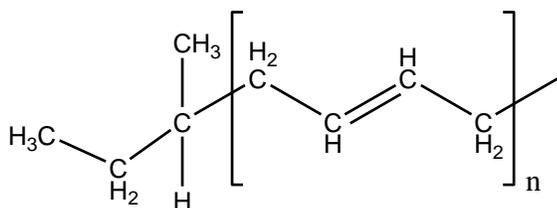


Sample Name:  
**Polybutadiene (1, 4-rich microstructure)**

Sample #: **P44150A-Bd**

Structure:



Composition:

Mn x 10 <sup>3</sup>	Mw/Mn	1,4 addition
89.0	1.03	>92%

Synthesis Procedure:

The 1,4-addition polybutadiene was prepared by anionic living polymerization of butadiene in non-polar media.

Characterization:

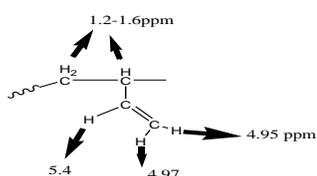
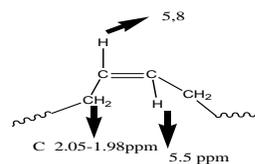
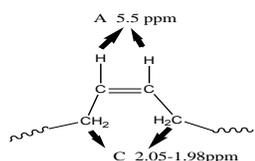
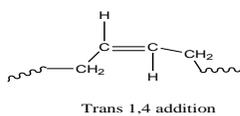
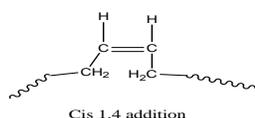
The product was characterized by size exclusion chromatography (SEC) and <sup>1</sup>H-NMR spectroscopy.

Microstructure:

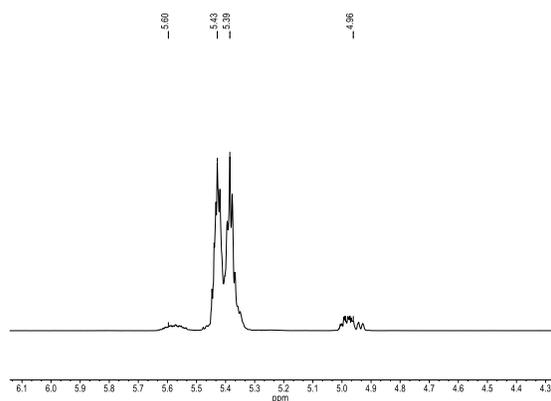
The ratio between 1,4- and 1,2-addition was calculated by <sup>1</sup>H-NMR spectroscopy.

Solubility:

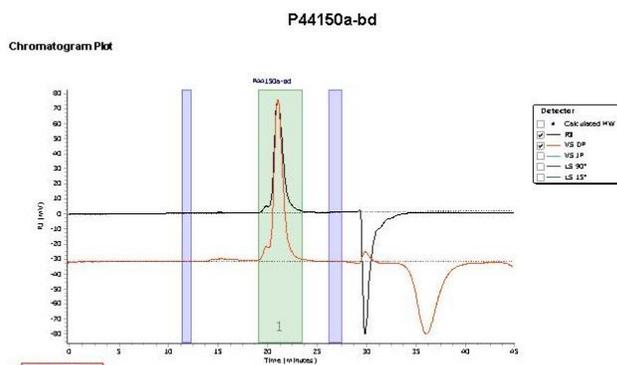
Polybutadiene is soluble in THF, toluene, hexane, cyclohexane and CHCl<sub>3</sub>. It precipitates from methanol, ethanol, and water.



**<sup>1</sup>H-NMR spectrum of the polymer:**



**SEC elugram of the polymer in THF at 30 °C:**  
**Agilent Instrument**



Peak	Mp (g/mol)	Mn (g/mol)	Mv (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	34524	68679	91647	93541	95435	32891	1.022