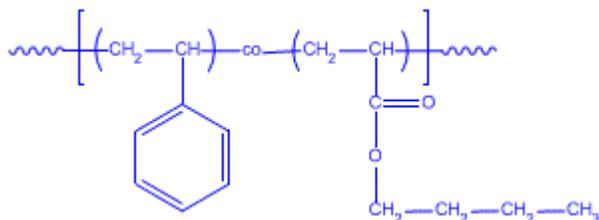


### Sample Name:

Random Copolymer Poly(styrene-co-n-butylacrylate)

### Sample #: P6406H-SnBAran

### Structure:



### Composition:

$M_n \times 10^3$	PDI
2.1 (nBA wt%: 7.4)	1.20
$T_g$ for the random copolymer	59°C

### Synthesis Procedure:

Random Copolymer is obtained by TEMPO mediated radical polymerization using 1,1-azobis(cyclohexanecarbonitrile) as initiator.

### 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  $^1H$ -NMR spectroscopy.

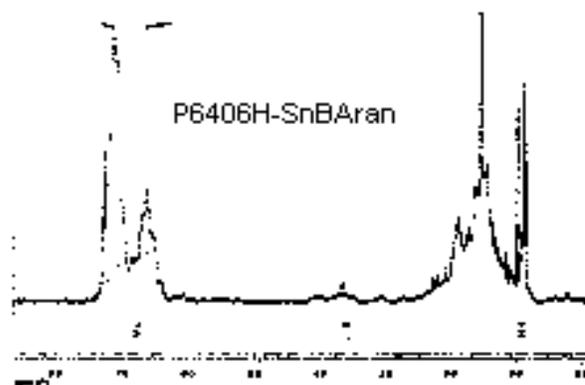
### Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 20°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 ( $T_g$ ).

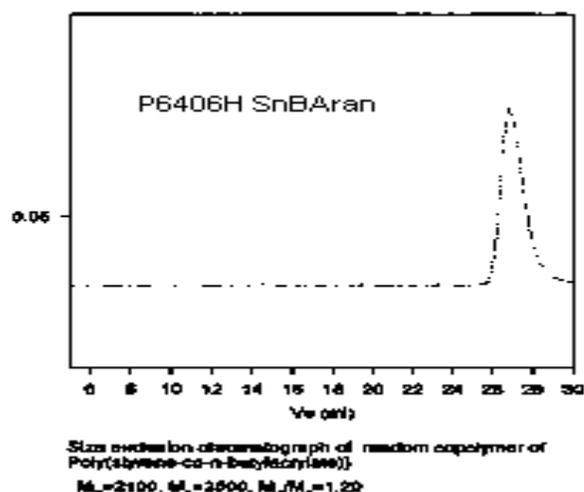
### Solubility:

Random Copolymer is soluble in THF, toluene, chloroform and precipitated out from cold hexane (-30°C).

### Proton NMR of copolymer:



### SEC of the random copolymer:



### DSC thermogram for the sample:

