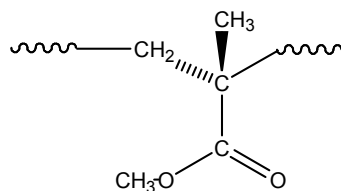


**Sample Name:** Carboxy terminated Poly(isotactic methyl methacrylate)

**Sample #:** P3875A-iMMACOOH

**Structure:**

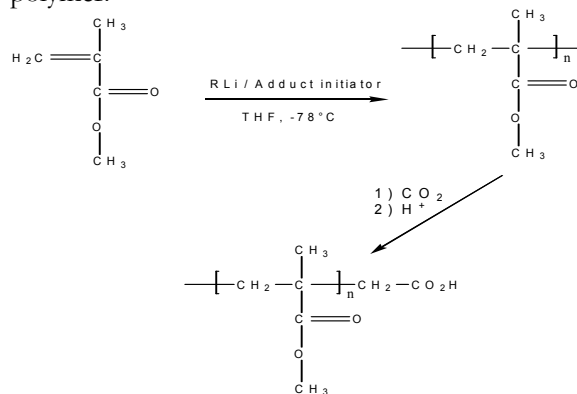


**Composition:**

Mn x 10 <sup>3</sup>	PDI
170	1.30
Degree of functionality	85%
T <sub>g</sub> for the polymer	52°C

**Synthesis Procedure:**

Carboxy terminated poly(methyl methacrylate) is obtained by living anionic polymerization in the presence of an adduct. Termination of the reaction with dried CO<sub>2</sub> produced a carbonyl end functionalized polymer:



**Characterization:**

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography. The carboxyl functionality is determined by acid-base titration.

**Thermal analysis:**

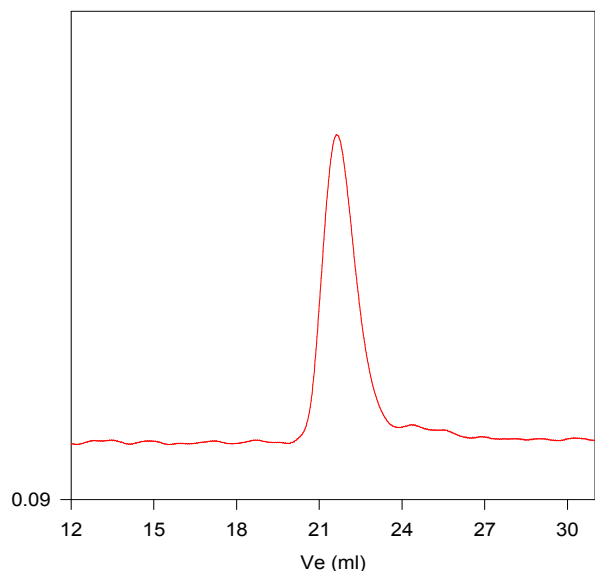
Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T<sub>g</sub>) has been considered.

**Solubility:**

Poly(methyl methacrylate) is soluble in THF, CHCl<sub>3</sub>, toluene and dioxane. The polymer precipitates from hexanes, cold methanol and cold ethanol. The polymer may be soluble in methanol at room temperature depending on its molecular weight.

**SEC of Polymer:**

**P3875A-iMMA-COOH**



Size exclusion chromatography of poly(methyl methacrylate) (before terminating reaction with CO<sub>2</sub>).

— Before terminating with CO<sub>2</sub>  
M<sub>n</sub>=170000, M<sub>w</sub>=229000 PI=1.3, functionality> 85% by titration

**DSC thermogram for the sample:**

