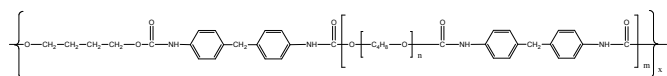


Sample Name:

**Costumer synthesis of poly(tetramethylene oxide)-based polyurethanes**

Lot Sample #: **P7274-PU**

**Structure**

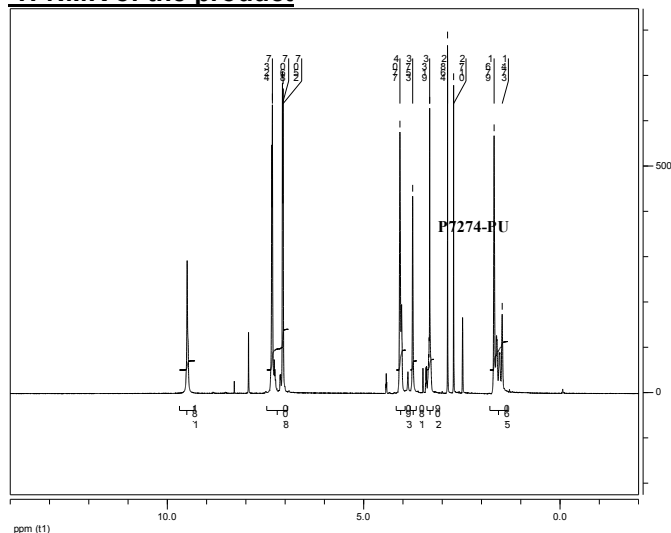


**Composition**

Mw x 10 <sup>3</sup>	Mw/Mn (PDI)	Composition
17.6	1.4	MDI:PTMO:BDL 6.0:1.0:5.0 feed ratio
		6.0:0.9:5.8 NMR

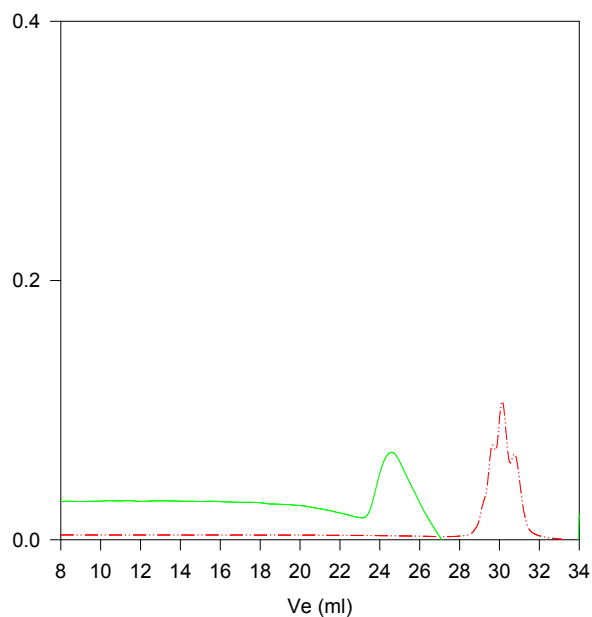
MDI: 4,4'-Methylenebis(phenyl isocyanate)  
PTMO: Poly(tetramethylene oxide) Mn=250  
BDL: 1,4-Butanediol

**<sup>1</sup>H-NMR of the product**



**SEC of the product:**

**P7274- PU**



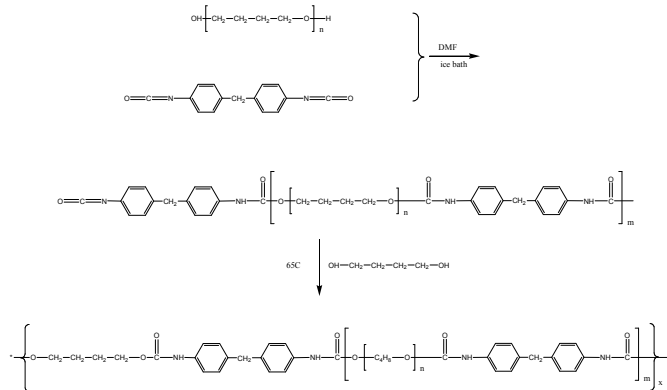
Size exclusion chromatography:

--- Poly(tetramethylene oxide) glycol  
M<sub>n</sub>=250, M<sub>w</sub>=300, PI=1.2

— Final polymer polyurethanes Mw=17600, Mn=12600, PI=1.4

**Synthesis Procedure:**

The synthesis method was followed the literature offered by costumer. The scheme of the reaction is illustrated below:



**Characterization:**

The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight, polydispersity index (PDI). The composition of the structure was determined by NMR.

**Solubility:**

Composition Feeding ratio	Chloroform	THF	DMF	DMSO	Tg- Liter.
MDI:PTMO:BDL (6.0:1.0:5.0)	N	Y	Y	Y	26.6