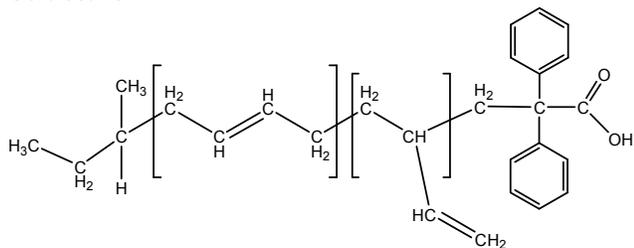


**Sample Name:** Carboxy-terminated  
**Polybutadiene (1, 2-rich microstructure)**  
**Sample #:** P19265-BdCOOH

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
2.0 1.8 (HNMR)	1.03
COOH functionality:	> 98 %
PBd 1,2-addition:	50 %

**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:**

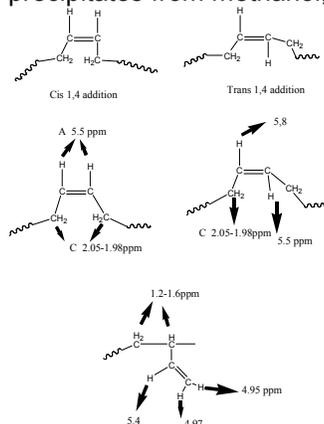
By GPC and HNMR. .

**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.

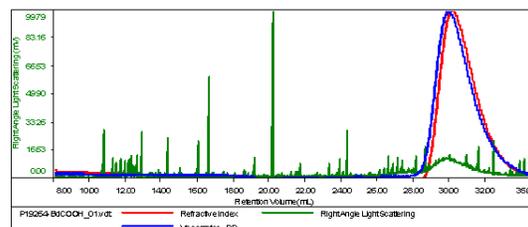
**Solubility:**

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:**

Concentration (mg/mL)	6.6739
Sample conc: (mL/g)	0.1670
MethodFile	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)	Polydispersity	Intrinsic Viscosity (dL/g)
BdCOOH_D1.vct	1,974	2,020	1,985	1.029	0.4361

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

