

Supplementary Materials

Microwave-Assisted Synthesis of Modified Glycidyl Methacrylate-Ethyl Methacrylate Oligomers, Their Physico- Chemical and Biological Characteristics

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Figure S1. ^{13}C NMR spectrum of [P(EMA)-*co*-(GMA)]. ^{13}C NMR (176 MHz, DMSO- d_6), δ [ppm] : 176.9 and 175.8 ($>\text{C}=\text{O}$), 79.2 and 65.7 ($>\text{C}-\text{OR}$), 60.5, 53.5, 48.6, 48.5, 18.4, 16.5, 13.5.

Figure S2. ^1H NMR spectrum of [P(EMA)-*co*-(GMA)]-ETA(1). ^1H NMR (400 MHz, DMSO- d_6), δ [ppm] : 0.76 and 0.92 (br, backbone CH_3), 1.17 (br, ethyl ester CH_3), 1.77-1.89 (m, backbone CH_2), 2.59 (br, $-\text{CH}_2-\text{NH}-\text{CH}_2-$), 3.34-3.37 (m, $\text{O}-\text{CH}_2-\text{CH}<$), 3.76 (br, CH_2-OH), 3.96 (br, CH_2 in Et).

Figure S3. ^1H NMR spectrum of [P(EMA)-*co*-(GMA)]-ETA(2). ^1H NMR (400 MHz, DMSO- d_6), δ [ppm] : 0.76 and 0.92 (br, backbone CH_3), 1.12-1.17 (m, ethyl ester CH_3), 1.77-1.89 (m, backbone CH_2), 2.59 (br, $-\text{CH}_2-\text{NH}-\text{CH}_2-$), 3.34-3.37 (m, $\text{O}-\text{CH}_2-\text{CH}<$), 3.75 (br, CH_2-OH), 3.97 (br, CH_2 in Et).

Figure S4. ^1H NMR spectrum of [P(EMA)-*co*-(GMA)]-Orn(2).

Figure S5. ^1H NMR spectrum of [P(EMA)-*co*-(GMA)]-Xyl.

Table S1. Molecular mass distribution for [P(EMA)-*co*-(GMA)].

Table S2. Molecular mass distribution for [P(EMA)-*co*-(GMA)]-Xyl.

Table S3. Molecular mass distribution for [P(EMA)-*co*-(GMA)]-ETA(2).

Table S4. Molecular mass distribution for [P(EMA)-*co*-(GMA)]-Orn(2).

Table S5. Determination of epoxy groups for [P(EMA)-*co*-(GMA)].

