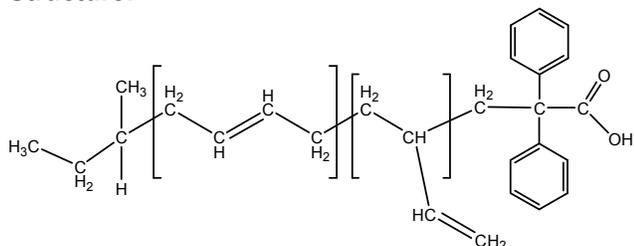


**Sample Name: Carboxy-terminated Polybutadiene (1,2-rich microstructure)**

**Sample #: P19259-BdCOOH**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
2.5 2.3 (HNMR)	1.04

COOH functionality:	> 98 %
Pbd 1,2-addition:	88 %

**Synthesis Procedure:**

1,2-addition carboxy-terminated polybutadiene was prepared by anionic living polymerization of butadiene in non-polar media, followed by termination of the polymerization with dried CO<sub>2</sub> in presence of THF to avoid any linking reaction with CO<sub>2</sub>.

**Characterization:**

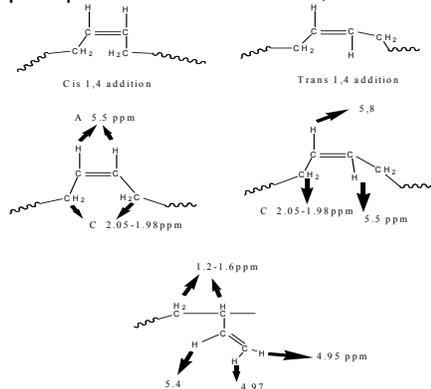
By GPC and HNMR. .

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

**Microstructure:** The ratio between 1,4- and 1,2-addition was calculated by <sup>1</sup>H NMR spectroscopy.

**Solubility:**

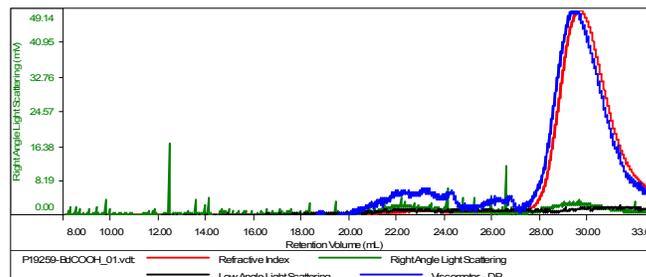
COOH terminated polybutadiene is soluble in DMF, THF, toluene, hexane, cyclohexane and CHCl<sub>3</sub>. It precipitates from methanol, ethanol and water.



**SEC of Sample:**

**Sample ID: P19259-BdCOOH**

Concentration (mg/mL)	1.2448
Sample dn/dc (mL/g)	0.1670
Method File	PS80K-April29-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersi	Intrinsic Viscosity (dL/g)
P19259-BdCOOH_01.vdt	2,669	2,779	2,665	1.041	0.4335

**<sup>1</sup>H NMR spectrum:**

