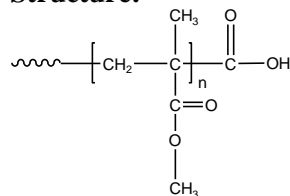


**Sample Name:** Carboxy Terminated Poly (methyl methacrylate)

**Sample #:** P1760-MMACOOH

**Structure:**

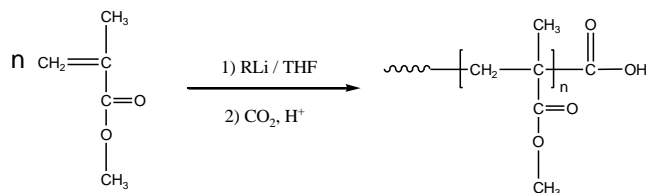


**Composition:**

$M_n \times 10^3$	PDI
6.9	1.10
COOH functionality	50%
$T_g$ for the functionalized polymer	99°C

**Synthesis Procedure:**

Carboxy Terminated Poly (methyl methacrylate) was prepared by anionic living polymerization of methyl 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:**

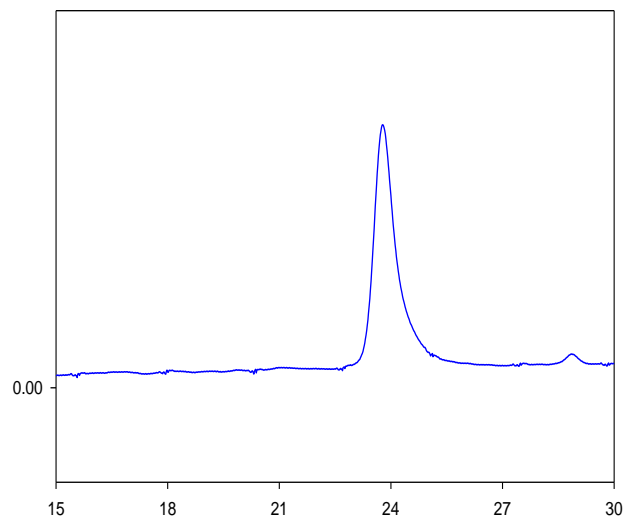
Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of  $10^\circ\text{C}/\text{min}$ . The inflection glass transition temperature ( $T_g$ ) has been considered.

**Solubility:**

The polymer is soluble in THF, Toluene, chloroform and acetone.

**SEC of Sample:**

P1760-MMACOOH



Ve (ml)

Size exclusion chromatography of poly (methyl methacrylate)

$M_n=6900$ ,  $M_w=7600$ ,  $PI=1.1$ , functionality=0.50

**DSC thermogram for the sample:**

