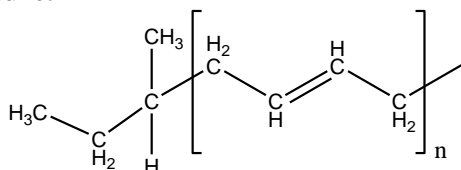


Sample Name: Polybutadiene (1, 4-rich microstructure)

Sample #: P41856-Bd

Structure:



Composition:

| | |
|----------------------|------|
| Mn x 10 ³ | PDI |
| 11.0 | 1.01 |

| | |
|--------------|------|
| 1,4 addition | >92% |
|--------------|------|

Synthesis Procedure:

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

Characterization:

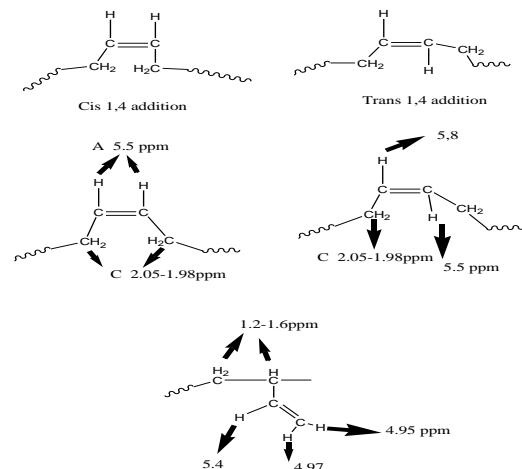
The product was characterized by size exclusion chromatography (SEC) and ¹H NMR.

Microstructure:

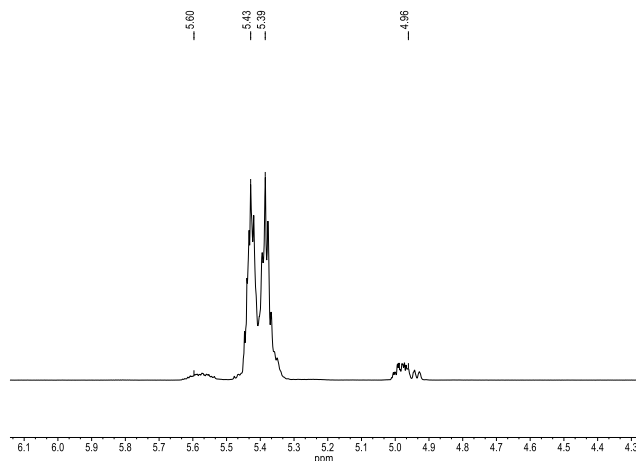
The ratio between 1,4- and 1,2-addition was calculated by ¹H NMR spectroscopy.

Solubility:

The polybutadiene is soluble in DMF, THF, toluene, hexane, cyclohexane and CHCl₃. It precipitates from methanol, ethanol and water.

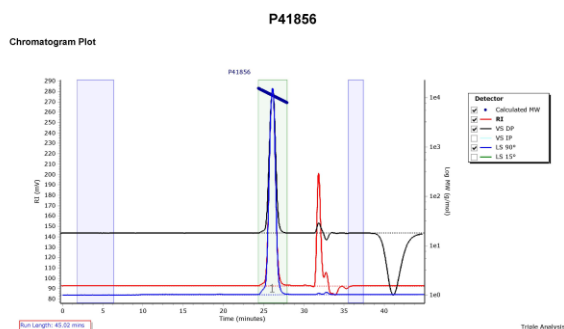


¹H NMR spectrum of the polymer:



SEC elugram of the polymer:

Agilent GPC/SEC Software



| Peak | Mp (g/mol) | Mn (g/mol) | Mw (g/mol) | Mz (g/mol) | Mz+1 (g/mol) | Mv (g/mol) | PD |
|--------|------------|------------|------------|------------|--------------|------------|-------|
| Peak 1 | 11238 | 11281 | 11336 | 11391 | 11447 | 11372 | 1.005 |