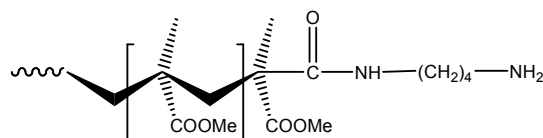


Sample Name:

Amino Terminated Poly(methyl methacrylate)
– Isotactic rich (>95%)

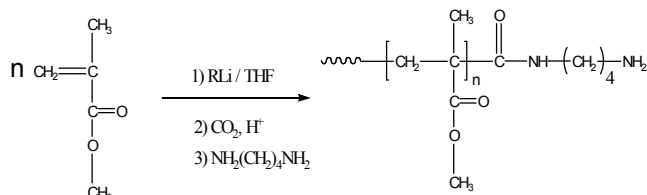
Sample #: P6135-MMANH₂

Structure:**Composition:**

Mn x 10 ³	PDI
45.0	1.30
NH ₂ functionality	>90%
T _g for the polymer	52°C

Synthesis Procedure:

Amino terminated polymethylmethacrylate is obtained by the chemical modification of the carboxylic acid terminated PMMA. The scheme of the polymerization reaction is illustrated below:

**Characterization:**

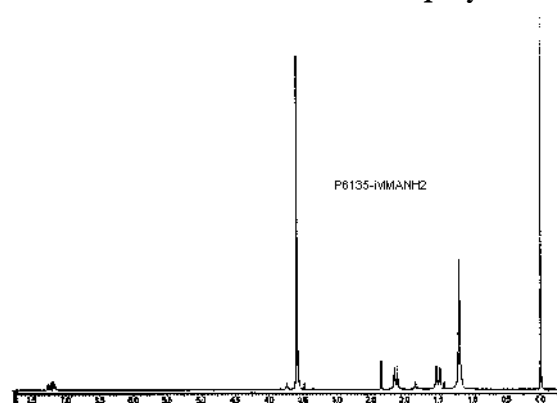
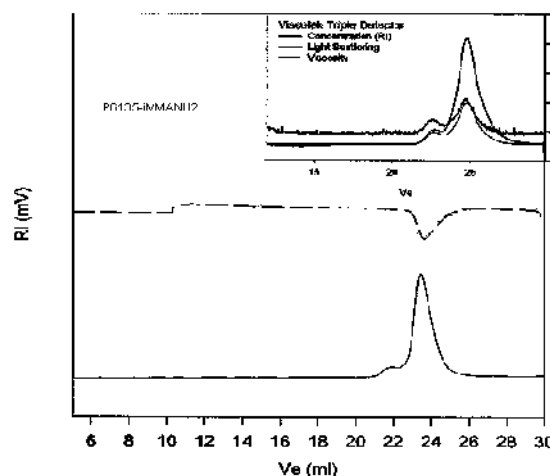
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector before the addition of the CO₂H function. Transesterification was verified by FT-IR to verify the disappearance of the t-butyl group.

Thermal analysis:

Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T_g) has been considered.

Solubility:

The polymer is soluble in CHCl₃, THF and dioxane.

¹H NMR of the functionalized polymer:**SEC of the polymer:**

Size Exclusion Chromatography of functionalized poly(methyl methacrylate):

M_n = 45000, M_w = 58500, M_w/M_n = 1.30, R_g = 8.20 nm. (from LS)

— RI detector, Unlabeled PMMA (pick out before CO₂)

— UV detector, running at 280nm

— Amino Terminated PMMA Reacted with Naphthyl isocyanate
(in up-right box, triple detector for carboxy terminated PMMA)

DSC thermogram for the sample: