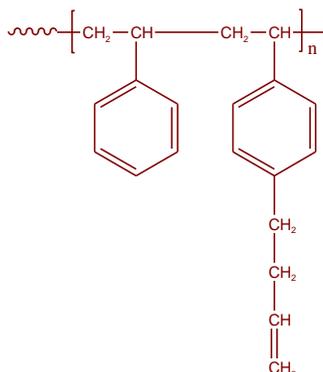


Sample Name: **Polystyrene Graft 1-Butene**

Sample #: **P6759-SSbutene**

Structure:

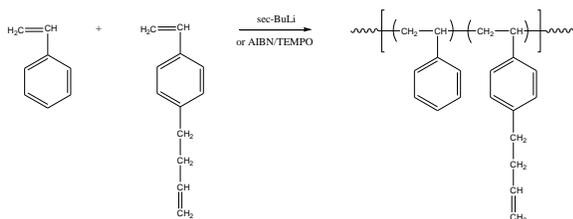


Composition:

Mn x 10 <sup>3</sup>	Double Bond mol%	Mw/Mn (Total)
4.6	10.0	1.10

Synthesis Procedure:

Polystyrene-g-1-butene is synthesized by copolymerization of styrene and 4-butene styrene. The brief synthetic route is illustrated as following scheme.



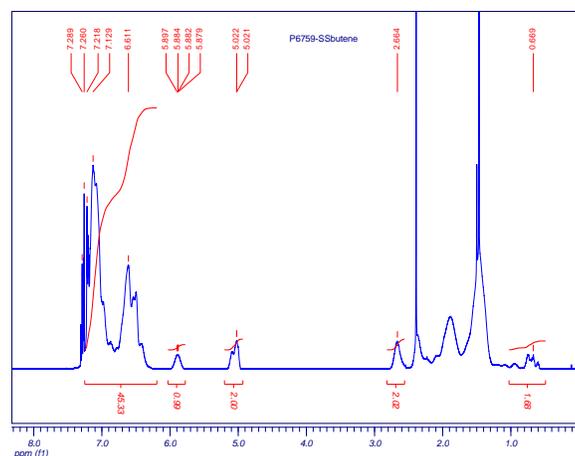
Characterization:

The molecular weight and polydispersity index (PDI) of polymers are obtained by size exclusion chromatography. The composition of grafting polymer is determined by NMR.

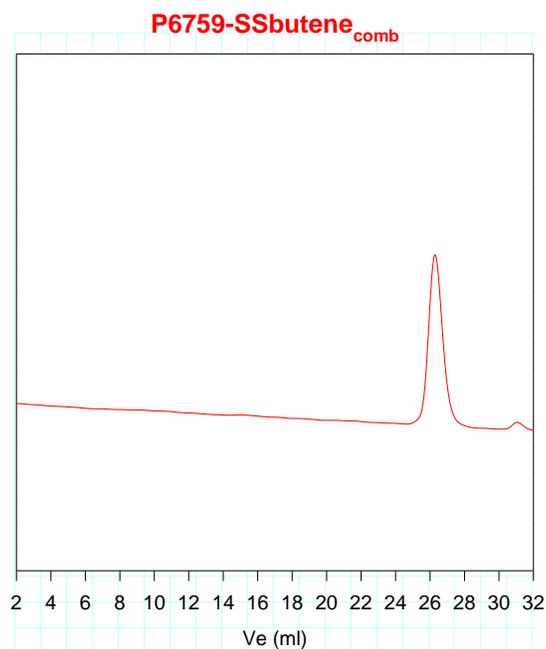
Solubility:

Polystyrene-g-butene is soluble in THF, DMF, chloroform, and Toluene. It precipitates from hexanes or methanol.

**NMR of Polymer:**



**SEC of Polymer:**



Size exclusion chromatography of copolymer:

M<sub>n</sub>=4600, M<sub>w</sub>=5100, PI=1.10