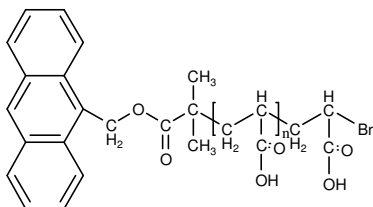


**Sample Name: Anthracene Terminated Poly(acrylic acid)**

**Sample #: P14967-AA-An**

**Structure:**

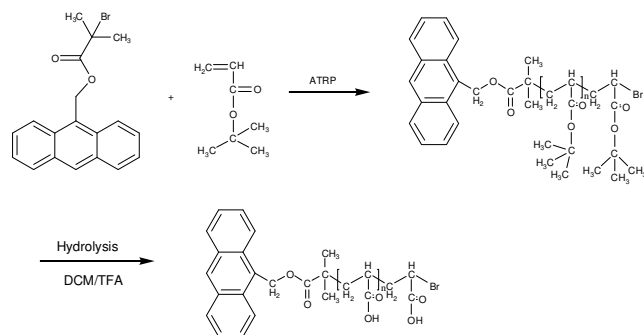


**Composition:**

| Mn x 10 <sup>3</sup> | PDI  |
|----------------------|------|
| 8.6                  | 1.14 |

**Synthesis Procedure:**

Anthracene ended polyacrylic acid is prepared via atom transfer radical polymerization of tert butyl acrylate using an anthracene-containing initiator, 9-anthracenemethyl-2-bromoisobutyrate, followed by hydrolysis.



**Characterization:**

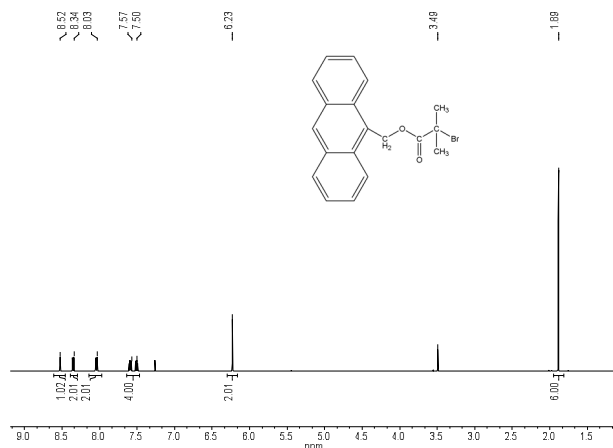
The polymer was characterized by SEC and <sup>1</sup>H NMR.

**Functionality:** functionality of the obtained polymer was determined by proton NMR.

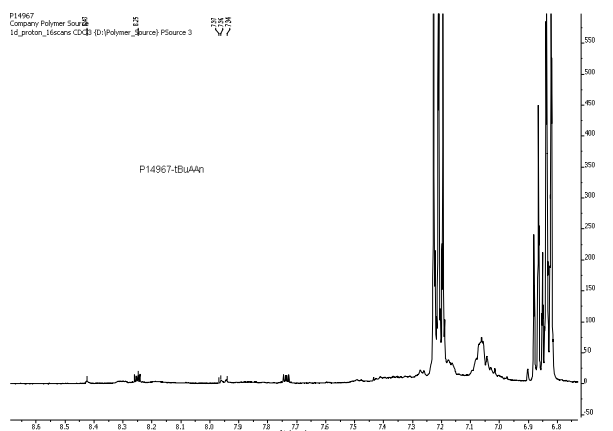
**Solubility:**

Anthracene terminated PAA is soluble in water, methanol. It precipitates from hexane.

**<sup>1</sup>H NMR of initiator:**



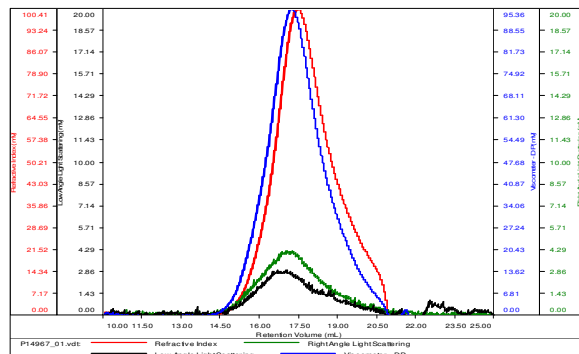
**<sup>1</sup>H NMR of Anthracene Terminated tBuA:**



**SEC of poly(tert-butyl acrylate) before hydrolysis:**

**SAMPLE ID: P14967**

|              |                               |
|--------------|-------------------------------|
| Conc (mg/mL) | 18.9274                       |
| dn/dc (mL/g) | 0.0500                        |
| Method       | ps80k-2.1Jan2016-DMF-0000.vcm |
| Solvent      | DMF w 0.023M LiBr             |
| Column       | PSS                           |



| Sample        | Mn     | Mw     | Mp     | Mw/Mn | IV     |
|---------------|--------|--------|--------|-------|--------|
| P14967_01.vdt | 15,365 | 17,530 | 15,165 | 1.141 | 0.1359 |

**After hydrolysis of ester: PAA-An Mn: 8,600; Mw: 9,800**