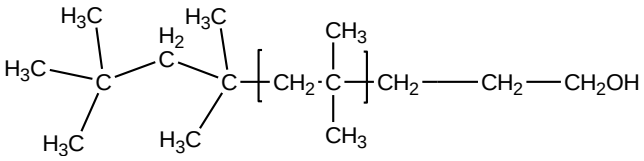
Sample Name: **Poly(isobutylene), ω-hydroxy-terminated**

Sample #: **P42315-IBOH**

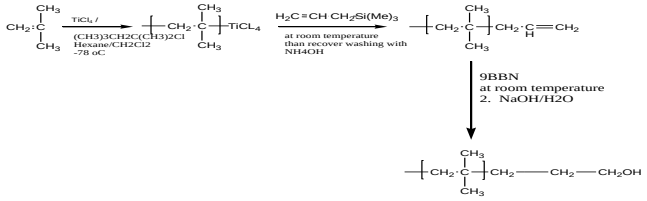
Structure:



Composition:

Mn x 10^3	PDI
8.0	1.04
OH functionality	>77%

Synthesis Procedure:
The scheme of the reaction is illustrated below:

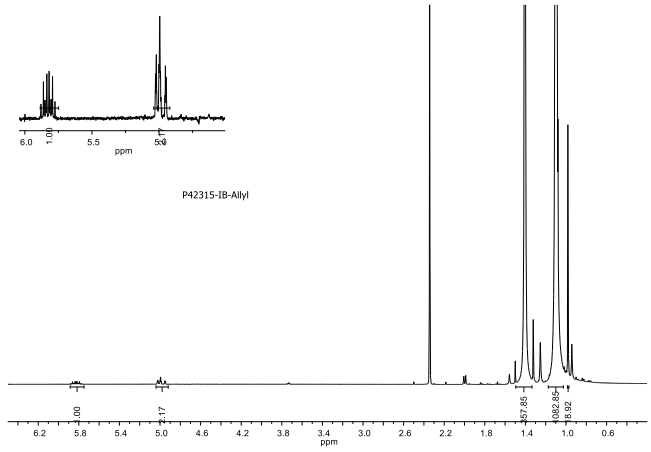


Characterization:
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

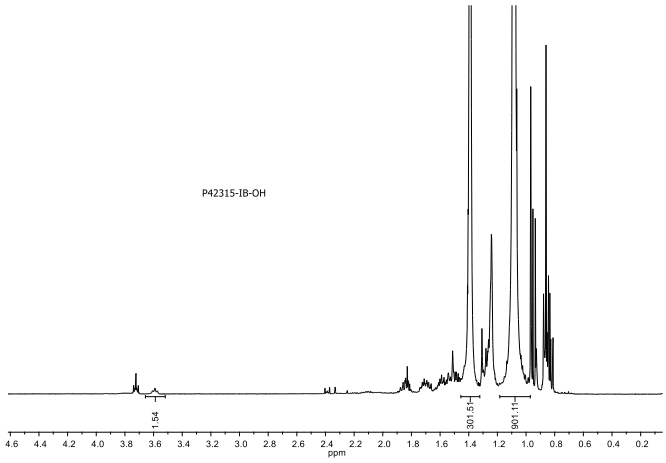
Functionality: The polymer's functionality was determined by ^{1}H-NMR spectroscopy.
In order to check OH functionality it was titrated with a known concentration of K naphthalene and found the functionality is higher than 77%.

Solubility:
The polymer is soluble in THF, CHCl3, toluene, hexane and acetone. It can be precipitated from methanol, ethanol and water.

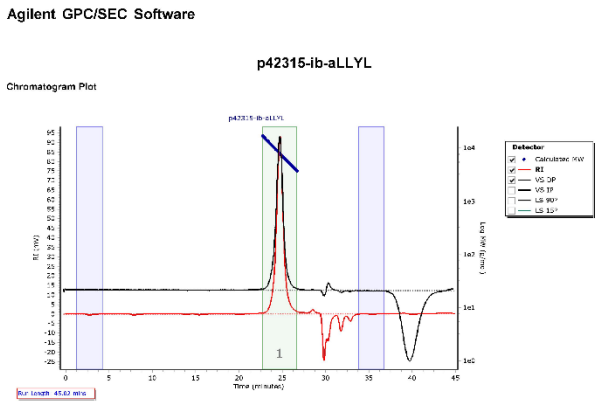
^{1}H NMR spectrum of the allyl terminated IB:



^{1}H NMR spectrum of OH-terminated PIB:



SEC elugram of the allyl terminated PIB:



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	7914	7780	8072	8367	8684	8291	1.038