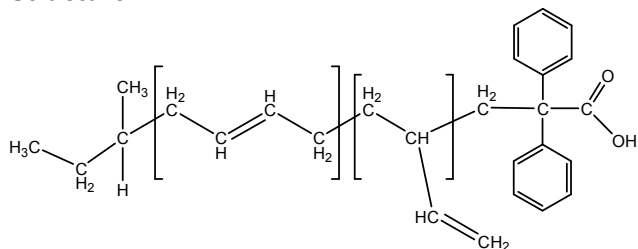


Sample Name: **Carboxy-terminated Polybutadiene (1,2-rich microstructure)**  
Sample #: **P19262-BdCOOH**

#### Structure:



#### Composition:

Mn x 10 <sup>3</sup>	PDI
2.1	1.2
1.8 (HNMR)	
COOH functionality:	> 98 %
PBd 1,2-addition:	80 %

#### 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:

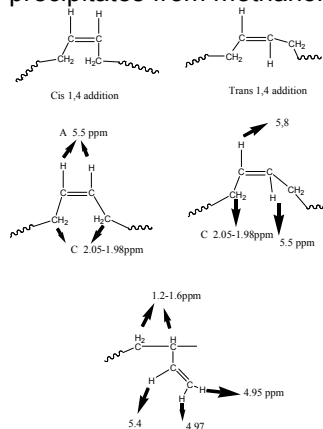
By GPC and HNMR. .

**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.

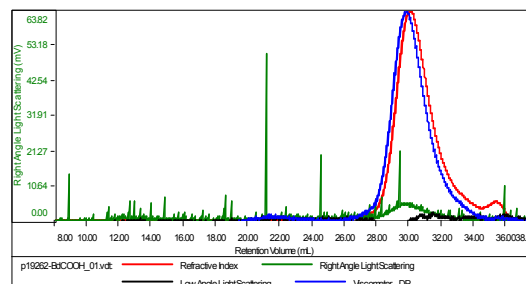
#### Solubility:

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 P19262-BdCOOH	
Concentration (mg/mL)	4.5486
Sample chid: (mL/g)	0.1670
Method File	PS80K-Appl/29-2015-0000.vcm
Column Set	3xPL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
p19262-BdCOOH_01.vdt	2,110	2,709	2,471	1.284	0.3420

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

