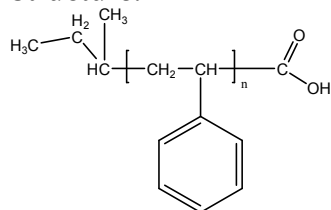


Sample Name:

**Mono carboxy Terminated Polystyrene**

Sample #: **P18049-SCOOH**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
5.3	1.04
T <sub>g</sub> (°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 CO<sub>2</sub>.

**Characterization:**

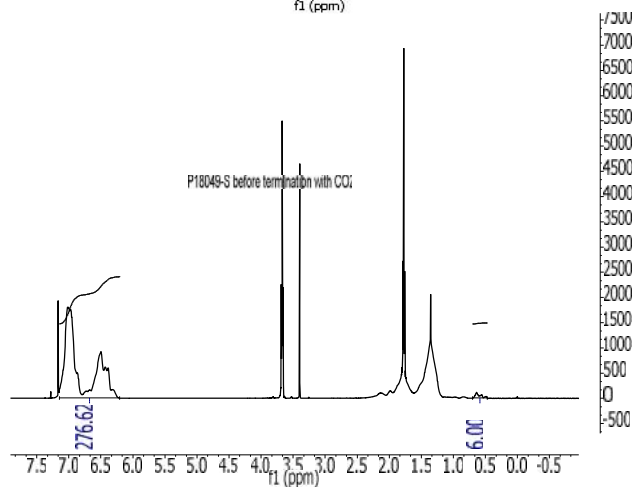
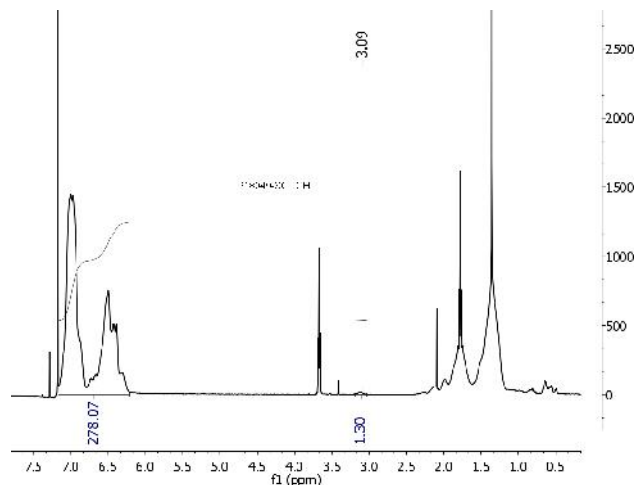
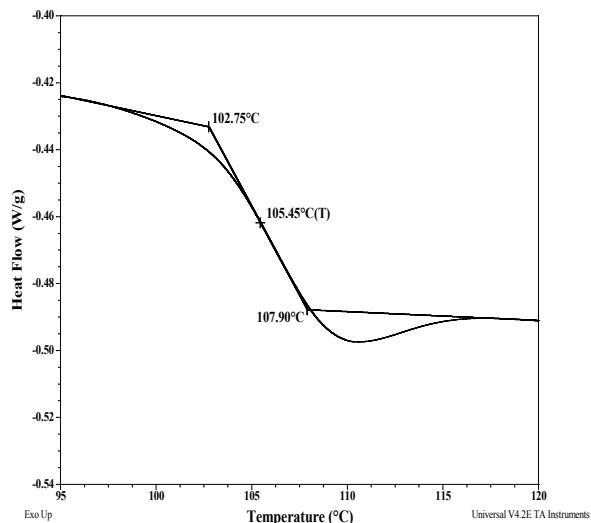
The molecular weight and polydispersity index of this polymer were determined before addition of the CO<sub>2</sub>H function, by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. Polymer functionality was determined by titration 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<sub>g</sub>) has been considered.

**Solubility:**

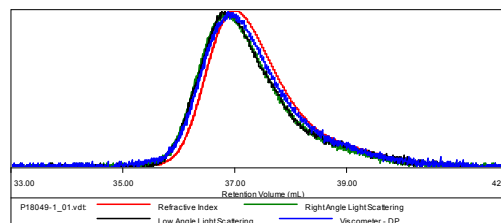
Polymer is soluble in toluene, THF, CHCl<sub>3</sub> and can be precipitated in water and cold methanol.



**SEC of Sample:**

**Sample ID: P18049-1SCOOH**

Concentration (mg/mL)	3.0309
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-May-2013-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18049-1_01.vdt	5,332	5,551	5,385	1.041	0.1638

