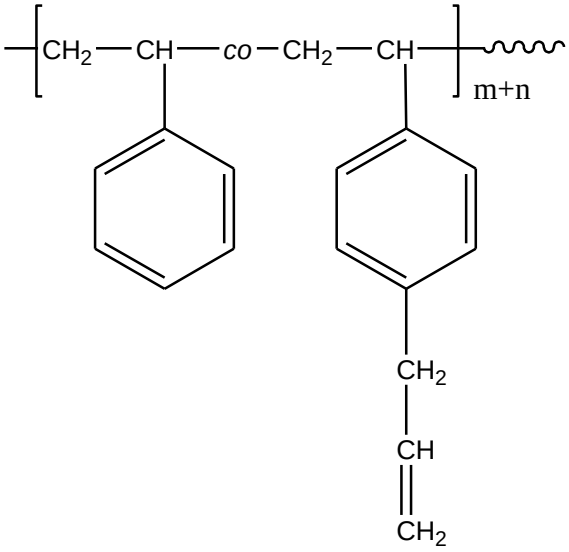
Sample Name: **Random copolymer of styrene with 4 allystyrene**

Sample #: **P14666-SSallyl-ran**

**Structure:**




**Composition:**

| Mn x $10^3$ | Double Bond mol% | Mw/Mn (Total) |
|---|---|---|
| 9.0 | 6.0% | 1.4 |

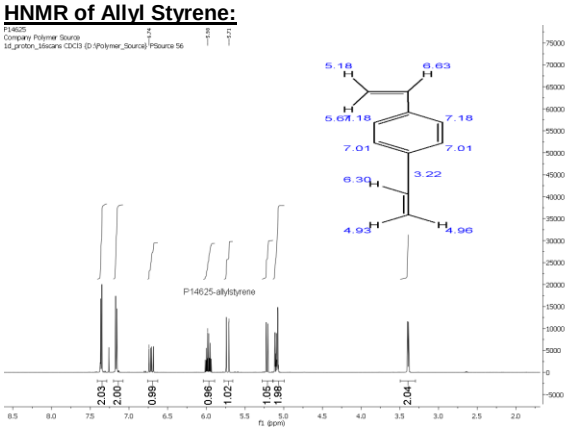
**Synthesis Procedure:**
Polystyrene-g-4-allylstyrene is synthesized by copolymerization of styrene and 4- allyl styrene.

**Characterization:**

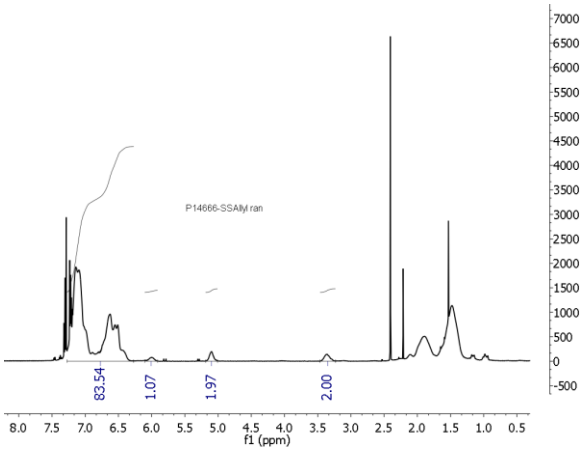
The molecular weight and polydispersity index (PDI) of polymers are obtained by size exclusion chromatography. The composition of grafting polymer is determined by NMR.

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

**HNMR of Allyl Styrene:**



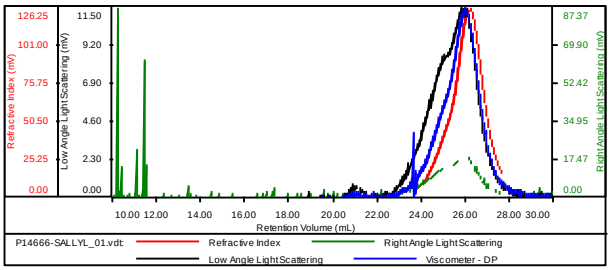

**NMR of Polymer:**




**SEC of Polymer:**

**Sample ID:P14666-SSallyl**

| | |
|---|---|
| **Concentration (mg/mL)** | 5.7493 |
| **Sample dn/dc (mL/g)** | 0.1850 |
| **Method File** | PS80K-NOV25-2013-0002.vcm |
| **Column Set** | 3x PL 1113-6300 |
| **System** | System 1 |




| Sample | Mn | Mw | Mp | Mw/Mn | IV |
|---|---|---|---|---|---|
| P14666-SALLYL_01.vdt | 8,866 | 12,370 | 9,112 | 1.395 | 0.1070 |