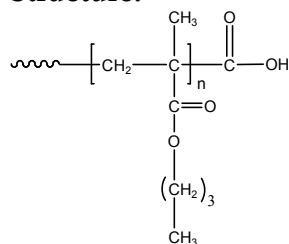


**Sample Name:**  
Carboxy Terminated Poly(n-butyl methacrylate)

**Sample #:** P2018-nBuMACOOH

**Structure:**

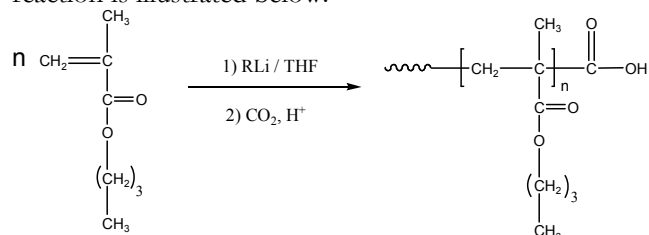


**Composition:**

$M_n \times 10^3$	PDI
6.8	1.07
Functionality	>90%
$T_g$ for the polymer	31°C

**Synthesis Procedure:**

Carboxy Terminated Poly(n-butyl methacrylate) was prepared by anionic living polymerization of n-butyl methacrylate in THF and termination of the polymerization with dried  $\text{CO}_2$ . The scheme of the reaction is illustrated below:



**Characterization:**

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector before the addition of the  $\text{CO}_2\text{H}$  function.

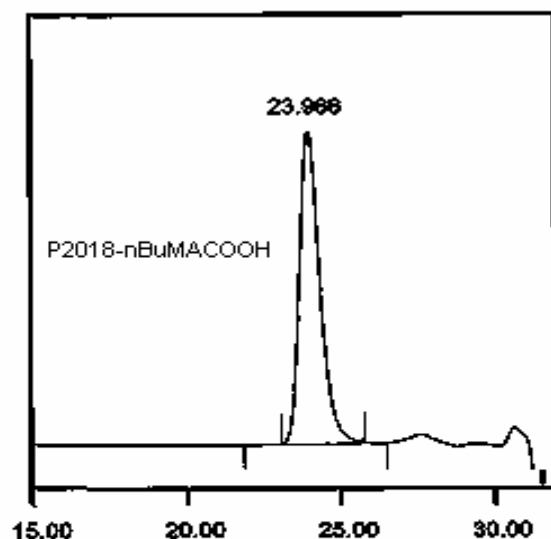
**Thermal analysis:**

Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of  $10^\circ\text{C}/\text{min}$ . The inflection glass transition temperature ( $T_g$ ) has been considered.

**Solubility:**

The polymer is soluble in  $\text{CHCl}_3$ , THF and dioxane.

**SEC of Sample:**



Size exclusion chromatography of poly(n-butyl methacrylate) (before terminating reaction with  $\text{CO}_2$ )  
 $M_n=6800$ ;  $M_w=7300$ ;  $PI=1.07$  and  $f=90\%$

**DSC thermogram for the sample:**

