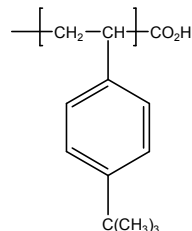


**Sample Name:**  
**Carboxy Terminated Poly(4-*t*-butyl styrene)**

**Sample #:** P3663-4tBuSCOOH

**Structure 1:**

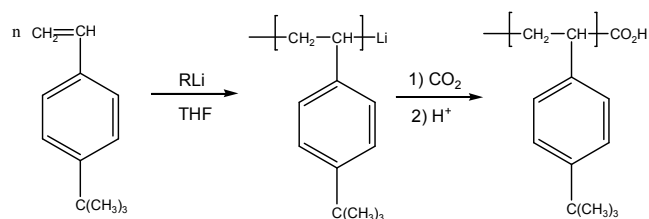


**Composition:**

Mn x 10 <sup>3</sup>	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<sub>2</sub>. The scheme of the reaction is illustrated below::



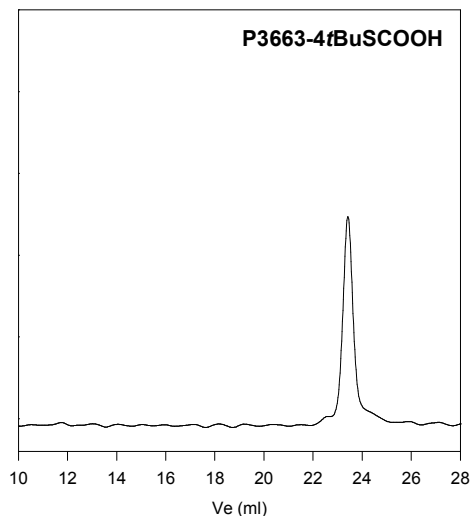
**Characterization:**

The molecular weight and polydispersity index of this polymer were determined before addition of the CO<sub>2</sub>H 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<sub>3</sub>. 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<sub>2</sub>)

M<sub>n</sub>=21000, M<sub>w</sub>=23000, PI=1.09 (functionality>95%)