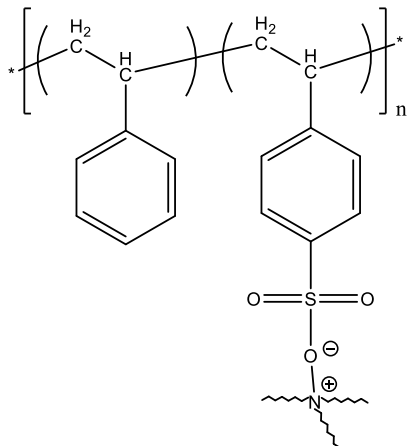


Sample Name: Ionomer of Poly (styrene-co-4-trioctyl ammonium styrene sulfonic acid)

Sample #: P42552-SSSO3N-TriOct

Structure:

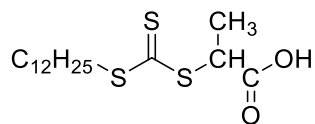


Composition:

Mn x 10 ³	Mole% of SO3N_Octyl	PDI
15.5	% 6.0	1.09

Synthesis Procedure:

Polymer is synthesized by copolymerization of Styrene with trioctylammonium-4 styrene sulfonate monomer using RAFT process. Following RAFT reagent was used:



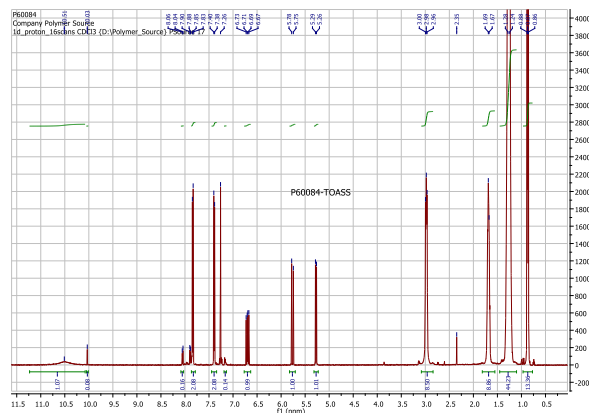
Characterization:

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

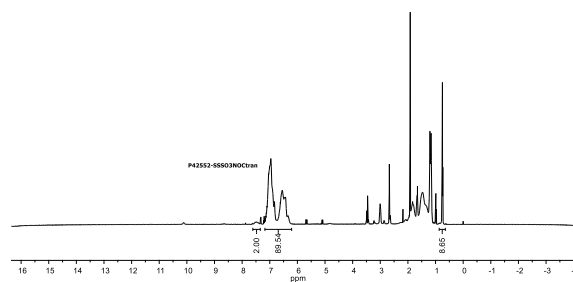
Thermal analysis:

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).

¹H-NMR spectrum of Trioctylammonium -4-styrene sulfonate (TOASS) monomer:



¹H-NMR spectrum of the sample:

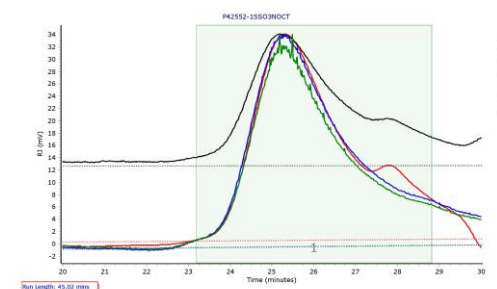


SEC elugram of copolymer:

Agilent GPC/SEC Software

P42552-1SSO3NOCT

Chromatogram Plot



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)
Peak 1	15486	15566	15597	15627	15657	15638