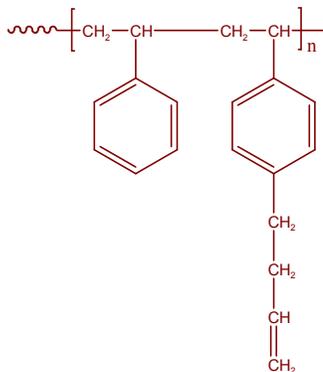


Sample Name: Random copolymer of styrene with 4-butenestyrene

Sample #: P10523-SSbutene

Structure:

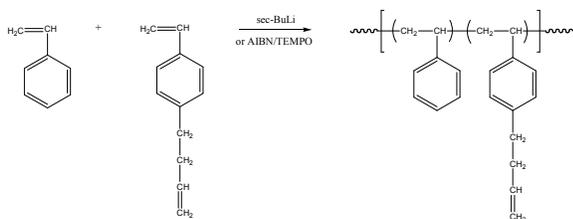


Composition:

Mn x 10 ³	Double Bond mol%	Mw/Mn (Total)
7.0	10.0	1.3

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.



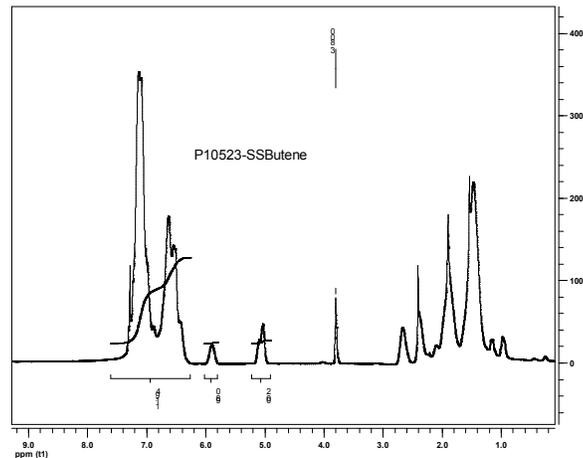
Characterization:

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:

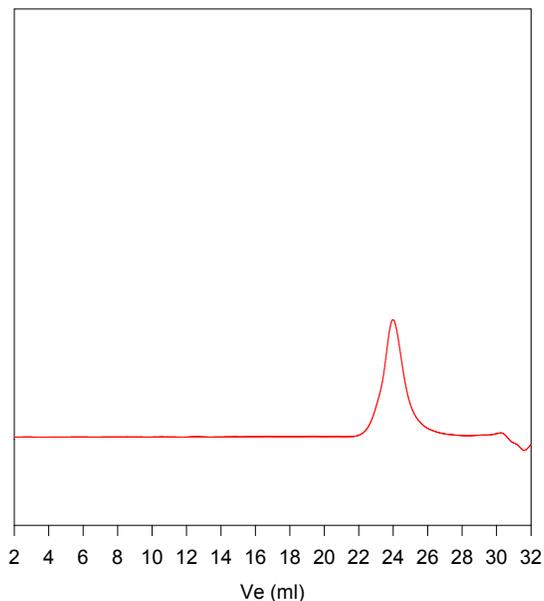
Polystyrene-g-butene is soluble in THF, DMF, chloroform, and Toluene. It precipitates from hexanes or methanol.

NMR of Polymer:



SEC of Polymer:

P10523-SSbutene



Size exclusion chromatography of copolymer:

M_n=7,000, M_w=9200, PI=1.3