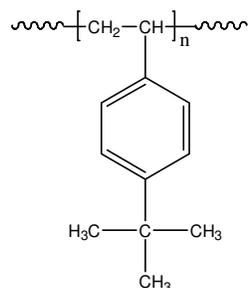


**Sample Name:** Poly(t-butyl styrene)

**Sample #:** P2687-4tBuS

**Structure:**

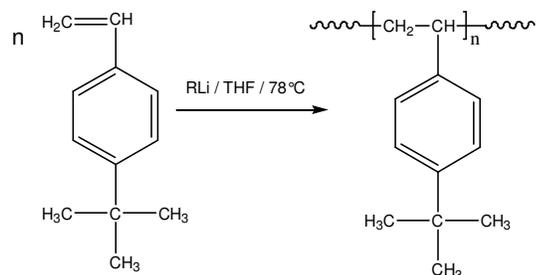


**Composition:**

Mn x 10 <sup>3</sup>	PDI
1.3	1.08
T <sub>g</sub>	54 °C

**Synthesis Procedure:**

Poly(t-butyl styrene) is synthesized by living anionic polymerization of t-butyl styrene and the reaction scheme is shown below.



**Characterization:**

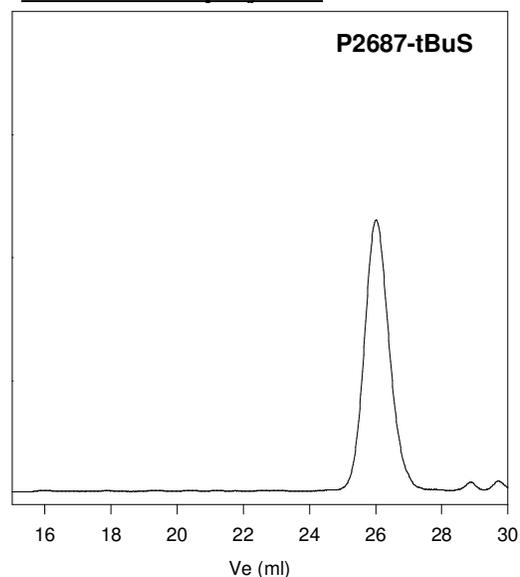
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography.

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>).

**Solubility:**

Poly(4-t-butyl styrene) is soluble in DMF, THF, toluene and CHCl<sub>3</sub>. It precipitates from methanol, ethanol, water and hexanes.

**SEC of Homopolymer:**



Size exclusion chromatograph of poly(p-tert-butylstyrene):  
M<sub>n</sub>=1300, M<sub>w</sub>=1400, PI=1.08

**DSC thermogram for the polymer:**

