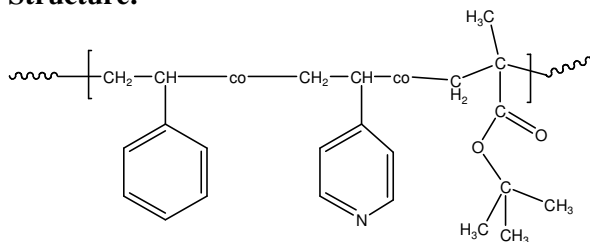


Sample Name:

Random Copolymer Poly(styrene-co-4-vinylpyridine-co-tert.butyl methacrylate)

Sample #: P11231-S4VPtBuMAran

Structure:



Composition:

Mn x 10 ³ PS4VPtBuMAran	PDI
480.0	2.5

T _g for random polymer	113 °C
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S4VPtBuMA ratio	15:67:18
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Synthesis Procedure:

The polymer is prepared by RAFT radical polymerization of styrene and 4-vinylpyridine and tBuMA.

Characterization:

The polymer was analyzed by size exclusion chromatography (SEC) in DMF at 60 °C 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, tBu moiety at 1.4 ppm

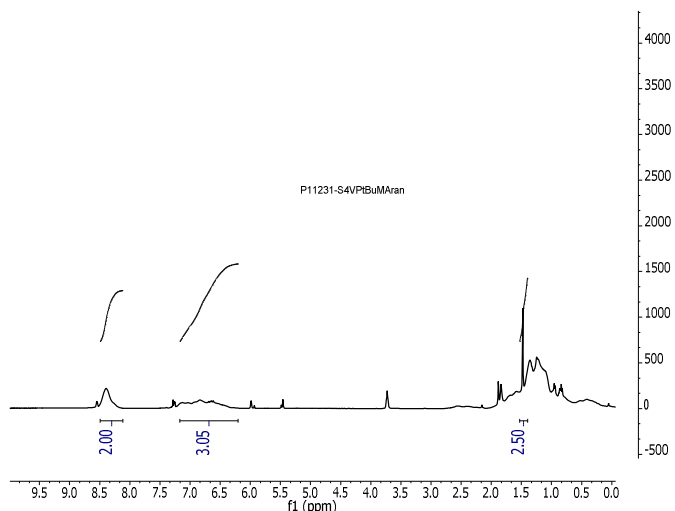
Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

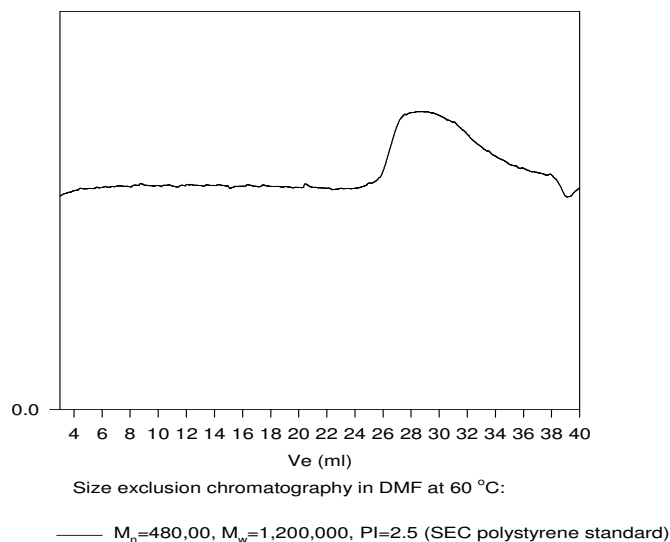
The polymer is soluble in THF, DMF and in hot methanol.

¹H-NMR Spectrum of the random copolymer:



SEC elugram of the random copolymer:

P11231-S4VPtBuMAran



DSC thermogram for the sample

