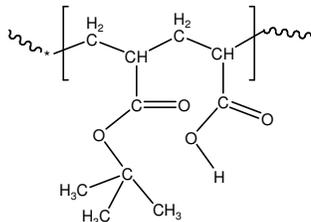


Sample Name:

**Random Copolymer Poly(tert.butylacrylate-co-acrylic acid)**

Sample #: P14373-tBuAAran

**Structure:**



**Composition:**

$M_n \times 10^3$	PDI
150.0	1.10
tBuA:AA	10:90

**Synthesis Procedure:**

Random Copolymer poly(tert.butylacrylate-co-acrylic acid) is prepared by RAFT process. The degree of acid content was determined by titration and from  $^1\text{H-NMR}$  analysis.

**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 by comparing the peak area at 1.4 ppm for tert.butyl vs backbone protons.

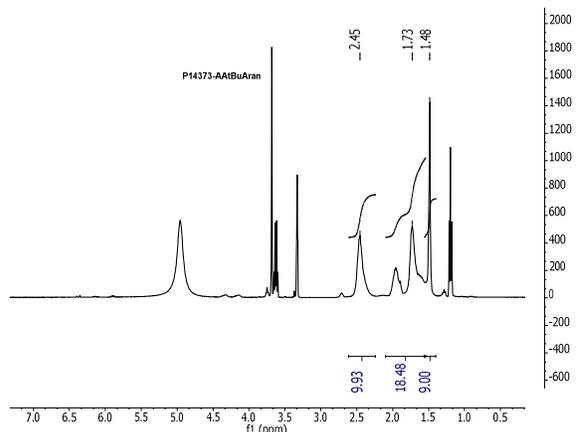
**Thermal analysis:**

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 ( $T_g$ ).

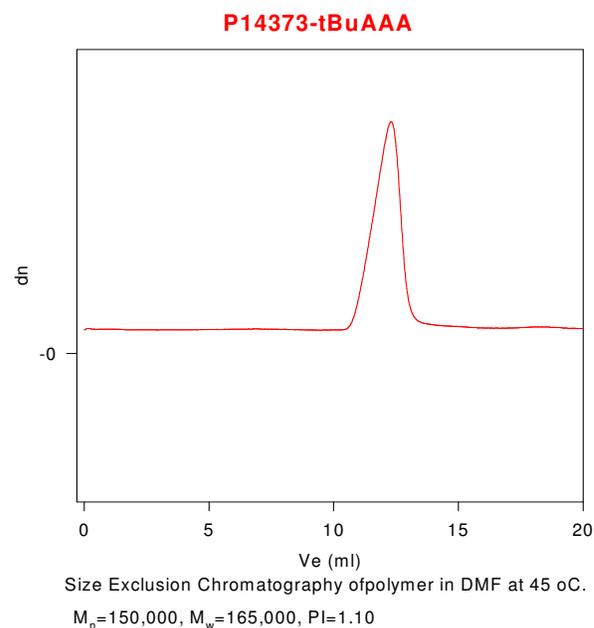
**Solubility:**

Random Copolymer is soluble in THF, methanol.

**Proton NMR spectrum of copolymer:**



**SEC curve of copolymer:**



**DSC thermogram of the copolymer:**

