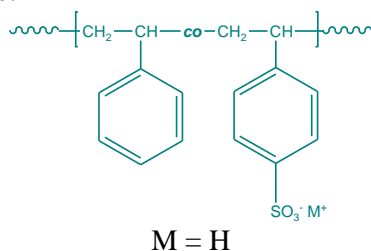


**Sample Name:** Ionomer of Poly (styrene-co-4-styrene sulfonic acid)

**Sample #:** P40908A-SSO3H

**Structure:**

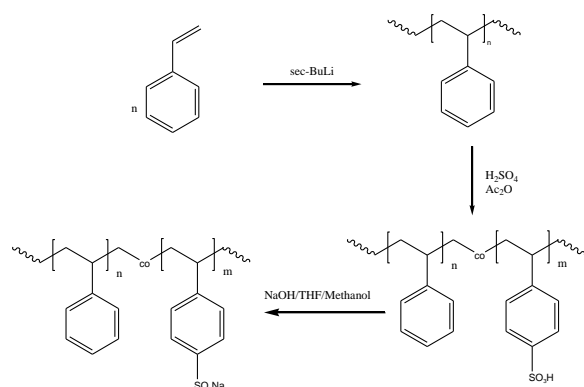


**Composition:**

Mn x 10 <sup>3</sup>	Mole% of SO <sub>3</sub> H	PDI
164.0	35.0%	1.04

**Synthesis:**

Poly (styrene-co-4-styrene sulfonic acid) is synthesized by partial sulfonation of monodispersed polystyrene, and the reaction scheme is shown below.



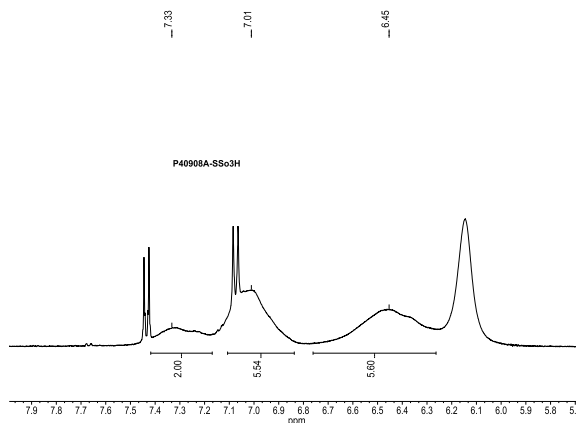
**Characterization:**

The product was characterized by size exclusion chromatography (SEC) and <sup>1</sup>H NMR.

**Solubility:**

The polymer is soluble in methanol.

**<sup>1</sup>H NMR spectrum of the Sample runs in DMSO:**



**SEC elugram of Polystyrene used for sulfonation process:**

