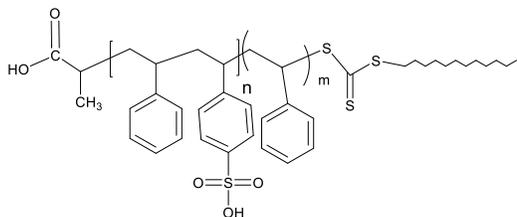


Sample Name:
Poly(styrene-co-Styrene sulfonic acid -b-Styrene)

Sample #: P42558A-SSSO3Hran-b-S

Structure:

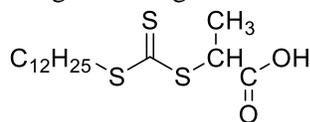


Composition: Sulfonation in the first block: 4%

$M_n \times 10^3$ SSSO3Hran-b-S	Mw/Mn (PDI)
30.0-b-15.0	1.12

Synthesis Procedure:

The polymer is prepared by RAFT polymerization process using following RAFT reagent:



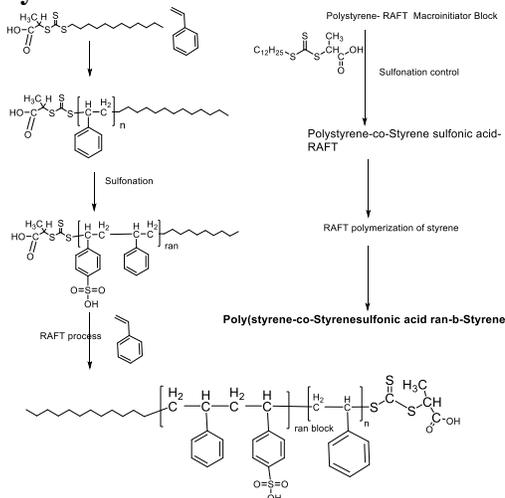
Characterization:

The product was characterized by size exclusion chromatography (SEC) and ¹H-NMR data analysis.

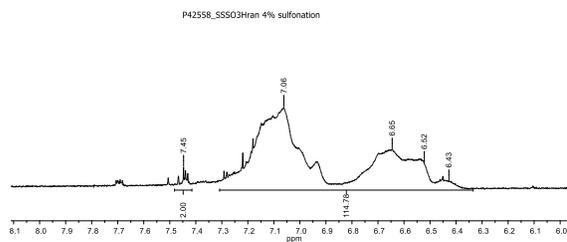
Thermal analysis:

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).

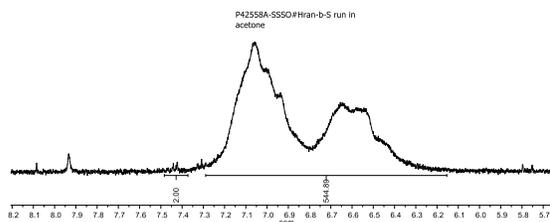
Synthesis route:



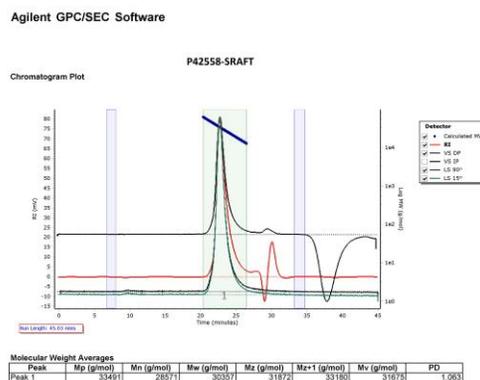
¹H-NMR spectrum of the Polymer: First random block:



¹H-NMR spectrum of P42558A-SSSO3Hran-b-S:



SEC profile of the PS-RAFT starting polymer:



SEC profile After Extension of PS block:

