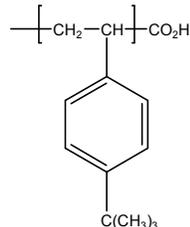


Sample Name:
Carboxy Terminated Poly(4-t-butyl styrene)

Sample #: P3663-4tBuSCOOH

Structure 1:

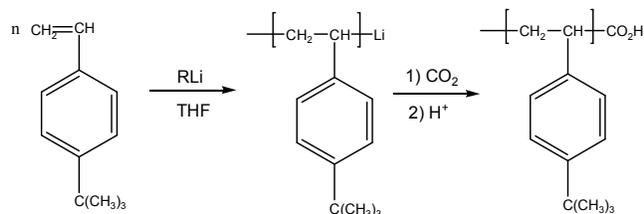


Composition:

$M_n \times 10^3$	PDI
21.0	1.09

Synthesis Procedure:

Carboxy Terminated Poly(4-t-butyl styrene) was prepared by anionic living polymerization of tert-butyl styrene in THF at -78°C followed by termination with dried CO_2 . The scheme of the reaction is illustrated below::



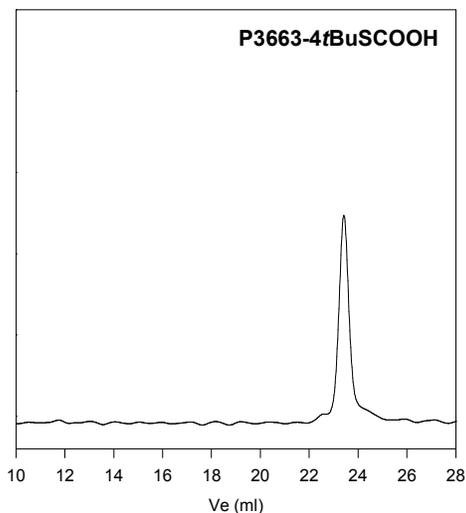
Characterization:

The molecular weight and polydispersity index of this polymer were determined before addition of the CO_2H function, by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. Polymer functionality was determined by titration with NaOH using phenolphthalein as the indicator.

Solubility:

Polymer is soluble in DMF, THF, toluene and CHCl_3 . It precipitates from methanol, ethanol, water and hexanes.

SEC of Sample:



Size exclusion chromatography of mono COOH terminated poly 4-t-butyl styrene (before termination with CO_2)
 $M_n=21000$, $M_w=23000$, $PI=1.09$ (functionality>95%)