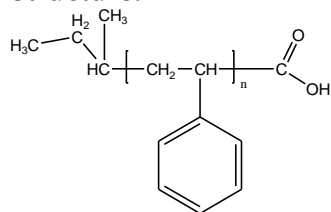


Sample Name:

Mono carboxy Terminated Polystyrene

Sample #: **P18042-SCOOH**

Structure:



Composition:

Mn x 10 ³	PDI
4.8	1.13
T _g (°C)	105
Functionality %	98

Synthesis Procedure:

Carboxy Terminated Poly(styrene) was prepared by anionic living polymerization of styrene in THF followed by termination with dried CO₂.

Characterization:

The molecular weight and polydispersity index of this polymer were determined before addition of the CO₂H function, by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. Polymer functionality was determined by titration with NaOH using phenolphthalein as the indicator.

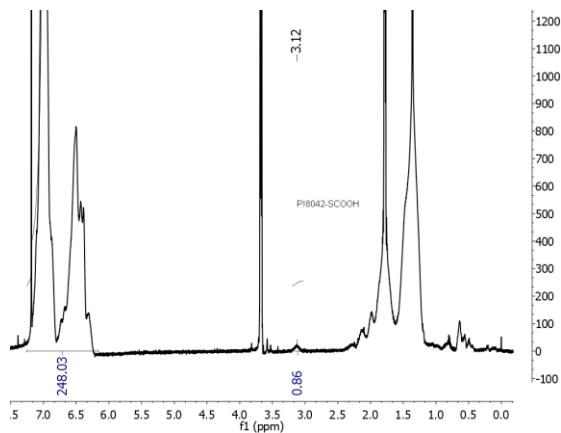
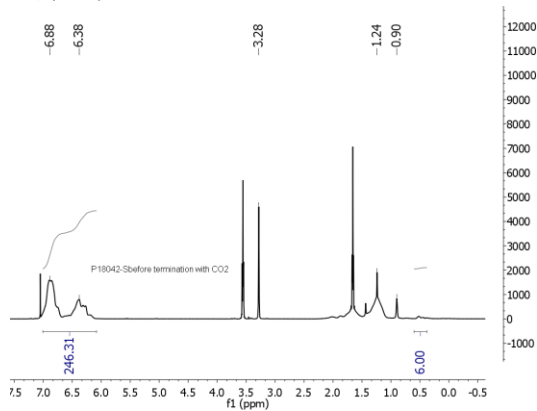
Thermal analysis:

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:

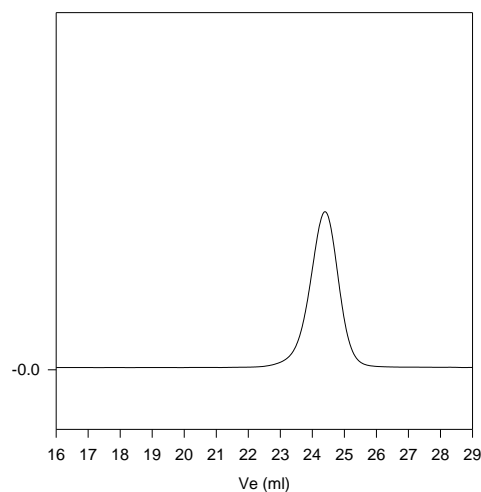
Polymer is soluble in toluene, THF, CHCl₃ and can be precipitated in water and cold methanol.

H NMR:



SEC of Sample:

P18042-SCOOH



Size exclusion chromatography of monocarboxy terminated polystyrene (before adding CO₂).

M_n=4800, M_w=5500, PI=1.13, functionality>99%

DSC thermogram for the sample:

