

Electronic Supplementary Information for

Copolymers of 2-hydroxyethylacrylate and 2-methoxyethyl acrylate by nitroxide mediated polymerization: Kinetics, SEC ESI MS analysis and thermoresponsive properties

*Richard Hoogenboom,^{*a,b} Anna-Marie Zorn,^c Helmut Keul,^b Christopher Barner-Kowollik^c
and Martin Moeller^b*

^a Supramolecular Chemistry Group, Department of Organic Chemistry, Ghent University,
Krijgslaan 281-S4, 9000 Ghent, Belgium. E-mail: richard.hoogenboom@ugent.be

^b DWI an der RWTH Aachen e.V. and Institute of Technical and Macromolecular Chemistry,
RWTH Aachen, Forckenbeckstrasse 50, 52056 Aachen, Germany

^c Preparative Macromolecular Chemistry, Institut für Technische Chemie und
Polymerchemie, Karlsruhe Institute of Technology (KIT),
Engesserstr. 18, 76128 Karlsruhe, Germany

Contents

P2: SEC-ESI-MS analysis of poly(2-methoxyethyl acrylate)

P3: SEC-ESI-MS analysis of poly(2-hydroxyethyl acrylate)-*ran*-(2-methoxyethyl acrylate)

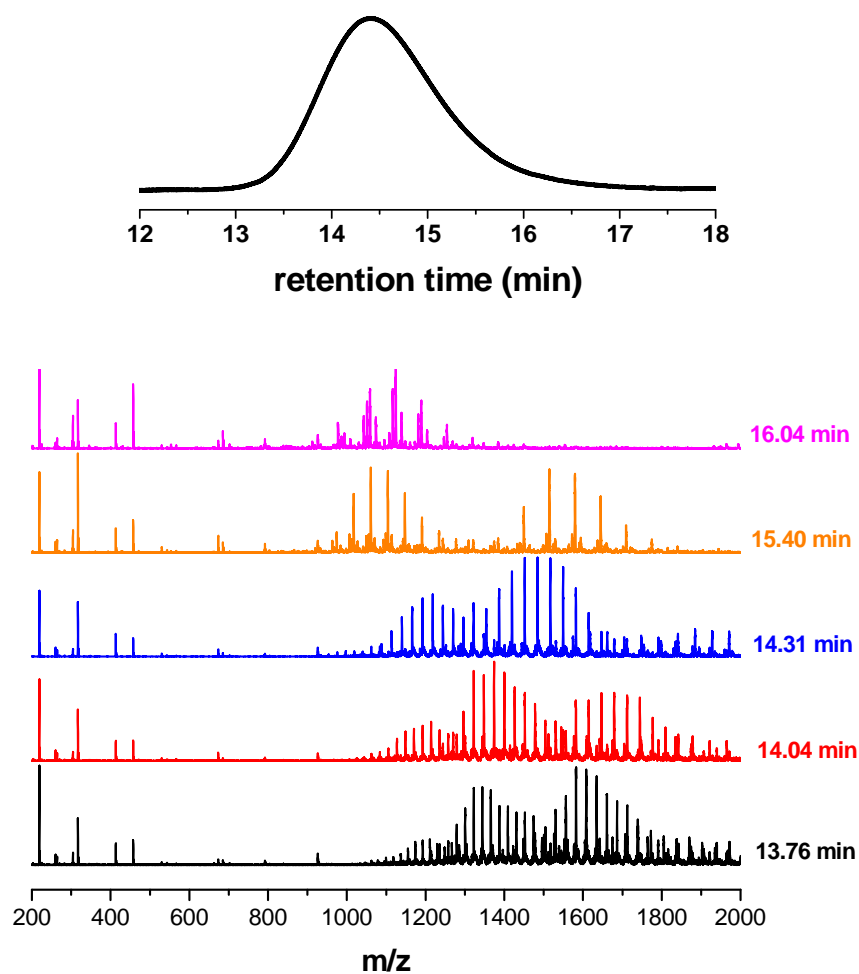


Fig. S1 SEC-ESI-MS analysis of poly(2-methoxyethyl acrylate): SEC trace (top) and ESI-MS spectra that were obtained for fractions at different retention times of the SEC analysis (bottom). The ESI-MS spectrum at 16.04 minutes SEC retention time mainly revealed double charged species. With decreasing SEC retention time, multiple charged ESI-MS distributions appear (even up to 5-times charged for 13.76 minutes) that shift to higher m/z indicative of the higher molar mass of the fractions at lower SEC retention times.

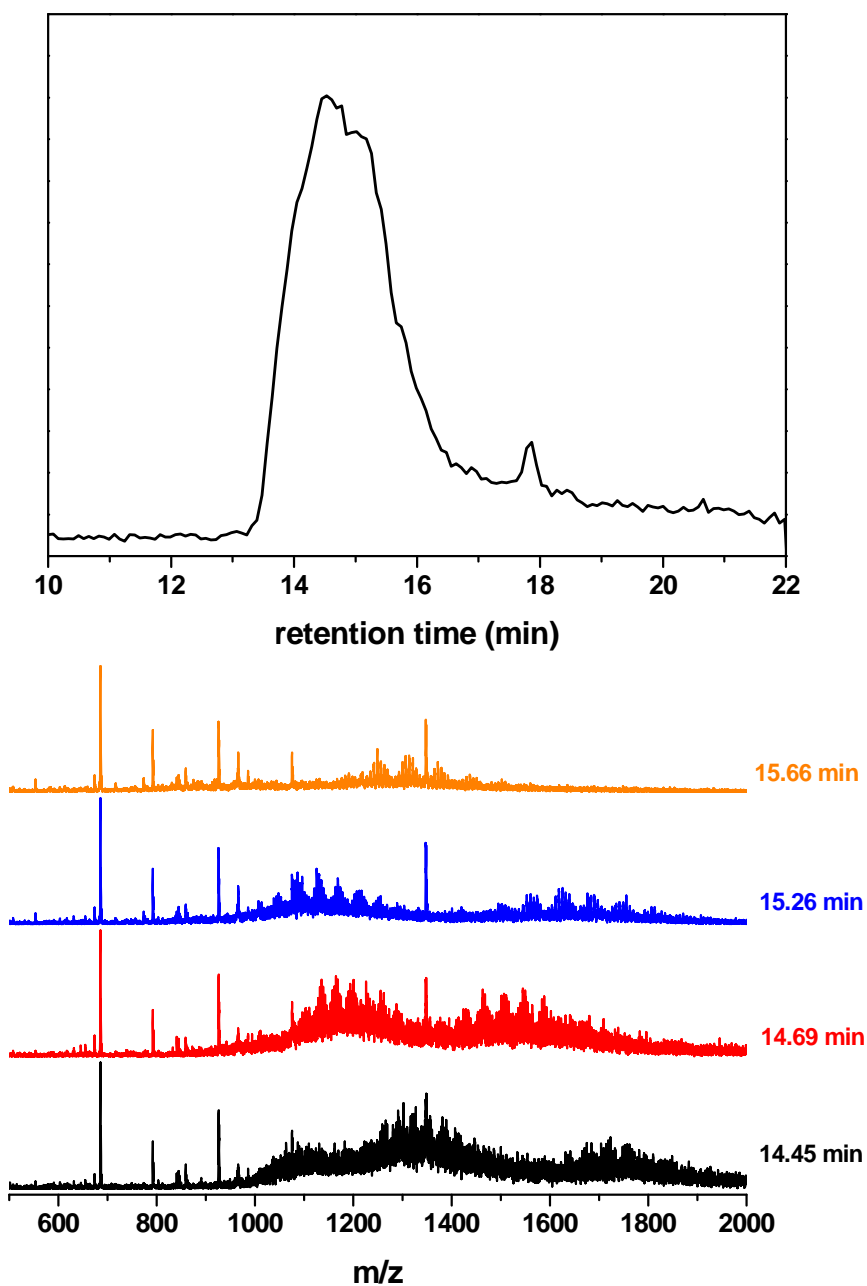


Fig. S2 SEC-ESI-MS analysis of poly(2-hydroxyethyl acrylate)-*ran*-(2-methoxyethyl acrylate) (HEA:MEA = 50:50): SEC trace (top) and ESI-MS spectra that were obtained for fractions at different retention times of the SEC analysis (bottom). The ESI-MS spectra could not be resolved due to the large number of possible distributions, even for a single m/z ratio. Nonetheless, the ESI-MS spectra show a similar trend with decreasing SEC retention time as shown for PMEA in Fig. S1 indicating the higher molar mass of lower SEC retention time fractions.