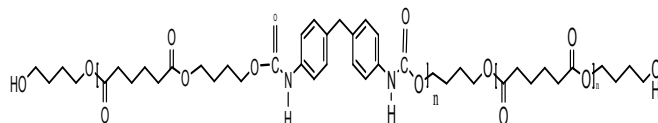


Sample Name:

**Poly urethane based on Adipic acid, Butane diol and 4, 4'-Methylenebis (phenyl isocyanate) MDI-based polyurethanes**

Sample #: **P19232-PU**

**Structure:**



**Composition:**

Mw x 10 <sup>3</sup>	Mw/Mn (PDI)	Composition Adipic acid: Butanediol:MDI	T <sub>g</sub> (°C)
40.5	1.5	1:1:1	-6.6 ; 104.8

**Mn of Oligomers around 2,000**

**Synthesis Procedure:**

Polyurethane is prepared in two-step procedure A: oligomerization of Adipic acid with Butane diol and then B reaction with MDI.

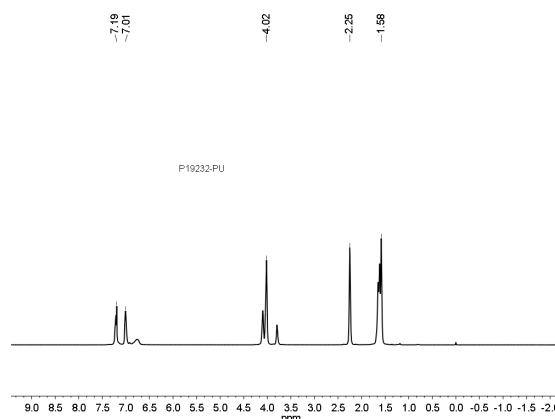
**Characterization:**

An aliquot of the copolymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The chemical composition was verified by <sup>1</sup>H-NMR spectroscopy, which is run in deuterated chloroform at 500MHz. The glass-transition temperature was measured by DSC.

**Solubility:**

Chloroform (y)	THF (Y)	DMF (Y)	DMSO (Y)
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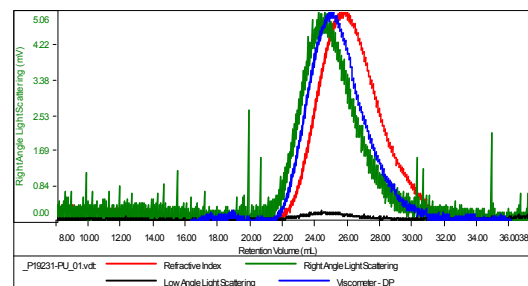
**Figure: <sup>1</sup>H NMR spectrum**



**Figure: SEC profile of the polyurethane**

**Sample ID: P19232-PU**

Concentration (mg/mL)	0.6151
Sample dilute (mL/g)	0.1300
Method File	PS80K-April13-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19231-PU_01.vdt	27,055	40,401	33,726	1.493	1.4393

**DSC Thermogram:**

