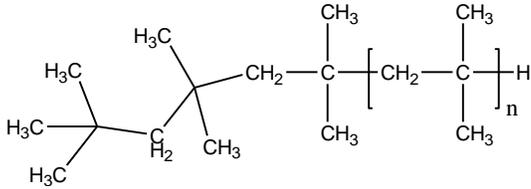


Sample Name: Polyisobutylene

Sample #: P42410-Ib

Structure:

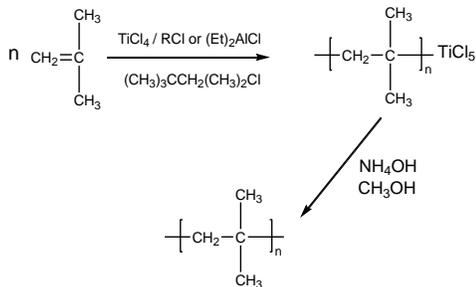


Composition:

$M_n \times 10^3$	PDI
467.0	1.14

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:

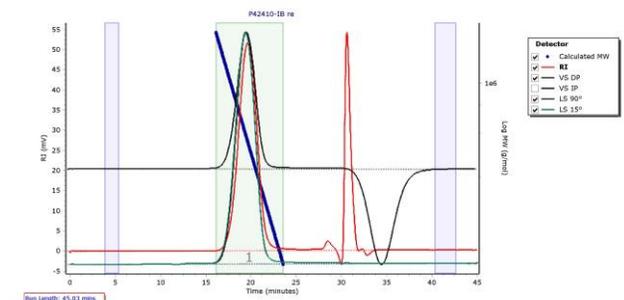
Polyisobutylene is soluble in THF, toluene, hexane, pentane, and cyclohexane. It precipitates from methanol and ethanol.

SEC elugram of the Sample:

Agilent GPC/SEC Software

P42410-IB re

Chromatogram Plot



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	494952	463958	529288	601952	683296	590809	1.141