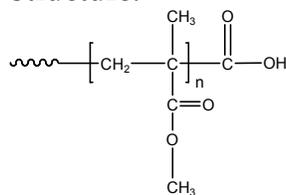


Sample Name:
Carboxy Terminated Poly(methyl methacrylate)

Sample #: P3497-MMACOOH

Structure:

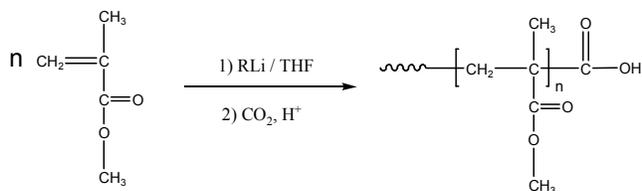


Composition:

| | |
|---|-------|
| Mn x 10 ³ | PDI |
| 35.0 | 1.08 |
| COOH functionality | 95% |
| 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 CO₂. 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 CO₂H function.

Thermal analysis:

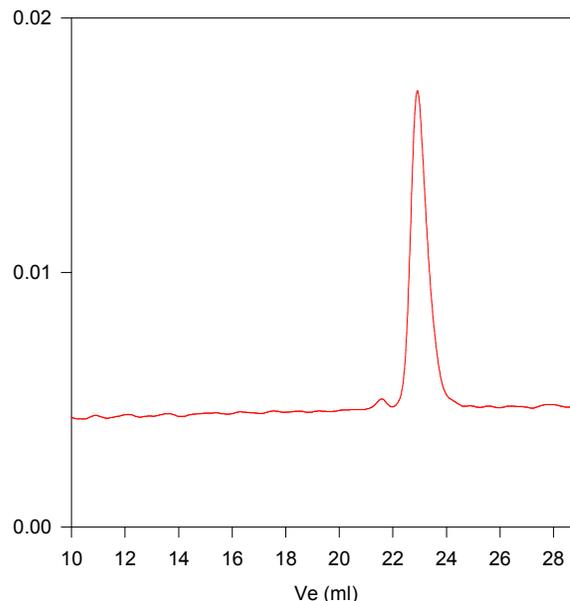
Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T_g) has been considered.

Solubility:

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

SEC of Sample:

P3497-MMACOOH



Size exclusion chromatography of carboxy terminated poly(methyl methacrylate) before terminating with CO₂

M_n=35000, M_w=37800, PI=1.08, functionality>0.90%

DSC thermogram for the sample:

