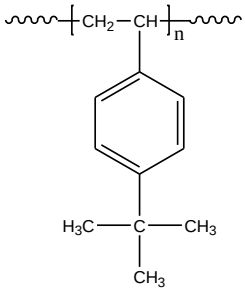
Sample Name: **Poly (t-butyl styrene)**

Sample #: **P3657-4tBuS**

Structure:

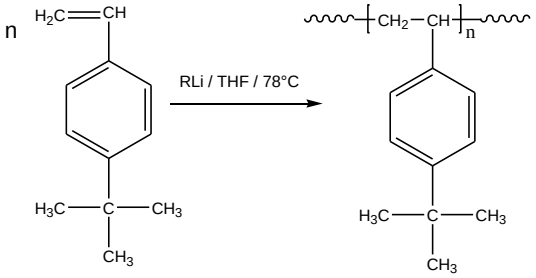


Composition:

Mn x 10^3	PDI
1,100.0	1.35
T_g	151 ^oC

Synthesis Procedure:

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



Characterization:

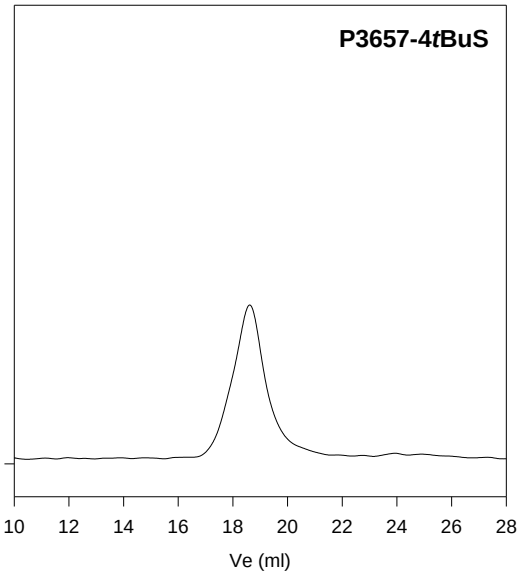
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography.

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10^oC/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 $CHCl_3$. It precipitates from methanol, ethanol, water and hexanes.

SEC profile of Homopolymer:



Size exclusion chromatograph of poly4-tert.butylstyrene:

M_n=1100,000 M_w=1500,000 PI=1.35

DSC thermogram for the polymer: