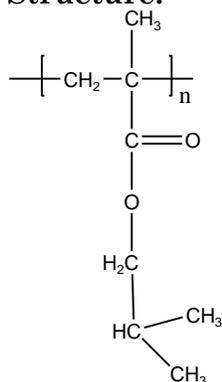


**Sample Name: Poly(isobutyl methacrylate)**

**Sample #: P8467-iBuMA**

**Structure:**

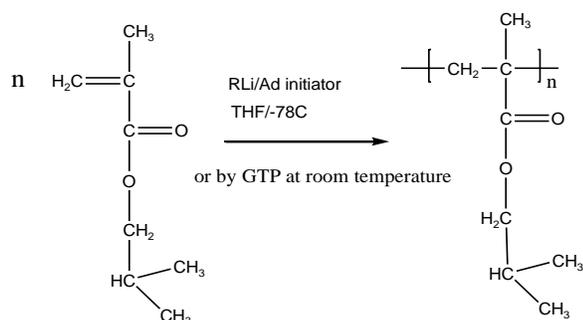


**Composition:**

$M_n \times 10^3$	PDI
23.0	1.35
$T_g$ ( $^{\circ}\text{C}$ )	62

**Synthesis Procedure:**

Poly(isobutyl methacrylate) is obtained by anionic of GTP process. The polymerization scheme can be illustrated as follows:



**Characterization:**

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscocel Co.

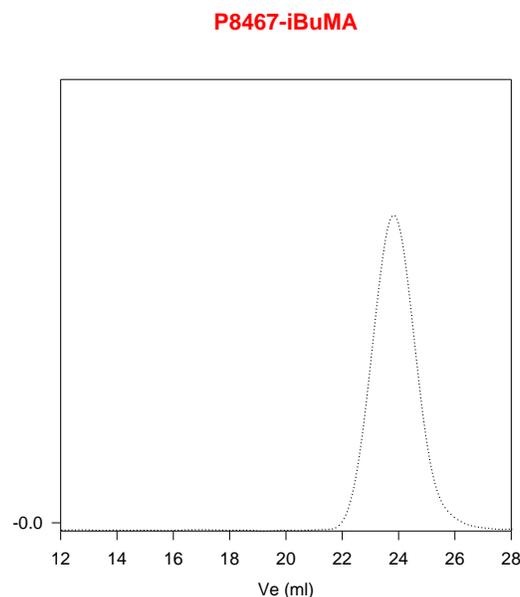
**Thermal analysis:**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of  $10^{\circ}\text{C}/\text{min}$ . The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature ( $T_g$ ).

**Solubility:**

Poly(isobutyl methacrylate) is soluble in THF,  $\text{CHCl}_3$ , toluene and dioxane. The polymer precipitates from hexanes, methanol and ethanol.

**SEC of the Homopolymer:**



Size exclusion chromatograph of Poly iso-butyl methacrylate:

$M_n=23000$ ,  $M_w=31000$   $PI=1.35$

**DSC thermogram for the polymer:**

