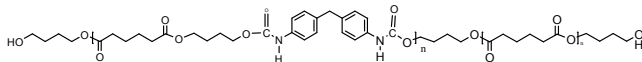


Sample Name:

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

Sample #: **P19233B-PU**

Structure:



Composition:

Mw x 10 ³	Mw/Mn (PDI)	Composition Adipic acid: Butanediol:MDI	Tg (°C)
8.0	1.10	1:1:1	-14.1 ; 68.8; 103.8

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 ¹H-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)
----------------	---------	---------	----------

Figure: ¹H NMR spectrum

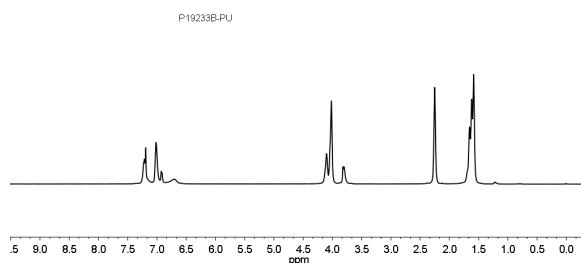
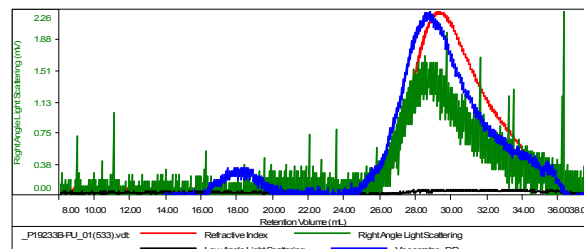


Figure: SEC profile of the polyurethane

Sample ID: P19233B-PU

Concentration (mg/mL)	1.1843
Sample chid: (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)
_P19233B-PU_01(533).vdt	7,328	7,912	6,762	1.080	0.5165

DSC Thermogram:

