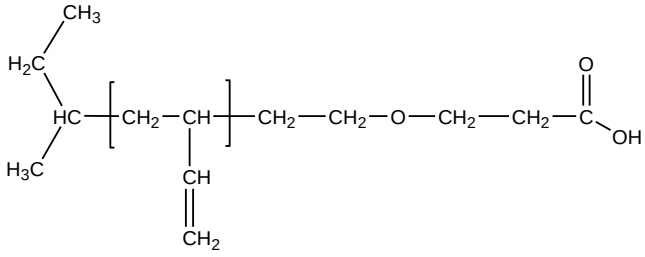
Sample Name: Carboxy Terminated Polybutadiene, 1, 2-rich microstructure

Sample #: P18209-BdCOOH

Structure:



Composition:

M_n x 10^3	PDI
135.0	1.05
COOH functionality	>90%
T_g (°C)	-53

Synthesis Procedure:

1,2-addition carboxy terminated polybutadiene was prepared by anionic living polymerization of butadiene in non-polar media, followed by end capping with a unit of diphenyl ethylene than the addition of THF followed by terminating the polymerization with dried CO_2.

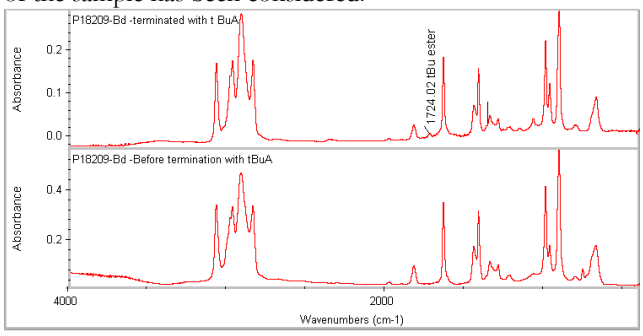
Characterization:

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co.

Functionality: The degree of polymer functionality was determined by acid-base titration.

Thermal Analysis:

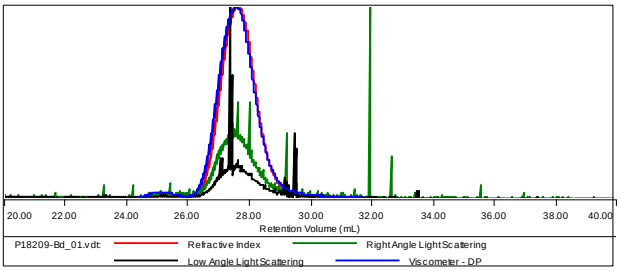
Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T_g) of the sample has been considered.



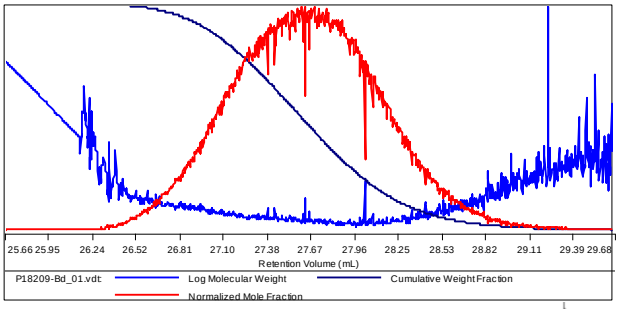
SEC of Sample:

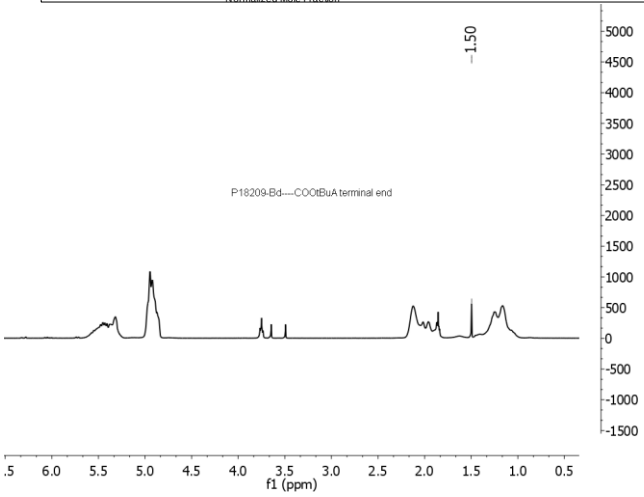
Sample ID: P18209-Bd-COOH

Concentration (mg/mL)	2.7937
Sample dn/dc (mL/g)	0.1270
Method File	PS80K-Sep26-2013-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18209-Bd_01.vdt	135,467	142,340	124,917	1.051	1.9600





DSC thermogram for the sample: