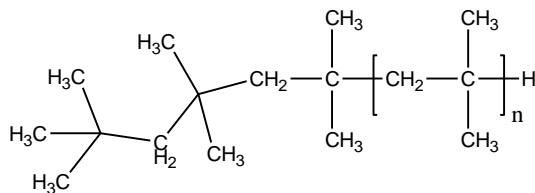


Sample Name: Polyisobutylene

Sample #: P42420-Ib

Structure:

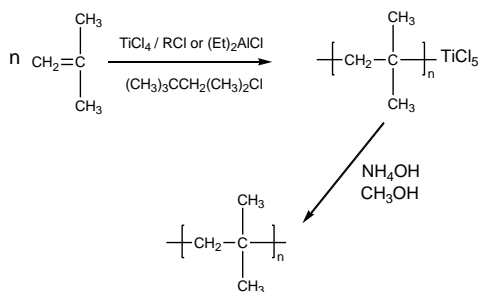


Composition:

Mn x 10 ³	PDI
727.0	1.17

Synthesis Procedure:

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

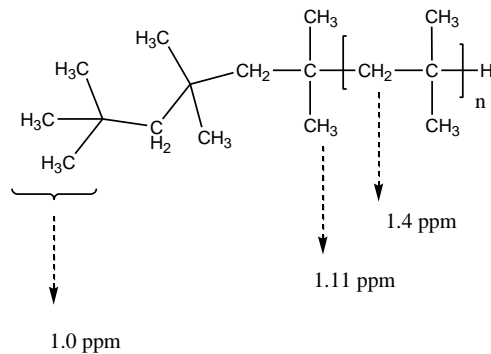


Purification:

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:

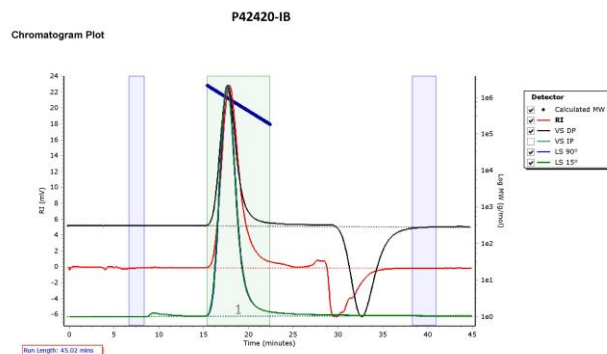
The molecular weight and polydispersity index (PDI) of polyisobutylene are obtained by size exclusion chromatography.



Solubility:

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

SEC elugram of the Sample:



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	908160	727276	856629	964885	1058602	951398	1.178