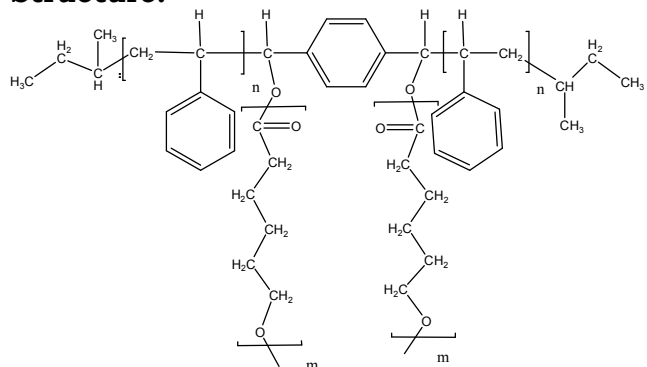


Sample Name:
Polystyrene with Polycaprolactone Comb
like

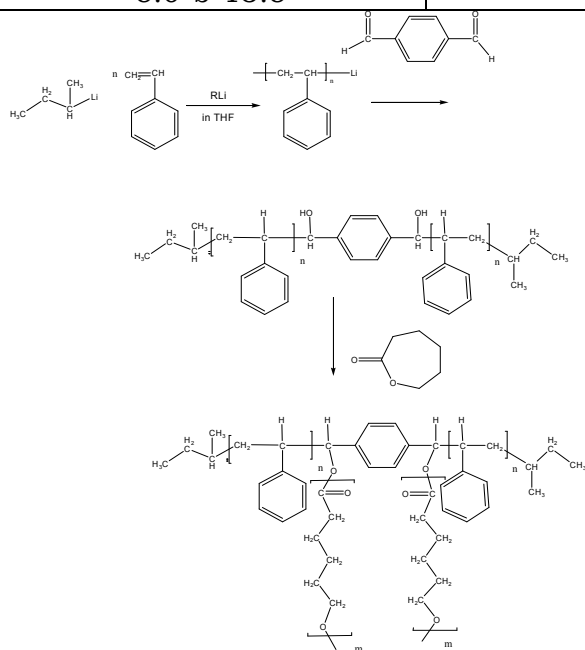
Sample #: P10092A- SCLcomb

Structure:



Composition:

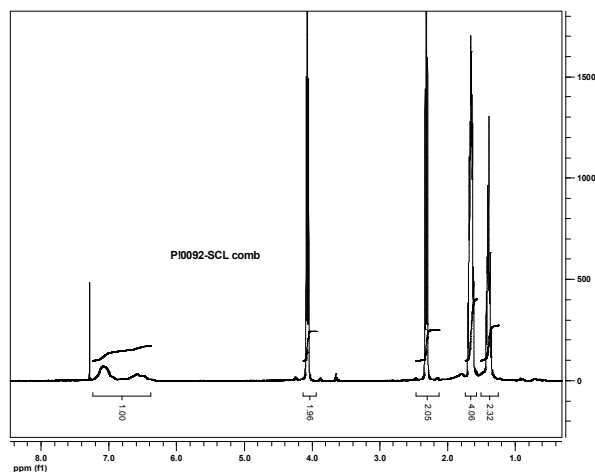
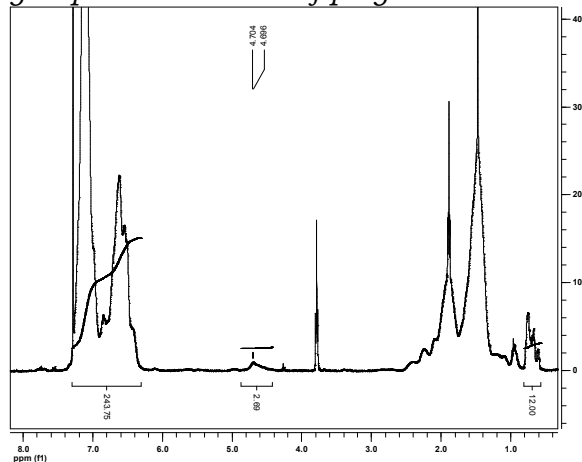
Mn x 10 ³	PDI
S-G-CL (each branch) 5.0-b-13.5	1.8



Characterization:

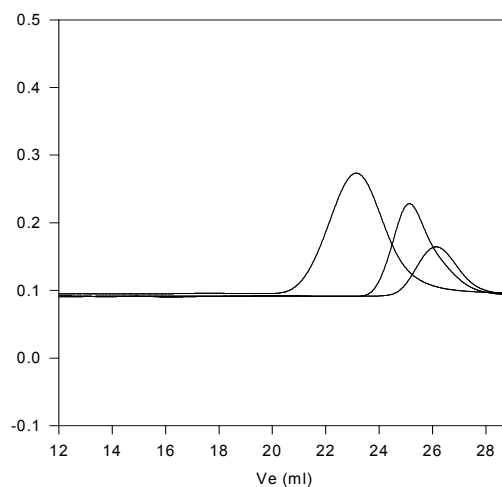
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

HNMR of the Polystyrene bearing Hydroxy groups in the center of polymer chains



SEC for the Product:

P10092A-S2CL



Size exclusion chromatography of ω-α dihydroxy in the center polystyrene and after reaction with Caprolactone

M_n=2500, M_w=3500, PI=1.4

After linking reaction : Mn 5,000 Mw/Mn 1.4 functionality: >1.98%

Poly caprolactone; Eanch branch Mn 13,500 Mw/Mn 1.8

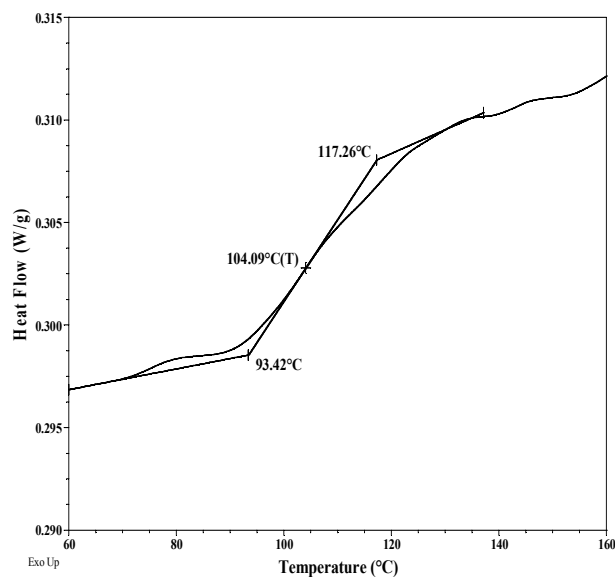
Thermal analysis of the sample# P10092A-SCLcomb

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).

Melting and crystallization curve for the sample

The melting temperature (T_m) was taken as the maximum of the endothermic peak where as the crystallization temperature (T_c) was considered as the minimum of the exothermic peak.

Thermogram for PS block



Thermal analysis results at a glance

Sample	T_m (°C)	T_c (°C)	T_g (°C)
S	-	-	104
ϵ -CL	58	33	Not distinct

Melting and crystallization curves for PCL

