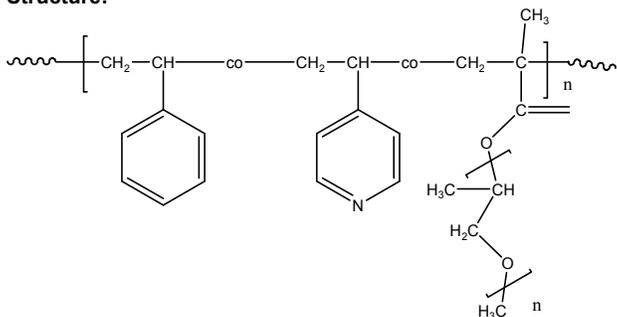


Sample Name:

Random Copolymer Poly(styrene-co-4-vinylpyridine-co-propylene glycol methyl ether methacrylate)

Sample #: P10394-S4VP-PGMAn

Structure:



Composition:

S: 4VP :PGMA; 41:45:14

$M_n \times 10^3$	PDI
PS-co-P4VP-co-PGMA	
47.0	1.6

Synthesis Procedure:

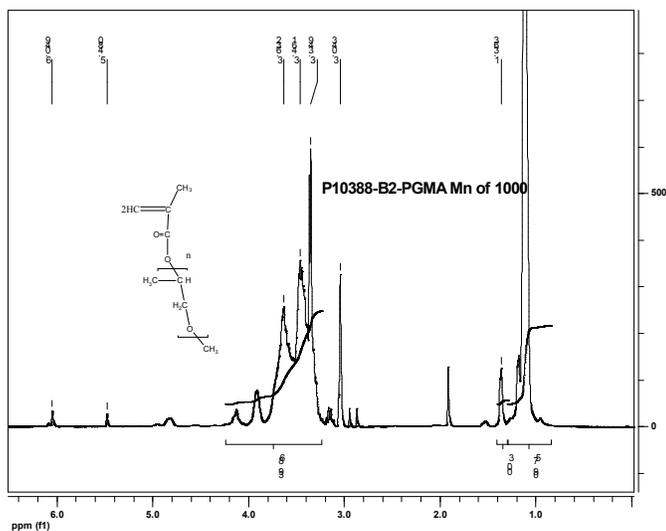
The polymer is prepared by radical polymerization of styrene and 4-vinylpyridine and polypropylene glycol methyl ether methacrylate of M_n 1000 by RAFT process.

Characterization:

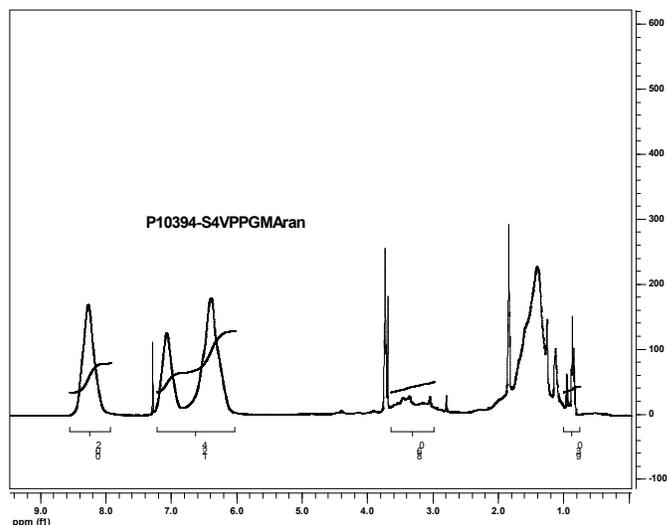
The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The copolymer composition was calculated from 1H -NMR spectroscopy by comparing the peak area of 4VP protons at 8.28 ppm with the styrene protons at about 6.1-7.2 ppm that deducts the contribution of the 4VP protons.

Solubility:

The polymer is soluble in $CHCl_3$, THF, DMF, methanol and precipitated out from hexane

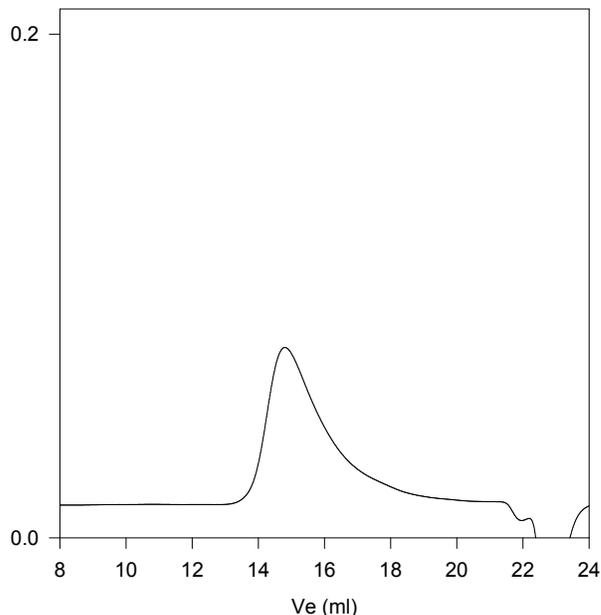


1H -NMR Spectrum of the random copolymer:



SEC of the random copolymer:

P10394-S4VPGMAPran



Size exclusion chromatography in DMF at 40 °C:

— $M_n=47,000$, $M_w=80,000$, $PI=1.7$ (SEC polystyrene standard)