

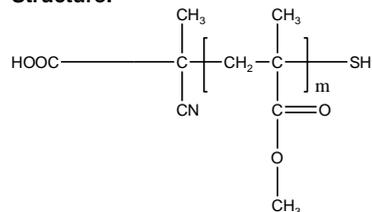
Sample Name: α -thiol ω -carboxylic acid terminated Poly(methylmethacrylate)

SEC of Sample:

P5761-MMASHCOOH

Sample #: P5761-MMASHCOOH

Structure:

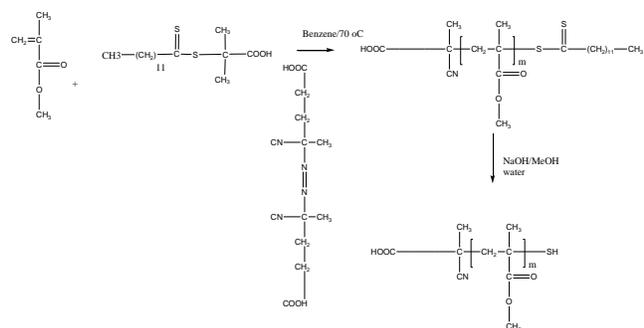


Composition:

Mn x 10 ³	PDI
9.0	1.38

Synthesis Procedure:

The polymer was prepared by reversible addition-fragmentation chain transfer polymerization (RAFT) of MMA with a 4,4'-azobis(4-cyanopentanoic acid) as initiator and a dithiobenzoate as chain-transfer agent, followed by hydrolysis. The scheme of the reaction is illustrated below:

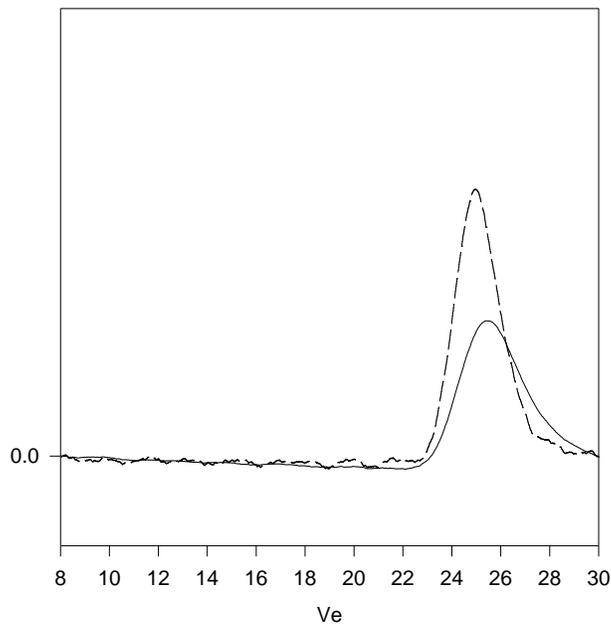


Characterization:

The molecular weight and polydispersity was determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector and THF containing 4v% (Et)3N as eluent. The COOH group of the polymer was converted to methyl ester for the SEC analysis to avoid and adsorption effect of the free COOH with the column packing material.

Solubility:

The polymer is soluble in THF, CHCl₃.



Size Exclusion Chromatography :

- Carboxy - thiol terminated of PMMA
SEC profile shows elution retarded
- — After Protection of free COOH to methyl ester:
Mn 9000 Mw: 12400 M_w/M_n=1.38