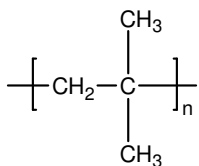


Sample Name: Polyisobutylene

Sample #: P3846B-IB

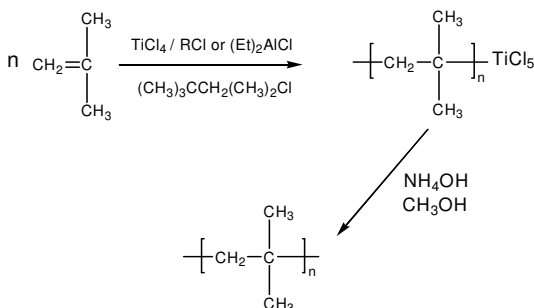


Composition:

Mn x 10 ³	PDI
497.0	1.4
T _g (°C)	-65

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.

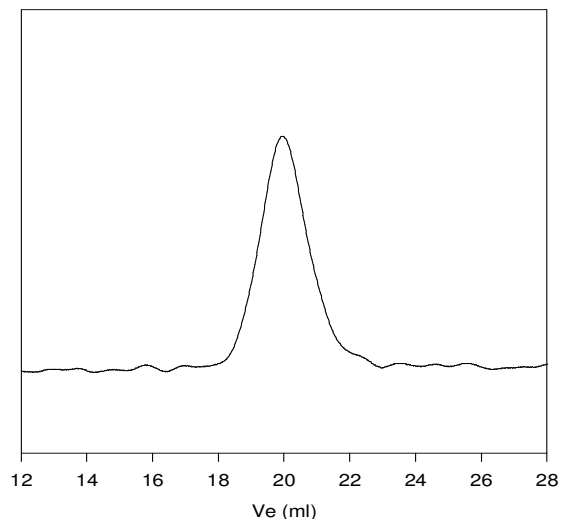
Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T_g) has been considered.

Solubility:

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

SEC of Homopolymer:

P3846B-IB



Size Exclusion Chromatogram of Polyisobutylene:

M_n=497000, M_w=710000, M_w/M_n = 1.4

intrinsic viscosity: 1.92dl/g radius of Gyration: 36.22nm

DSC thermogram for the polymer:

