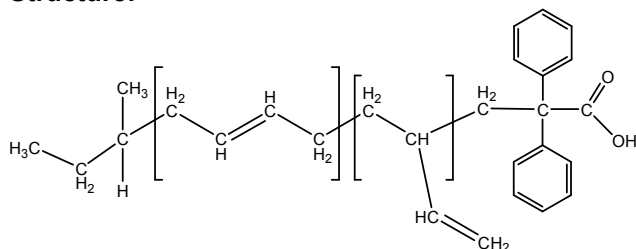


Sample Name: Carboxy-terminated Polybutadiene (1,2-rich microstructure)

Sample #: **P19259-BdCOOH**

Structure:



Composition:

Mn x 10 ³	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 CO₂ in presence of THF to avoid any linking reaction with CO₂.

Characterization:

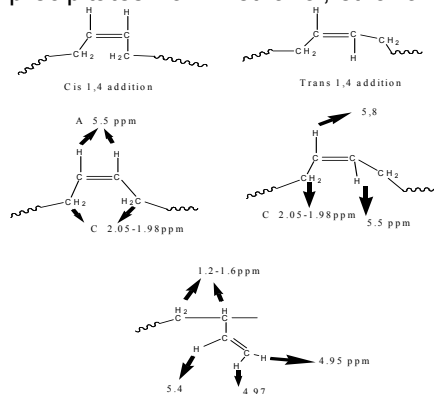
By GPC and HNMR. .

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 ^1H NMR spectroscopy.

Solubility:

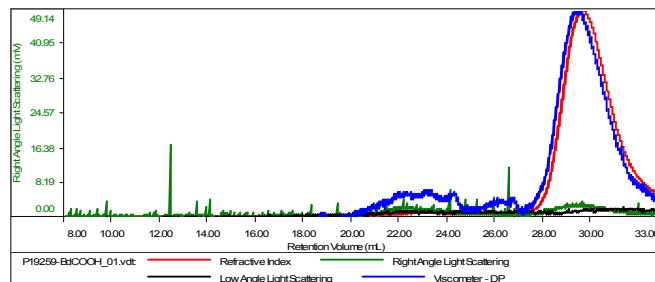
COOH terminated polybutadiene is soluble in DMF, THF, toluene, hexane, cyclohexane and CHCl_3 . It precipitates from methanol, ethanol and water.



SEC of Sample:

Sample ID:P19259-BdCOOH

Concentration (mg/mL)	1.2448
Sample concn: (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)	Polycdispersi	Intrinsic Viscosity (dL/g)
P19259-BdCOOH_01.vcl	2,669	2,779	2,665	1.041	0.4335

¹H NMR spectrum:

