

Sample Name:

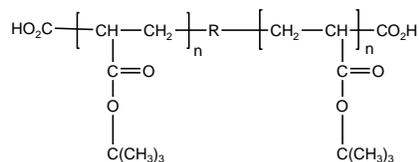
$\alpha$ - $\omega$ - Dicarboxy Terminated Poly(t-butyl acrylate)

SEC of Sample:

P8820-tBuA2COOH

Sample #: P8820-tBuA2COOH

Structure:

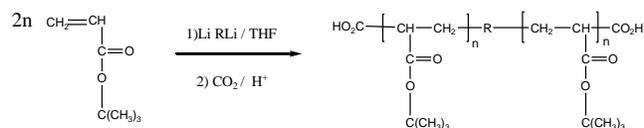


Composition:

$M_n \times 10^3$	PDI	COOH functionality %
16.0	1.13	95

Synthesis Procedure:

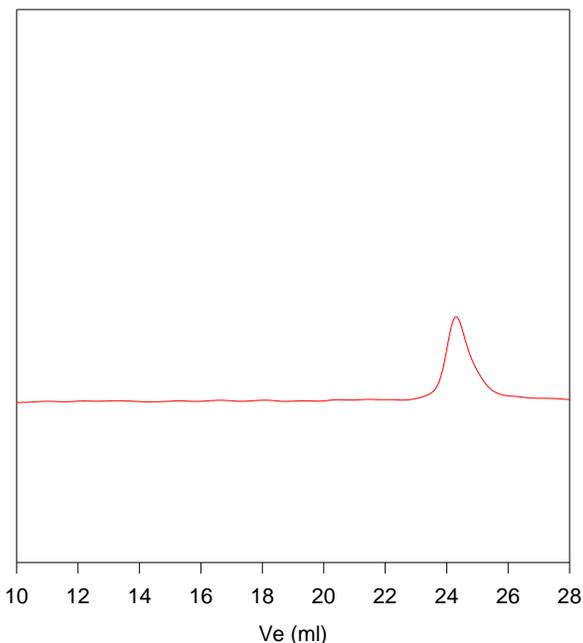
Carboxy Terminated Poly(t-butyl acrylate) is synthesized by living anionic polymerization of methyl methacrylate using a bifunctional initiator (oligomer  $\alpha$ -methylstyrene lithium) in THF followed by termination with dry ice.



Characterization:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) before inclusion of the CO<sub>2</sub>H function using a Varian liquid chromatograph equipped with a UV and refractive index detector. The functionality of polymer was determined by the titration with NaOH, using phenolphthalein as the indicator.

Solubility: Soluble in THF, CHCl<sub>3</sub>.



Size exclusion chromatography of  $\alpha$ - $\omega$  dicarboxy terminated poly(tert.butylacrylate) (before terminating reaction with CO<sub>2</sub>).

$M_n=16,000$ ,  $M_w=18,000$  PI=1.13, functionality=1.95