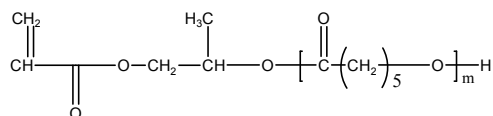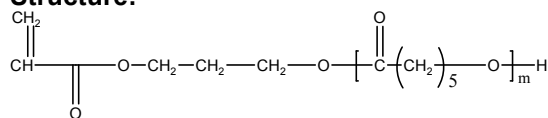Sample Name: **Hydroxypropyl acrylate ended poly(caprolactone)**

Sample #: **P7143-CL-vinyl**

Structure:

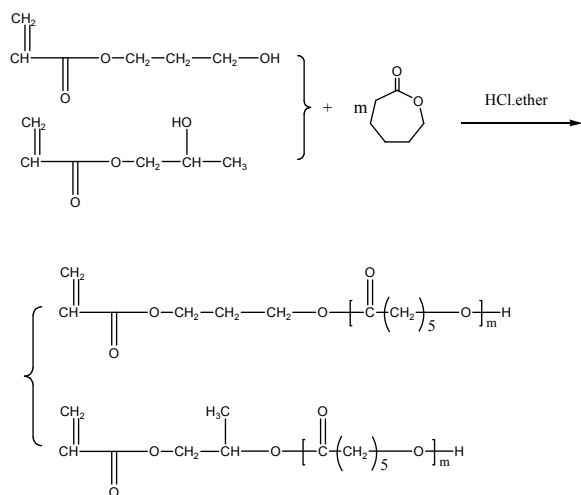**Composition:**

Mn x 10^3	PDI
11.2	1.4

Synthesis Procedure:

Hydroxypropyl acrylate ended poly(- caprolactone) is prepared by cationic polymerization of caprolactone in the presence of hydroxypropyl acrylate (mixture of isomers) and HCl. The scheme of the reaction is illustrated below:
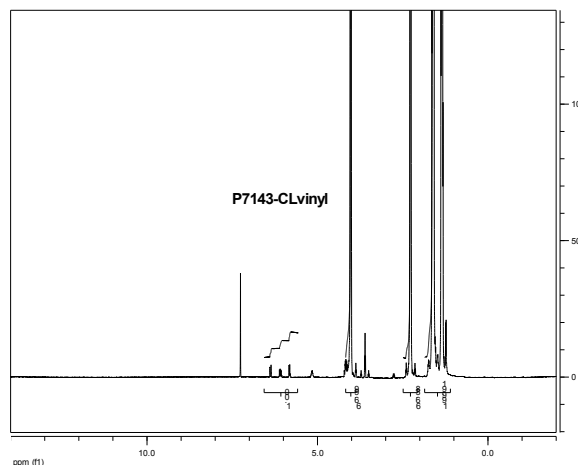

Characterization:

The molecular weight is calculated from NMR of poly(-caprolactone) by comparing the peak area of the acrylate protons at about about 5.7-6.4 ppm with the   -caprolactone protons at about 4.1 ppm. The polydispersity index (PDI) is obtained by size exclusion chromatography.
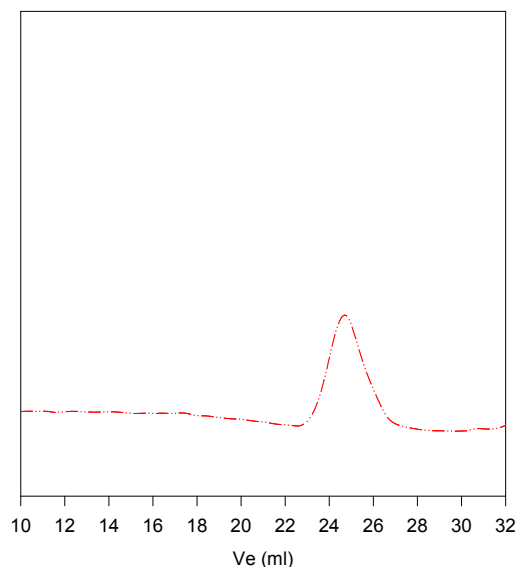
Solubility:

The polymer is soluble in toluene, THF, $CHCl_3$ and CH_2Cl_2. The polymer is insoluble in methanol, hexane and ether.

1H NMR of the polymer:

P7143-CLvinyl

SEC of the polymer:

P7143-CLvinyl

Size exclusion chromatography of Polymer:

----- M_n=11200, M_w=15700, PI=1.4