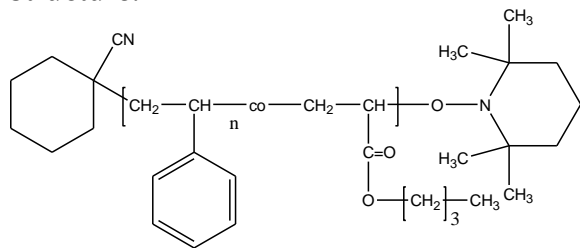


Sample Name:

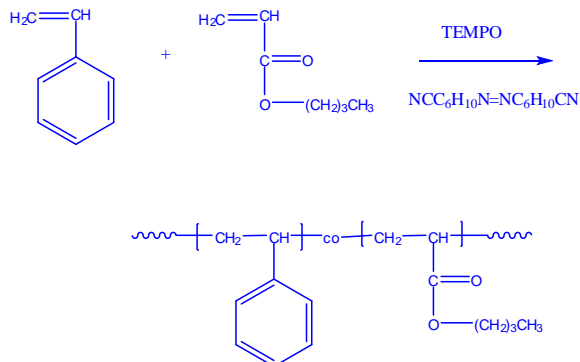
Random Copolymer of styrene and n-butyl acrylate

Sample #P6406L-SnBA_{ran}**Structure:****Composition:**

Mn x 10 ³	PDI	nBA (wt%)
1.36	1.34	~7.4%
T _g for the random copolymer	47°C	

Synthesis Procedure:

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

**Characterization:**

The molecular weight and polydispersity index (PDI) of polymer is obtained by size exclusion chromatography in THF. The columns were calibrated with polystyrene standards. The chemical composition was calculated on the base of NMR result.

Thermal analysis:

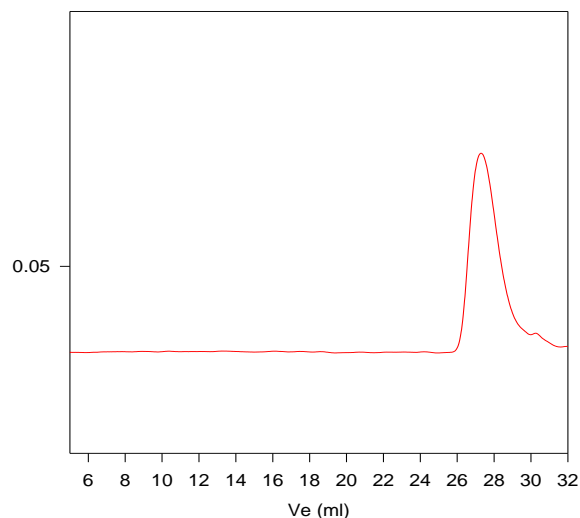
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 20°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

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

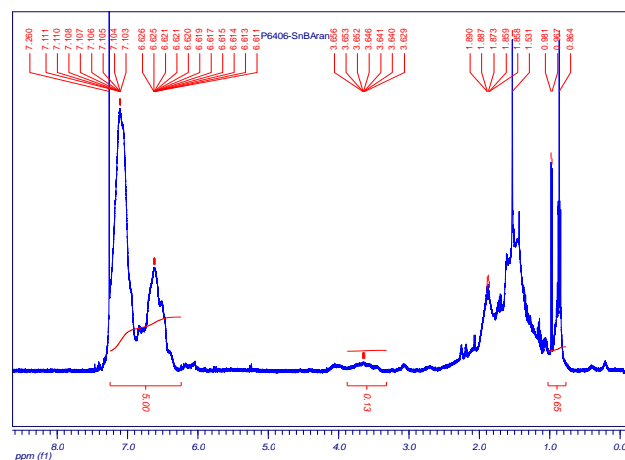
SEC of Copolymer:

P6406L-SnBA_{ran}



Size exclusion chromatograph of random copolymer of Poly(styrene-co-n-butylacrylate)

M_w=1360, M_n=1820, M_w/M_n=1.34

Proton NMR of Copolymer:**Thermogram of the copolymer:**