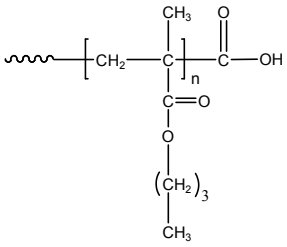
Sample Name:
Carboxy Terminated Poly(n-butyl methacrylate)

Sample #: P2021-nBuMACOOH

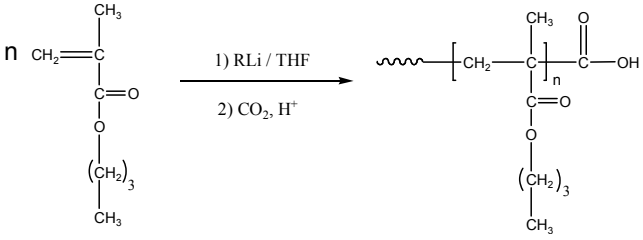
Structure:



Composition:

M_n x 10^3	PDI
5.2	1.06
Functionality	>99%
T_g for the polymer	22°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 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 CO_2H function.

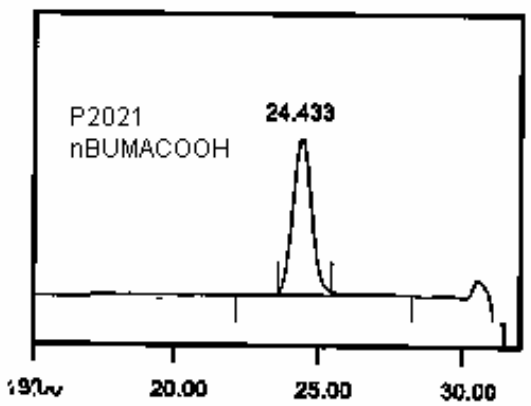
Thermal analysis:

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

Solubility:

The polymer is soluble in $CHCl_3$, THF and dioxane.

SEC of Sample:



Size exclusion chromatography of poly(n-butyl methacrylate) (before terminating reaction with CO2)
Mn=5200, Mw=5500; PI=1.06, f=99%

DSC thermogram for the sample: