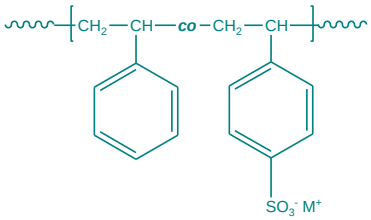
Sample Name: **Poly(styrene-co-4-styrene sulfonic acid)**

Sample #: **P6114-SSO3H**

Structure:

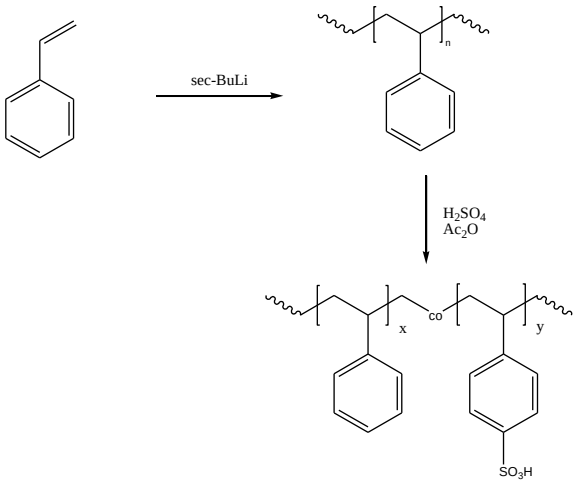


M = H

Composition:

Mn x 10^3	Mole% of SO3H	PDI
175.0	33.0	1.08

Synthesis Procedure:
Poly(styrene-co-4-styrene sulfonic acid) is synthesized by partially sulfonation of monodispersed polystyrene and the reaction scheme is shown below.

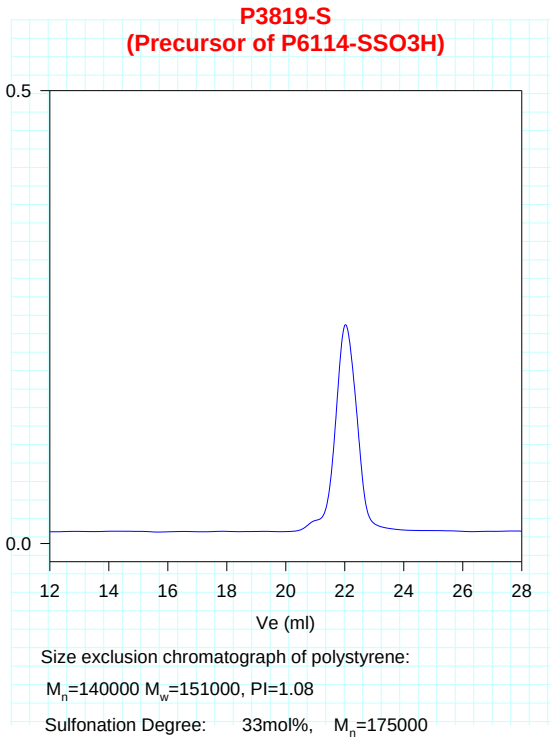


Characterization:

The molecular weight and polydispersity index (PDI) of parent polymer are obtained by size exclusion chromatography. The degree of sulfonation is determined by element analysis or titration.

Solubility:
Poly(styrene-co-4-styrene sulfonic acid) is soluble in DMF, chloroform, dichloroethane or alcohols dependent on its chemical composition. It precipitates hexanes.

SEC of Homopolymer:



Size exclusion chromatograph of polystyrene:
M_n=140000 M_w=151000, PI=1.08
Sulfonation Degree: 33mol%, M_n=175000