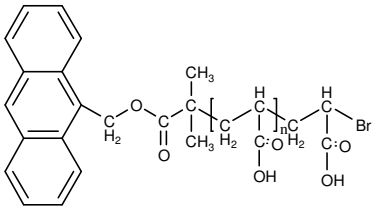
Sample Name: **Anthracene Terminated Poly(acrylic acid)**

Sample #: **P14977-AA-An**

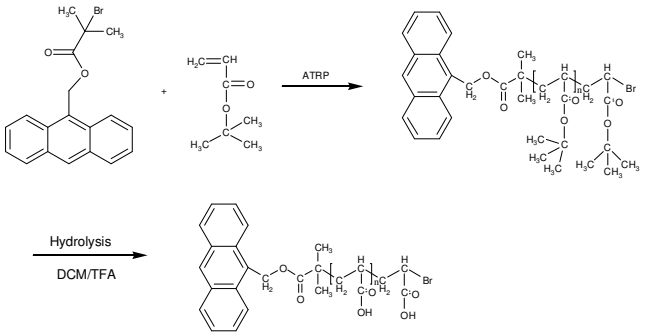
Structure:



Composition:

Mn x 10^3	PDI
5.0	1.35

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 ^{1}H NMR.

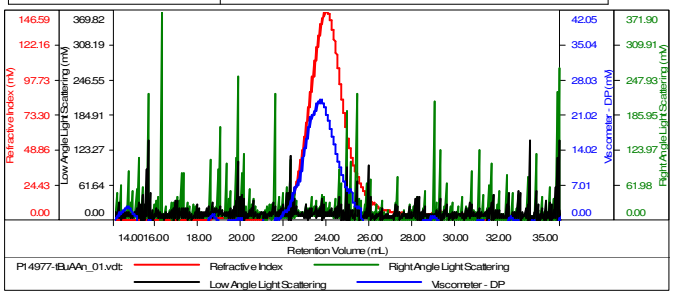
Functionality: functionality of the obtained polymer was determined by proton NMR.

Solubility:
Anthracene terminated PAA is soluble in water and methanol. It precipitates from hexane.

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

Sample ID-P194977-tBuA-An

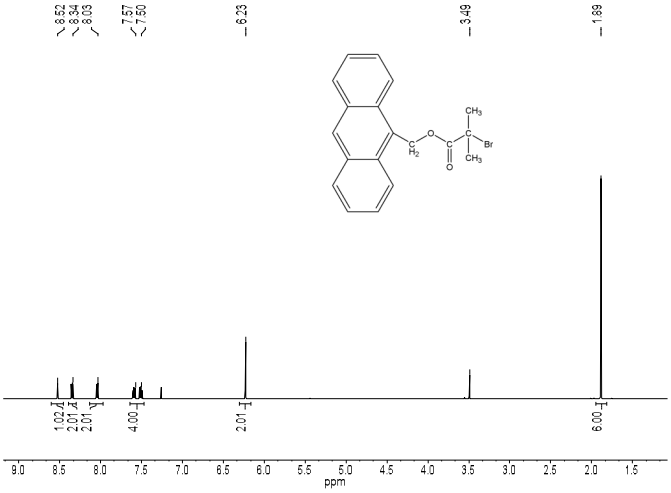
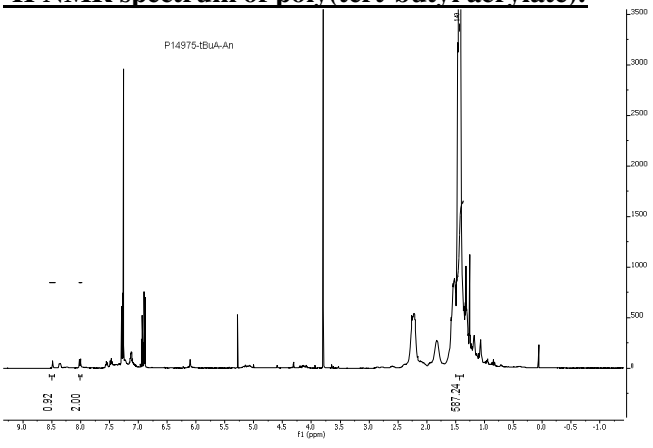
Concentration (mg/mL)	3.6419
Sample dn/dc (mL/g)	0.0840
Method File	PS80K-Jan-2016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Mn 8,800 Mw: 12,000 Mw/ Mn 1,35

After hydrolysis of ester: PAA-An Mn: 5,000; Mw: 6,700

^{1}H NMR spectrum of initiator:



^{1}H NMR spectrum of poly(tert-butyl acrylate):