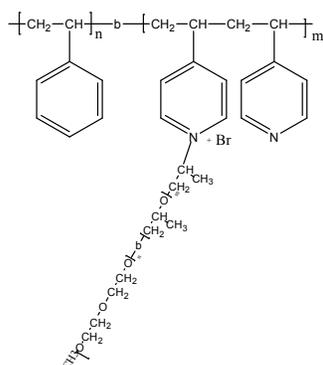


**Sample Name:** Poly(styrene-co- 4-vinyl pyridine)  
**quaternized with PEOPO block copolymer**

**Sample #:** P10379C-S4VPQEPO

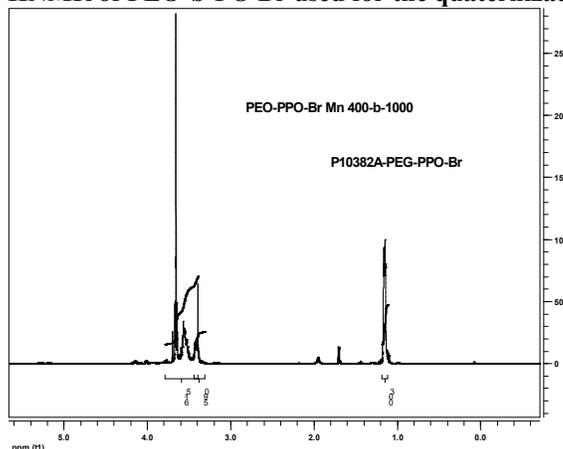
**Structure:**



**Composition:** S:4VP 20:80 ratio

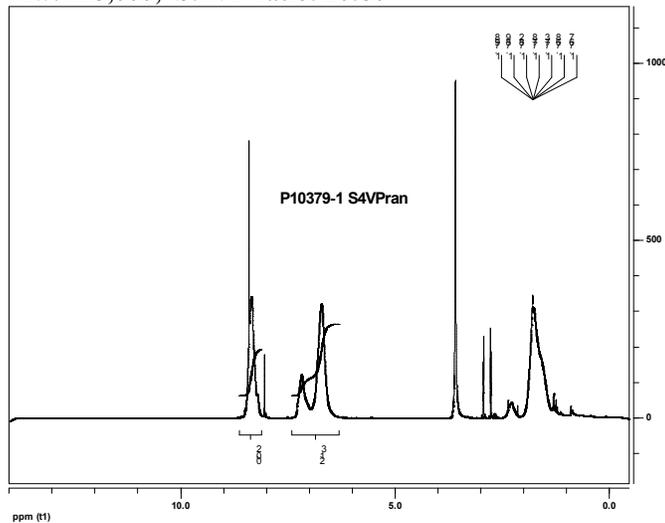
Mn × 10 <sup>3</sup> PS-co-P4VP	PDI
125.0	-
% Quaternization with PEOPO block Mn of 400-b-1000	≈26%

**HNMR of PEO-b-PO Br used for the quaternization :**

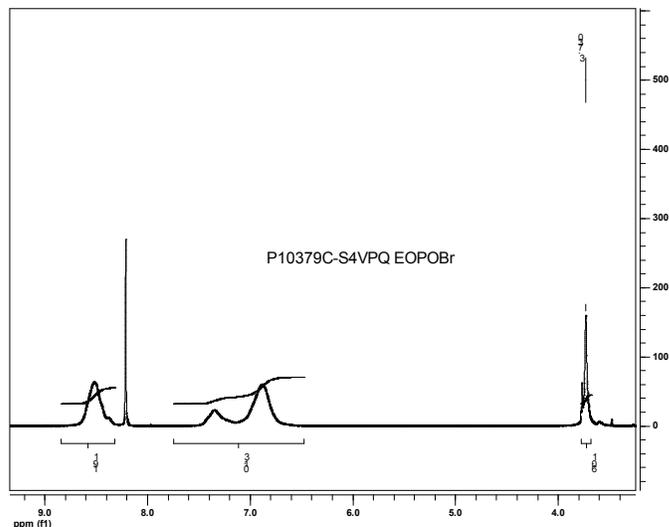


**HNMR of S4VP random copolymers used:**

**Mw: 125,000; S:4VP ratio: 20:80**



**<sup>1</sup>H NMR of the Copolymer after quaternization:**



**Characterization:**

The composition was calculated from <sup>1</sup>H-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: 4g

EOPOBr Block copolymer: 1.5g

DMF Stirrer at 60 °C over night

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

Yield: 5.3g

**Solubility:**

Polymer is soluble in DMF, NMP and DMSO and also in methanol.