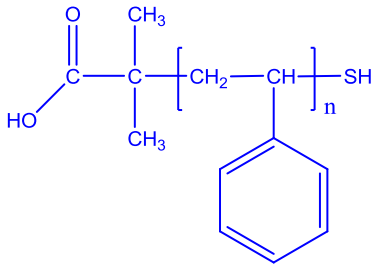
Sample Name:

α-Carboxy-ω-Thiol Terminated Polystyrene

Sample #: **P6695 SCOOHSH**

Structure:

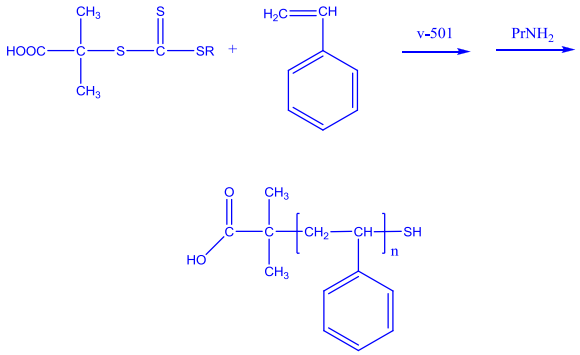


Composition:

Mn × 10^3	PDI	Functionality %
2.3	1.25	95
T_g (°C)	78	

Synthesis Procedure:

The hetero-functional terminated Polystyrene was prepared by RAFT polymerization of styrene in dioxane followed by aminolysis to liberate thiol. The scheme of the reaction is illustrated below:

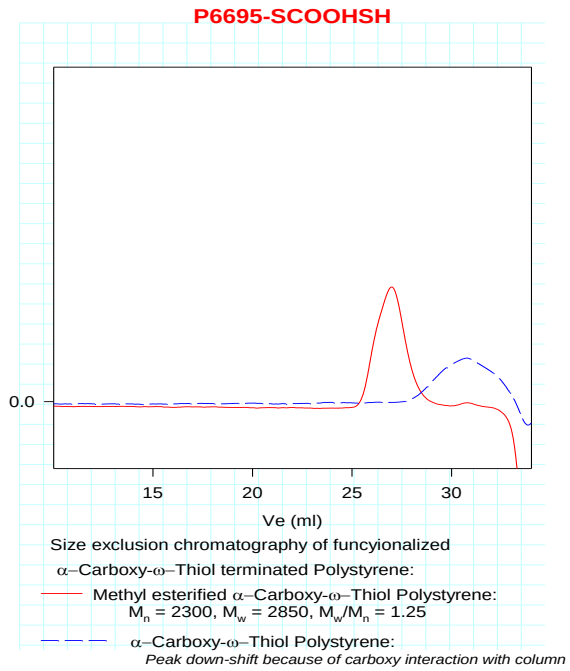


Characterization:

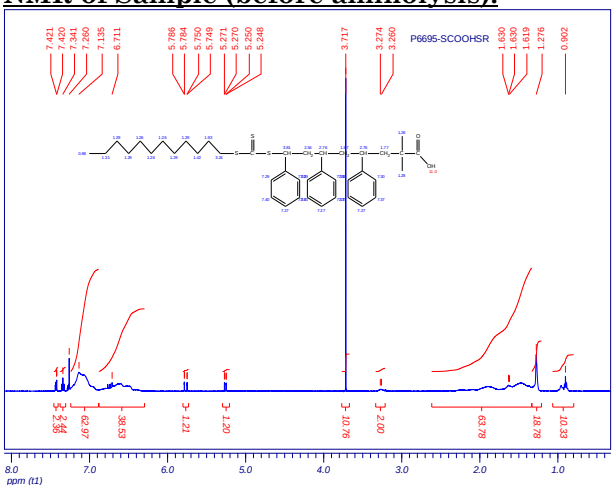
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. Polymer functionality was verified by NMR.

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min.The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

SEC of Sample:



NMR of Sample (before aminolysis):



DSC thermogram for the polymer: