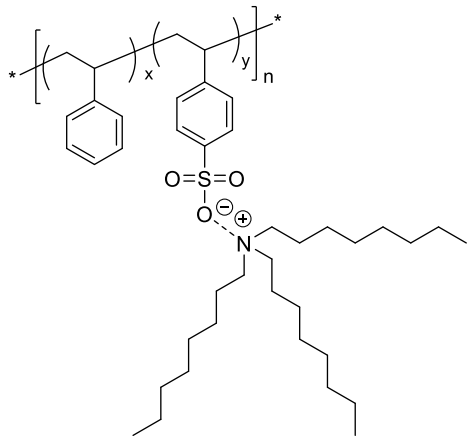
Product Name:
Poly(styrene–*co*–4-trioctylammonium styrene sulfonic acid) ionomer

Product # **P42609-SSSO3N-TriOct**

Structure:



Composition:

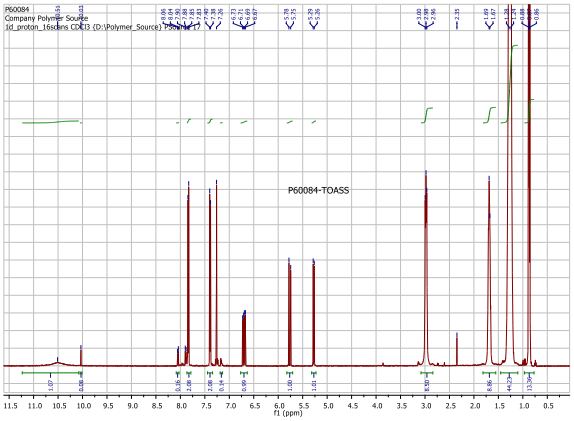
$M_n \times 10^3$ (g/mol)	M_w/M_n	Sulfonation:
19.0	1.06	8 mol%

Synthesis Procedure:
Poly(styrene–*co*–4-styrene sulfonic acid) was synthesized by copolymerization of styrene with trioctylammonium 4-styrene sulfonate.

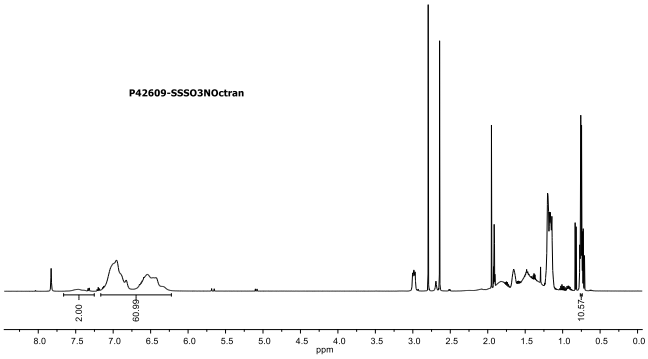
Characterization:
The product was validated by size exclusion chromatography (SEC, using triple detection method) and proton NMR spectroscopy analysis.

Solubility:
The solubility of polymer in chloroform, acetone, dimethylsulfoxide (DMSO) and methanol depends on the degree of sulfonation.

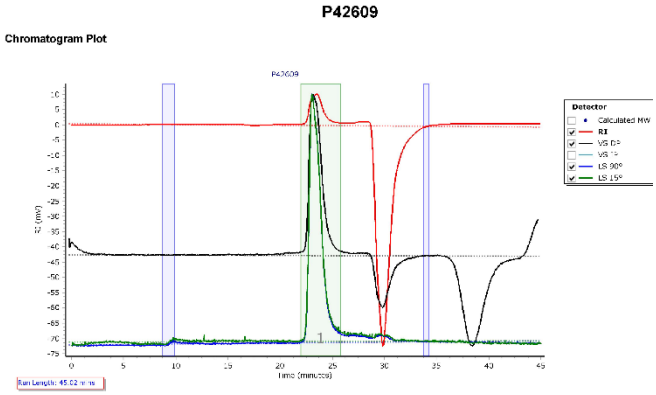
^{1}H NMR spectrum of trioctylammonium-4-styrene sulfonate (TOASS) monomer:



^{1}H NMR spectrum of the product in DMSO-d6:



SEC of the diblock copolymer (final product):



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	20102	18706	19789	20739	21575	20704	1.058