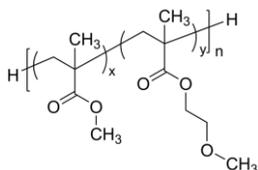


Sample Name:

**Poly(methyl methacrylate-co-2-methoxyethyl methacrylate), random**

Sample #: P42963A-MMA2MeOEMArAn

Structure:



Composition:

Mn x 10 <sup>3</sup> PMMA-co-MeOEMA	PDI
15.0	1.10

T <sub>g</sub> of random polymer: 75
PMMA (mole%): 80

Synthesis Procedure:

Random Copolymer is prepared by group transfer polymerization.

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 <sup>1</sup>H-NMR spectroscopy by comparing the peak area the aromatic protons of ppm with the protons of methyl methacrylate at about ppm that deducts the contribution of the styrene back bone protons.

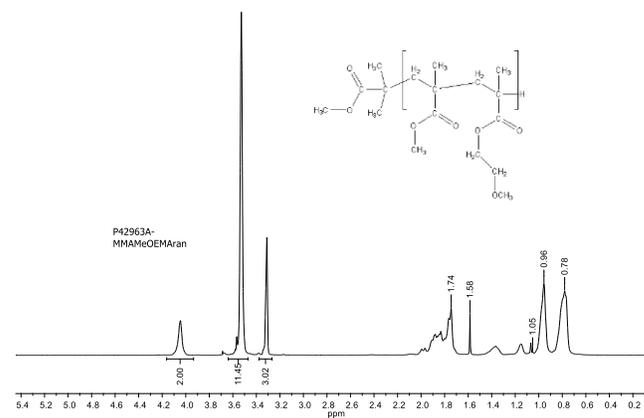
Thermal analysis

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<sub>g</sub>).

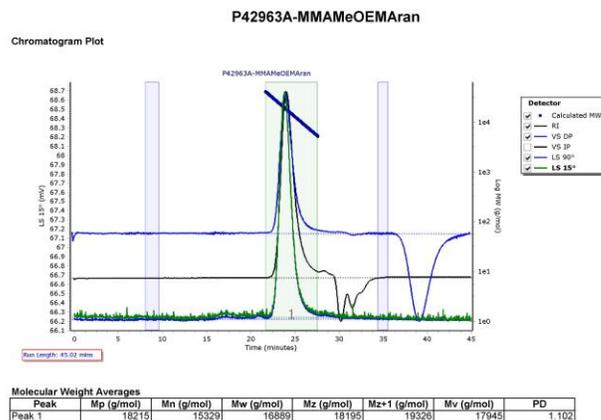
Solubility:

The polymer is soluble in CHCl<sub>3</sub>, THF, DMF, and toluene. It precipitated out from methanol and water.

<sup>1</sup>H-NMR Spectrum of the random copolymer:



SEC elugram of the random copolymer:



DSC Thermogram for the sample:

