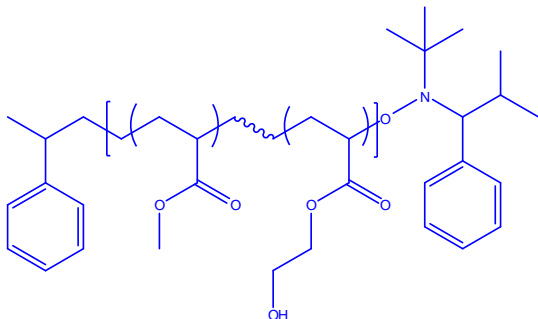


Sample Name:

Random Copolymer Poly(methyl methacrylate-co-hydroxyethyl methacrylate)

Sample #: **P6415-MMAHEMAran**

Structure:



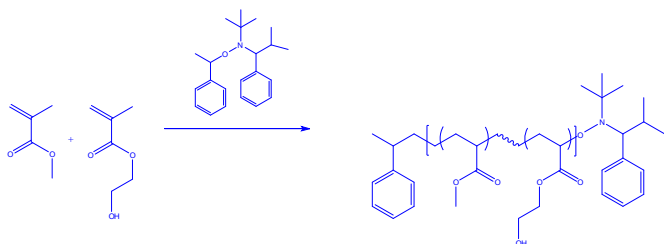
Composition:

PMMA (mol%) : 98%, HEMA: 2%

$M_n \times 10^3$ MMA-co-HEMA	PDI
22.3	2.02
T_g for the random copolymer	101°C

Synthesis Procedure:

Random Copolymer is prepared by nitroxide-mediated radical polymerization of HEMA and MMA .



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 $^1\text{H-NMR}$ spectroscopy.

Thermal analysis:

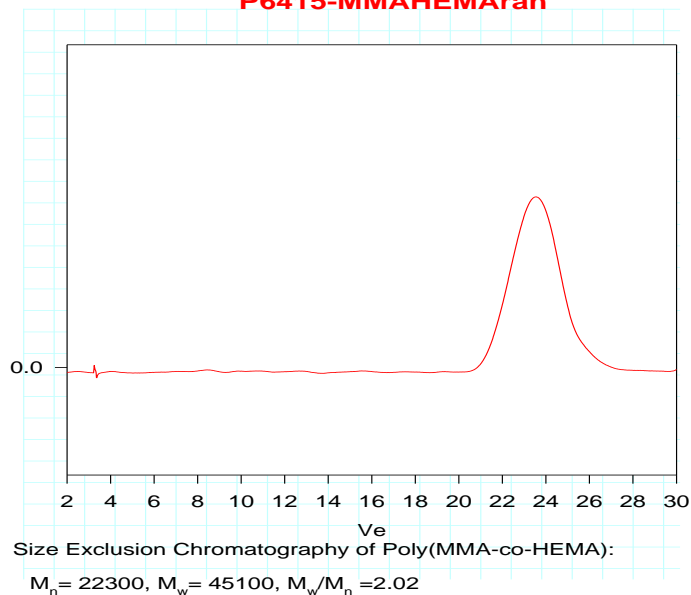
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of $10^\circ\text{C}/\text{min}$. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

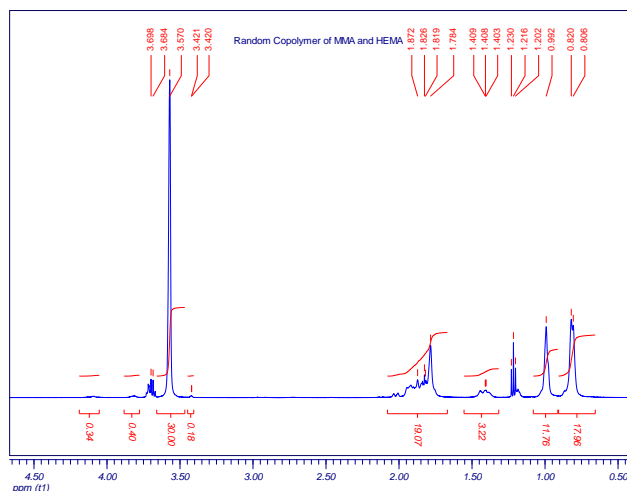
Random Copolymer Poly(MMA-co-HEMA) is soluble in CHCl_3 , THF, DMF, toluene and precipitated out from methanol.

SEC of the random copolymer:

P6415-MMAHEMAran



Proton NMR of copolymer:



DSC thermogram for the sample:

