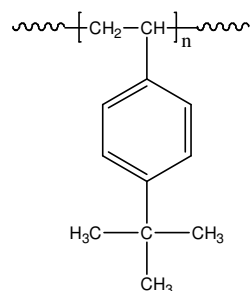


Sample Name: Poly(t-butyl styrene)

Sample #: P2900-4tBuS

Structure:

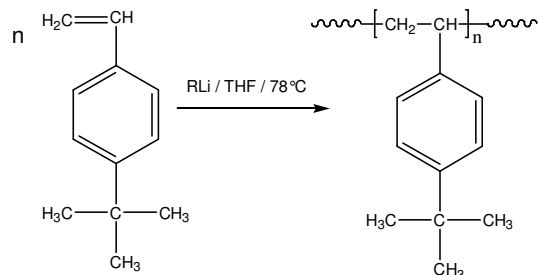


Composition:

Mn x 10 ³	PDI
2.3	1.06
T _g	92 °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:

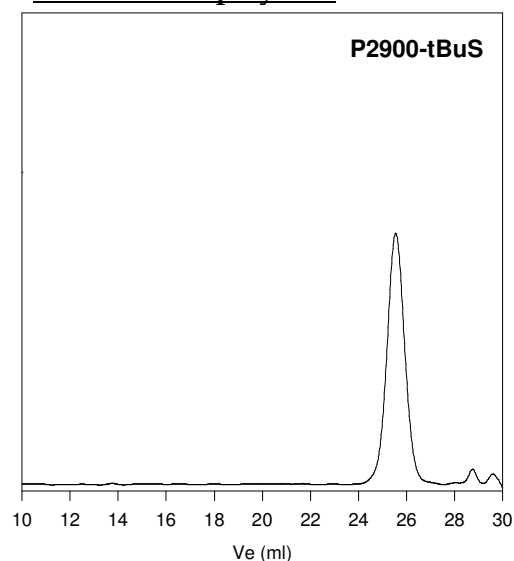
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography.

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_g).

Solubility:

Poly(4-t-butyl styrene) is soluble in DMF, THF, toluene and CHCl₃. It precipitates from methanol, ethanol, water and hexanes.

SEC of Homopolymer:



Size exclusion chromatograph of poly(p-tert-butylstyrene):

M_n=2300, M_w=2450, PI=1.06

DSC thermogram for the polymer:

