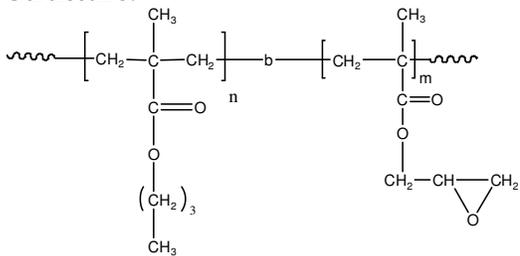


### Sample Name:

Poly( n-butyl methacrylate-b-Glycidyl methacrylate)

Sample #: P9471-nBuMAGMA

### Structure:



### Composition:

|                                  |                            |
|----------------------------------|----------------------------|
| $M_n \times 10^3$<br>nBuMA-b-GMA | PDI                        |
| 23.0-b-8.0                       | 1.07                       |
| $T_g$ for nBuMA block: 27 °C     | $T_g$ for GMA block: 87 °C |

### Synthesis Procedure:

Poly(n-butyl methacrylate-b-Glycidyl methacrylate) block copolymer is synthesized by living anionic polymerization with sequential addition of n-butyl methacrylate and -Glycidyl methacrylate. The obtained polymer was precipitated in methanol/acidic.

### Characterization:

SEC analysis of the obtained block copolymer in THF in presence of triethyl amine as eluent .

The final block copolymer composition by  $^1\text{H-NMR}$  spectroscopy in  $\text{CdCl}_2$  Block copolymer PDI is determined by SEC.

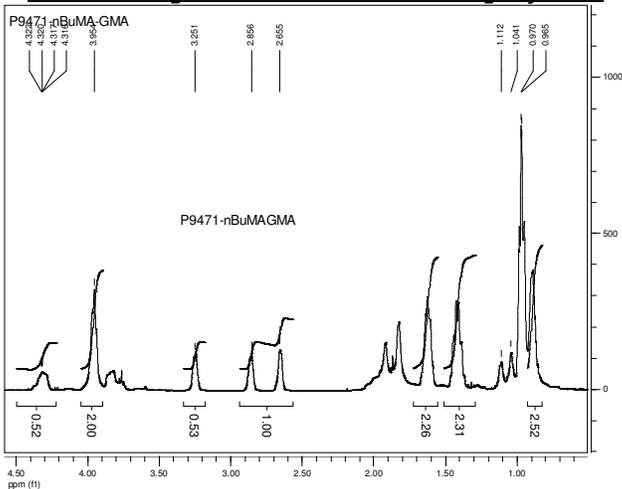
### Thermal analysis:

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:

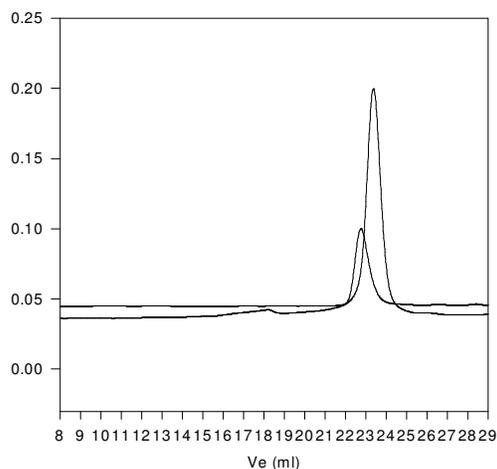
Polymer is soluble in THF and  $\text{CHCl}_3$ .

### $^1\text{H-NMR}$ Spectrum of the block copolymer:



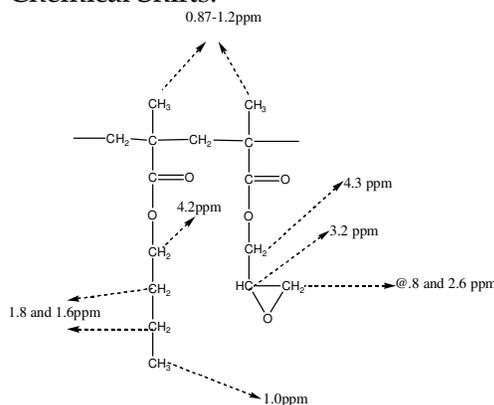
### SEC of the block copolymer:

P9471--nBuMAGMA



Size exclusion chromatography of  
1. Poly nBuMA:  $M_n$  23000  $M_w$ : 24800  $M_w/M_n$  1.08  
Poly(nBuMA)-b- Poly (GMA)  $M_n$  23,000-b-8000  $M_w/M_n$  1.07

### Chemical Shifts:



### DSC thermogram for the polymer:

