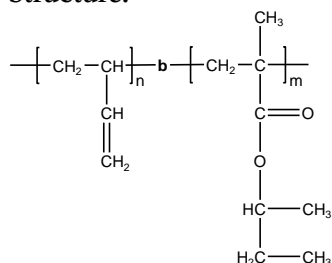


Sample Name: Poly(1,2-butadiene-b-s-butyl methacrylate)

Sample #: P18497-BdsBuMA

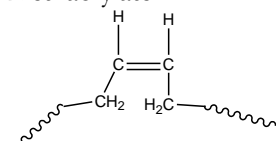
Structure:



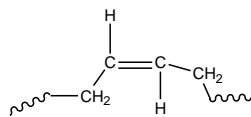
Composition:

Mn x 10 ³ Bd-b-sBuMA	Mw/Mn (PDI)
45.0-b-101.0	1.12
T _g for Bd block: -11°C	T _g for sBuMA block: 74°C

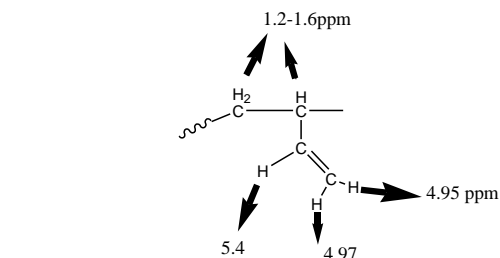
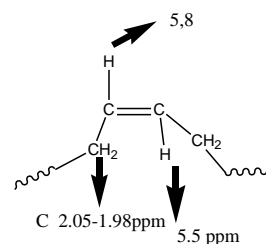
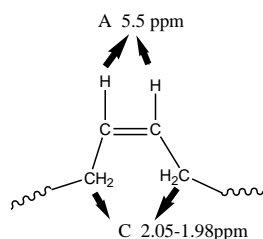
Synthesis Procedure: Poly(1,2-butadiene-b-s-butyl methacrylate) is prepared by living anionic polymerization with sequence addition of butadiene followed by sec butyl methacrylate.



Cis 1,4 addition



Trans 1,4 addition



Characterization:

By SEC and HNMR analysis.

Solubility:

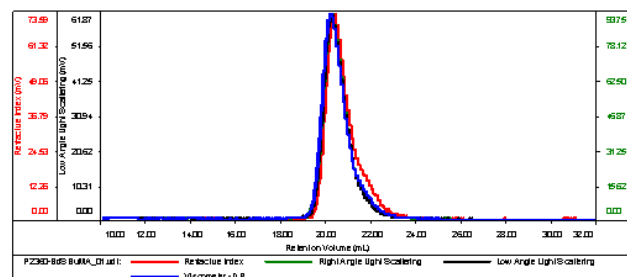
Poly(butadiene-b-sec Butyl methacrylate) is soluble in THF, CHCl₃, toluene, dioxane. The polymer can be precipitate out in ethanol, methanol.

Thermal analysis:

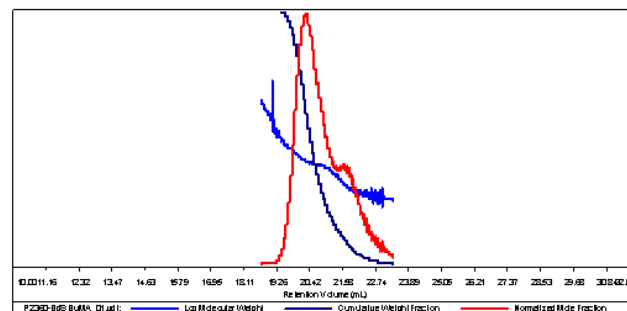
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

SEC profile of the block copolymer

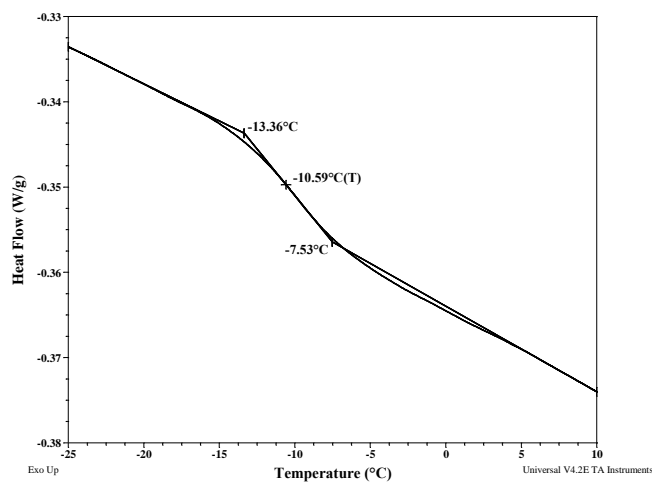
Concentration (mg/mL)	2.9204
Sample dn/dc (mL/g)	0.0950
Method File	PS80K-Feb10-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
BdSBuMA_01.volt	146,841	163,216	176,008	1.112	1.5012



DSC thermogram for Bd block:



DSC thermogram for sBuMA block:

