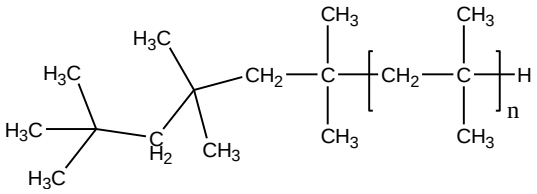
Sample Name: **Polyisobutylene**

Sample #: **P42414-Ib**

Structure:

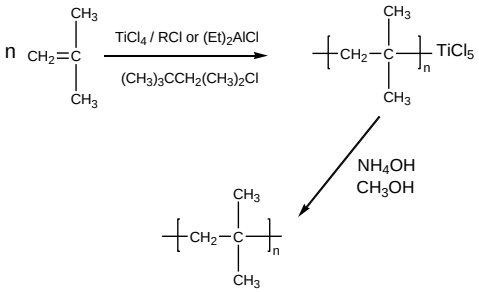


Composition:

Mn x 10^3	PDI
1,924.0	1.33

Synthesis Procedure:

Polyisobutylene is synthesized by living cationic polymerization of isobutylene in hexane at –78 °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.

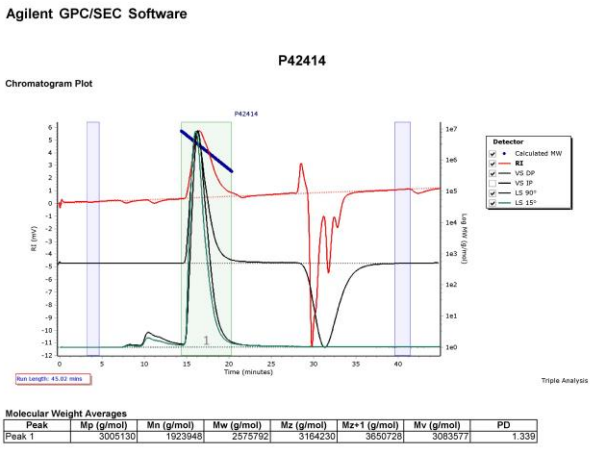
Characterization:

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:



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	3005130	1923948	2575792	3164230	3650728	3083577	1.339