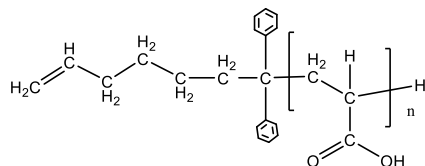


**Sample Name:** Poly (acrylic acid),  $\alpha$ -vinyl-terminated

**Sample #:** P42278A-AAVinyl

**Structure:**

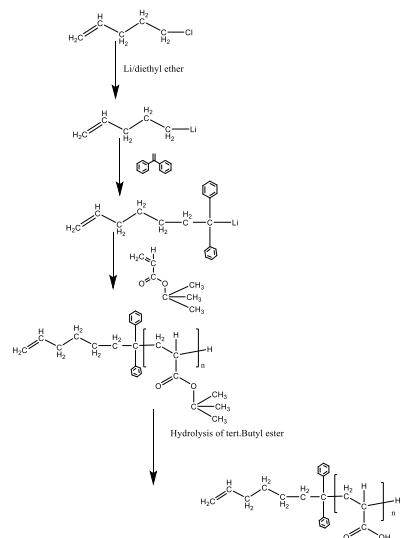


**Composition:**

Mn x 10 <sup>3</sup>	PDI
7.5	1.4
Functionality:	100%

**Synthesis procedure:**

Poly (acrylic acid),  $\alpha$ -vinyl-terminated was prepared by anionic process using pentenyl lithium as initiator. The following reaction scheme shows how the product was prepared:



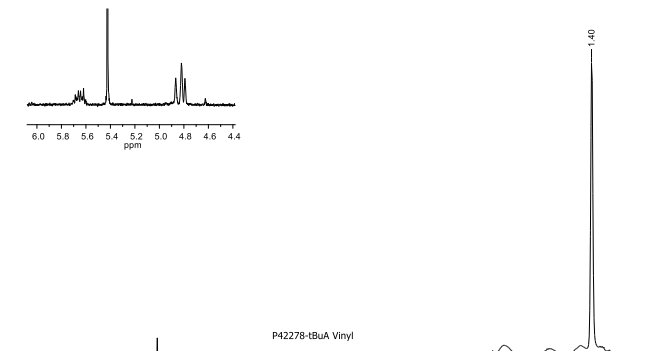
**Characterization:**

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. Agilent chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors.

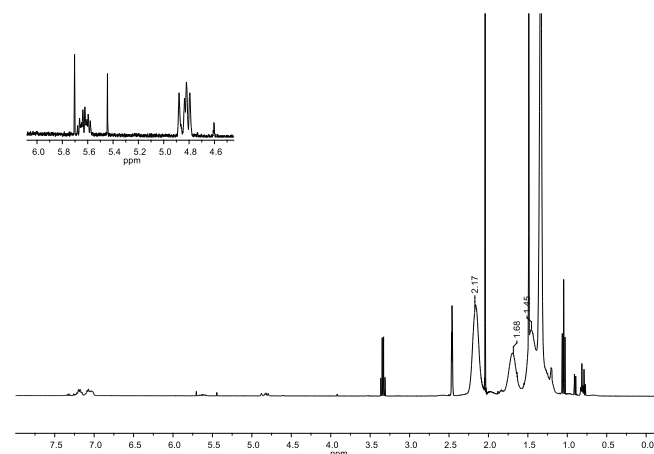
**Functionality:**

Functionality of the obtained polymer was determined by <sup>1</sup>H NMR.

**HNMR spectrum of PtBuA vinyl sample:**



**HNMR spectrum of the sample runs in DMSO:**

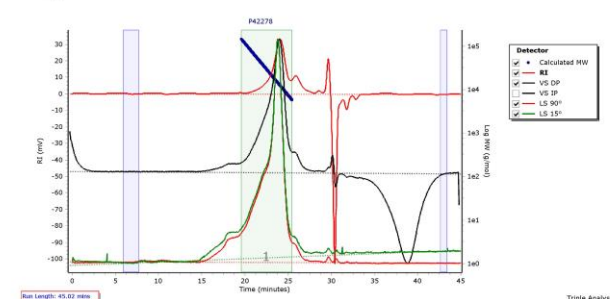


**SEC elugram of Poly (tert.butyl acrylate):**

Agilent GPC/SEC Software

P42278

Chromatogram Plot



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	12537	13266	18046	30045	54490	27706	1.36

After Hydrolysis of tert.butyl ester Mn: 7,500