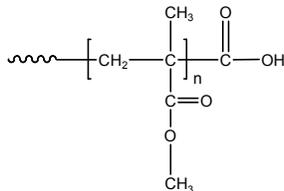


Sample Name:
Carboxy Terminated Poly(methyl methacrylate)

Sample #: P1762-MMACOOH

Structure:



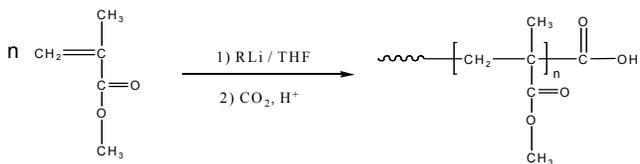
Composition:

Composition:

$M_n \times 10^3$	PDI
8.5	1.12
COOH functionality	40%
T_g for the functionalized polymer	123°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 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:

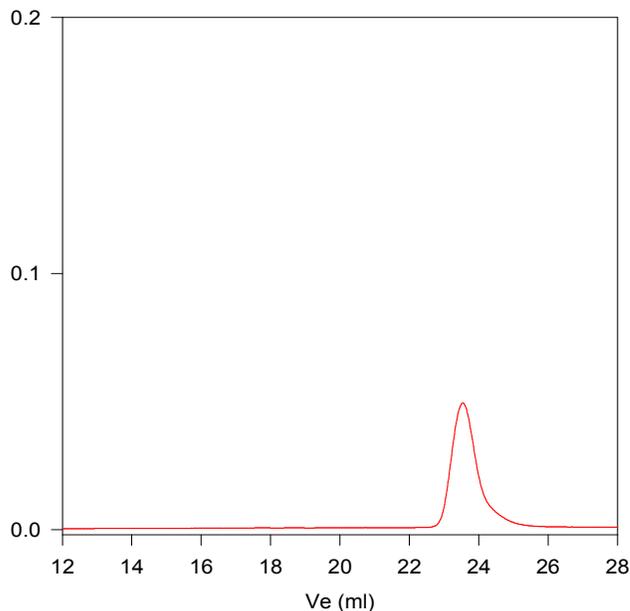
Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of $10^\circ\text{C}/\text{min}$. The inflection glass transition temperature (T_g) has been considered.

Solubility:

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

SEC of Sample:

P1762-MMACOOH



Size exclusion chromatography of poly(methyl methacrylate) (before terminating reaction with CO_2).

$M_n=8500$, $M_w=9500$ PI=1.12, functionality=0.40

DSC thermogram for the functional polymer:

