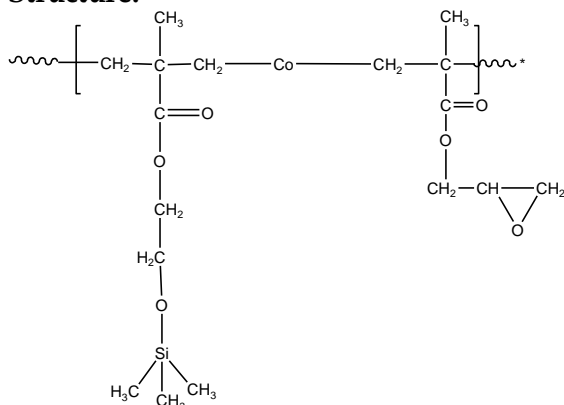## Sample Name:
 Random Copolymer Poly(2-Trimethyl siloxy ethyl methacrylate-co-Glycidyl methacrylate)

Sample #: P9470-HEMATMSGMAran

Structure:

Composition: HEMATMS: and GMA ratio: 5:5

Mn x 10^3 HEMATMS-co-GMA	PDI
14.0	1.07
T_g for the random copolymer	42 ^{0}C

Synthesis Procedure:
Random Copolymer is prepared by living anionic polymerization of GMA and trimethyl siloxy ethyl methacrylate .

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}H-NMR spectroscopy by comparing the peak area the methyl ester at 3.6ppm m with the protons of methyl methacrylate at about 0.8-1.2 ppm that deducts the contribution of the methyl protons of the HEMA moiety.
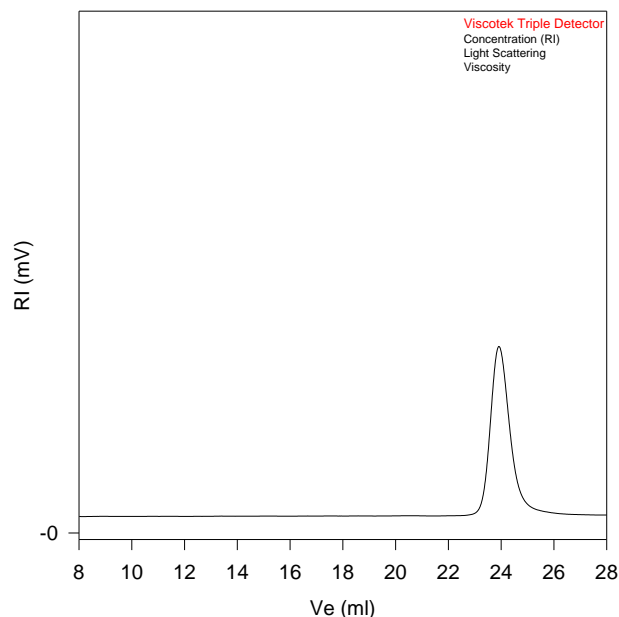
Thermal analysis:
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min.The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:
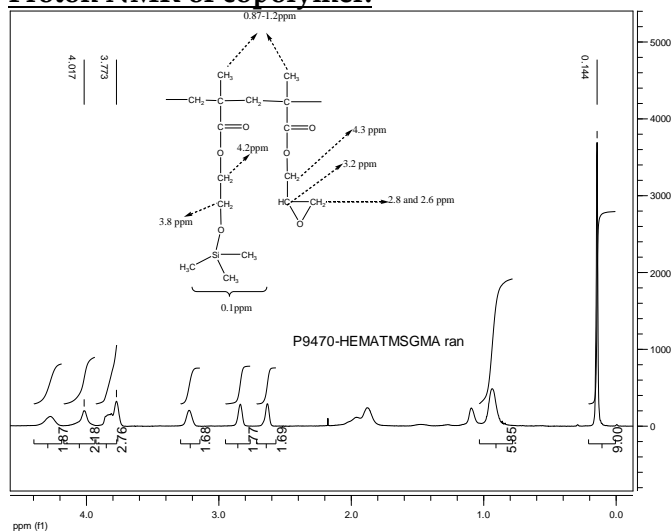Random Copolymer Poly(MMA-co-HEMA) is soluble in , THF, DMF.

SEC of the random copolymer:
P9470-HEMATMSGMAran

Size Exclusion Chromatography of random copolymer of HEMATMS-GMA

—— M_n = 14000, M_w = 15,000, M_w/M_n = 1.07

Proton NMR of copolymer:

P9470-HEMATMSGMA ran

DSC thermogram for the sample: