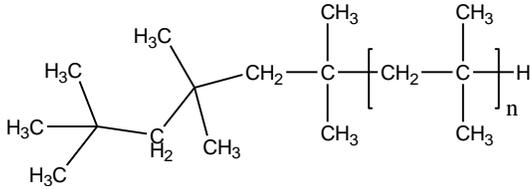


Sample Name: Polyisobutylene

## SEC elugram of the Sample:

Sample #: P42413-IB

### Structure:

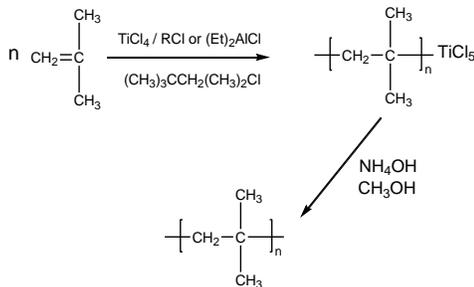


### Composition:

$M_n \times 10^3$	PDI
775.0	1.45

### 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. It precipitates from methanol and ethanol.

Agilent GPC/SEC Software

