolymer

Sample #: P10395-S4VPQEOPONHEPoxy

Structure:

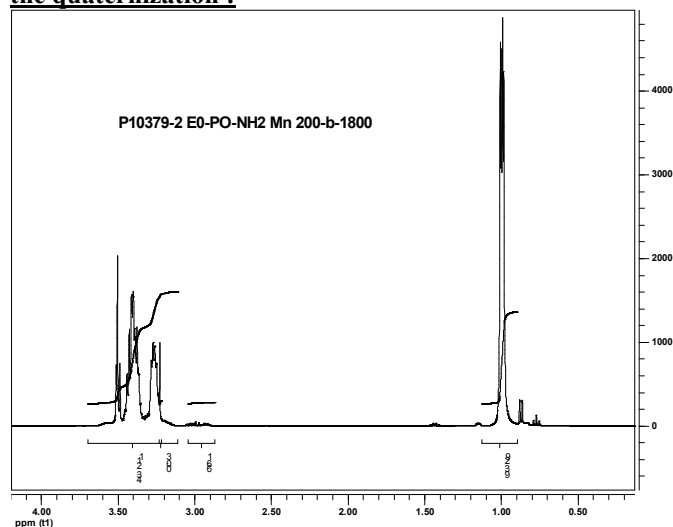


Composition: S:4VP 20:80 ratio

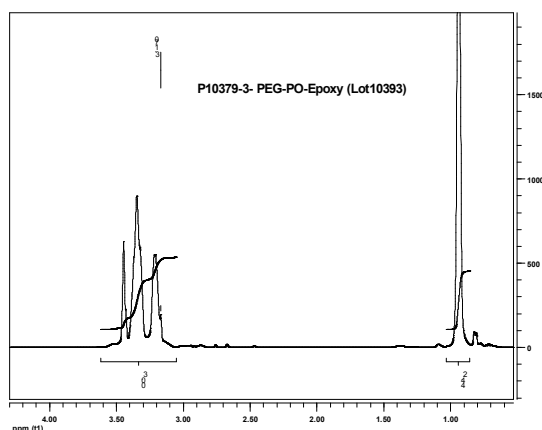
Mn $\times 10^3$ PS-co-P4VP	PDI
125.0	-
% Quaternization with PEOPO block Jeffamine M 2005 Mn of 200-b-1800	$\cong 16\%$

By Epoxydation reaction.

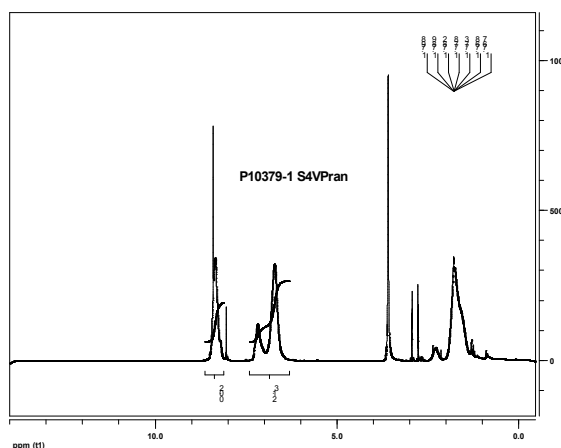
^1H NMR of PEO-b-PO NH₂ (Jeffamine M 2005) used for the quaternization :



^1H NMR of Jeffamine –Epoxy:



**^1H NMR of S4VP random copolymers used: Mw 125,000
S:4VP 20:80 ratio**



Characterization:

The composition was calculated from ^1H -NMR spectroscopy by comparing the peak area of the styrene protons at 6.3-7.2 ppm with the peak area of the 4-vinyl pyridine protons at about 8.5 ppm.

Quaternization. Polymer was dissolved in distilled DMF.

S4VP copolymer: 4 g

EOPONH-Epoxy Block copolymer: 1.6 g

DMF Stirrer at 60 °C over night

Precipitated in hot hexane to remove any unreacted EOPO block copolymer;

Yield: 5.0 g

Solubility:

The polymer is soluble in DMF, NMP and DMSO and also in methanol.