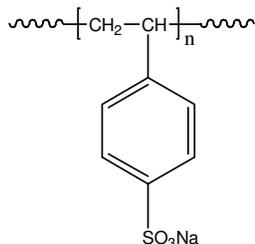


**Sample Name: Poly(styrene sulfonic acid sodium salt)**

**Sample #: P3242-SSO3Na (dialysed form)**

**Structure:**

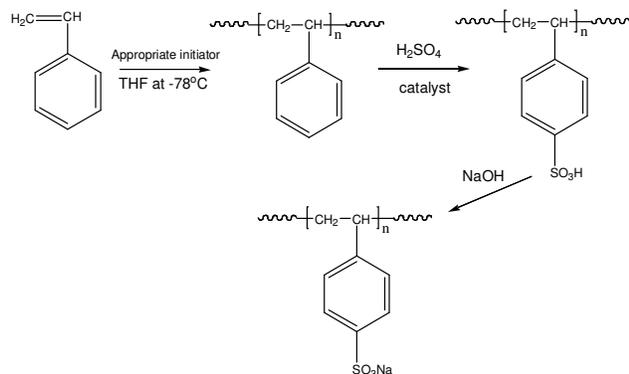


**Composition:**

$M_n \times 10^3$	PDI
263.0	1.04

**Synthesis Procedure:**

Poly(styrene sulfonic acid sodium salt) is obtained by the anionic polymerization of styrene followed by sulfonation of the polymer under acidic conditions. The reaction scheme is illustrated below:



**Characterization:**

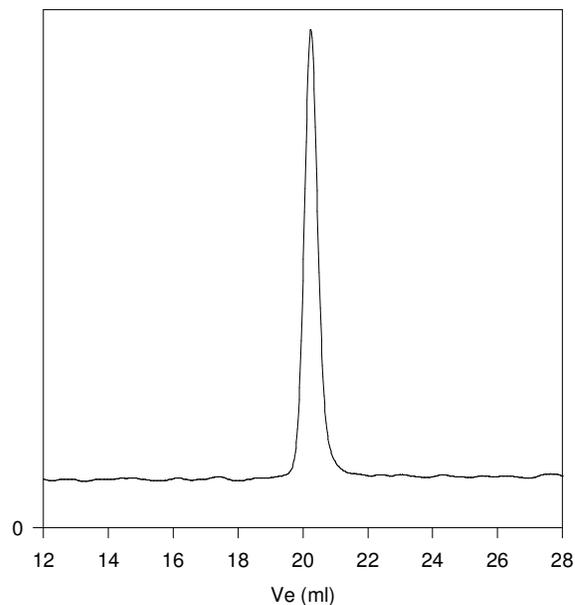
The molecular weight and polydispersity index (PDI) of poly(styrene sulfonic acid sodium salt) are obtained by size exclusion chromatography. The degree of sulfonation is determined by acid/base titration and by elemental analysis.

**Solubility:**

Poly(styrene sulfonic acid sodium salt) is soluble in water, and ethylene glycol.

**SEC of Homopolymer:**

**Poly styrene Precursor (P2763-S) for Sulfonation Sample # P3242-SSO3H**



Size exclusion chromatograph of polystyrene used:

$M_n=133200, M_w=138500, PI=1.04$

After Sulfonation:

$M_n=235000, M_w=244000, PI=1.04$  degree of sulfonation over 85% by elemental analysis

Sodium salt form:  $M_n : 263000 M_w/M_n 1.04$

