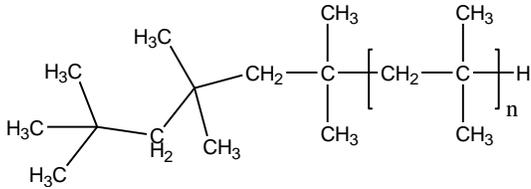


**Sample Name:** Polyisobutylene

**Sample #:** P18621-Ib

**Structure:**

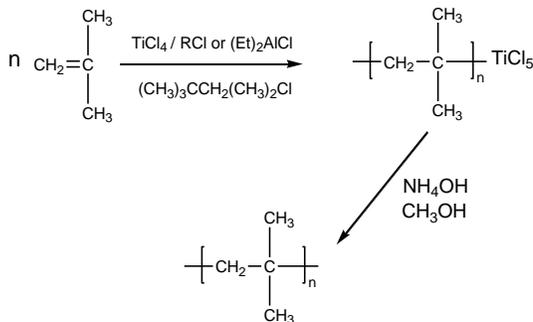


**Composition:**

$M_n \times 10^3$	PDI
3.2	1.5

**Synthesis Procedure:**

Polyisobutylene is synthesized by living cationic polymerization of isobutylene in hexane at  $-78^\circ\text{C}$  using a tin based catalyst and a 2,4,4-dimethyl pentene / HCl initiator. The reaction scheme is shown below:

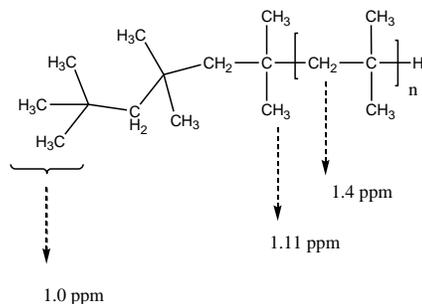


**Purification:**

After polymerization the catalyst residues are removed by filtration and washing with acidic water after which the pH is returned to nominal values and finally the polymer is freeze dried.

**Characterization:**

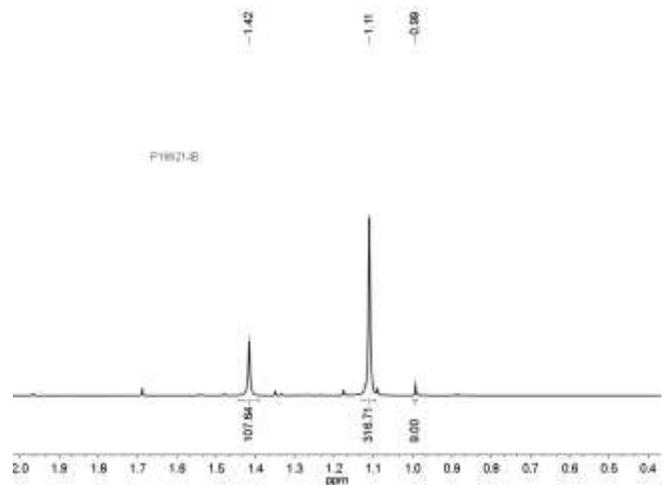
The molecular weight and polydispersity index (PDI) of polyisobutylene are obtained by size exclusion chromatography.



**Solubility:**

Polyisobutylene is soluble in THF, toluene, hexane, pentane and cyclohexane and precipitates from methanol and ethanol.

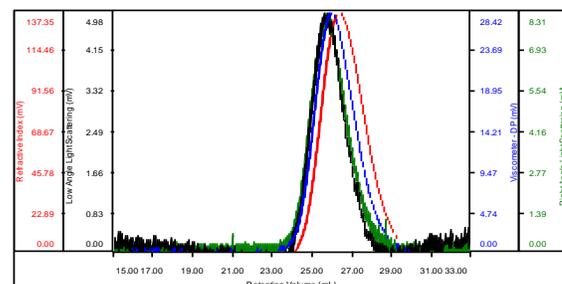
**$^1\text{H}$  NMR spectrum of the polymer:**



**SEC elugram of the sample:**

**Sample ID: P18621-IB**

Concentration (mg/mL)	28.7908
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-Apr15-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	$M_n$	$M_w$	$M_p$	$M_w/M_n$	IV
P18627-1_01.vdt	3,281	4,982	4,714	1.519	0.0458