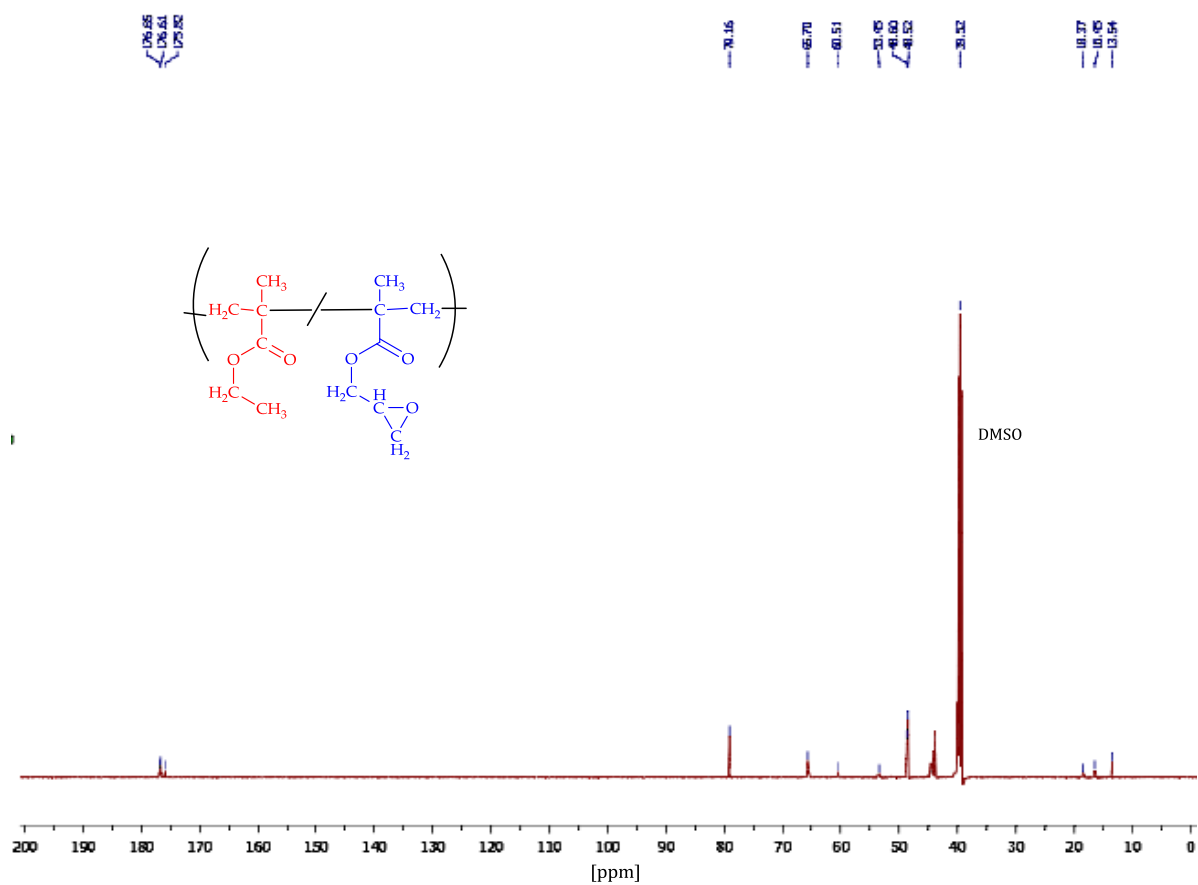


Figure S1. ^{13}C NMR spectrum of [P(EMA)-*co*-(GMA)]. ^{13}C NMR (176 MHz, DMSO-d_6), δ (ppm): 176.9 and 175.8 ($>\text{C}=\text{O}$), 79.2 and 65.7 ($>\text{C}-\text{OR}$), 60.5, 53.5, 48.6, 48.5, 18.4, 16.5, 13.5.

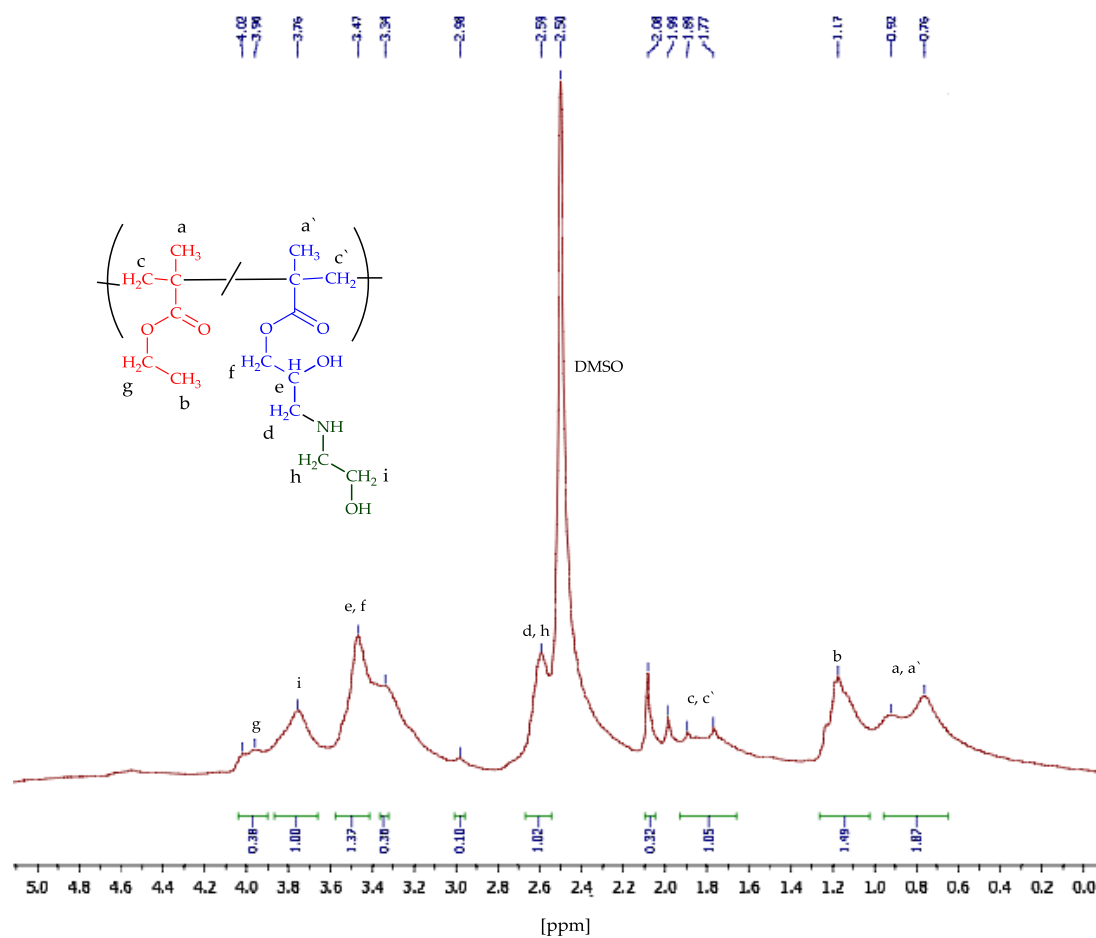


Figure S2. ^1H NMR spectrum of [P(EMA)-co-(GMA)]-ETA(1). ^1H NMR (400 MHz, DMSO-d_6), δ (ppm): 0.76 and 0.92 (br, backbone CH_3), 1.17 (br, ethyl ester CH_3), 1.77-1.89 (m, backbone CH_2), 2.59 (br, $-\text{CH}_2-\text{NH}-\text{CH}_2-$), 3.34-3.37 (m, $\text{O}-\text{CH}_2-\text{CH}<$), 3.76 (br, CH_2-OH), 3.96 (br, CH_2 in Et).

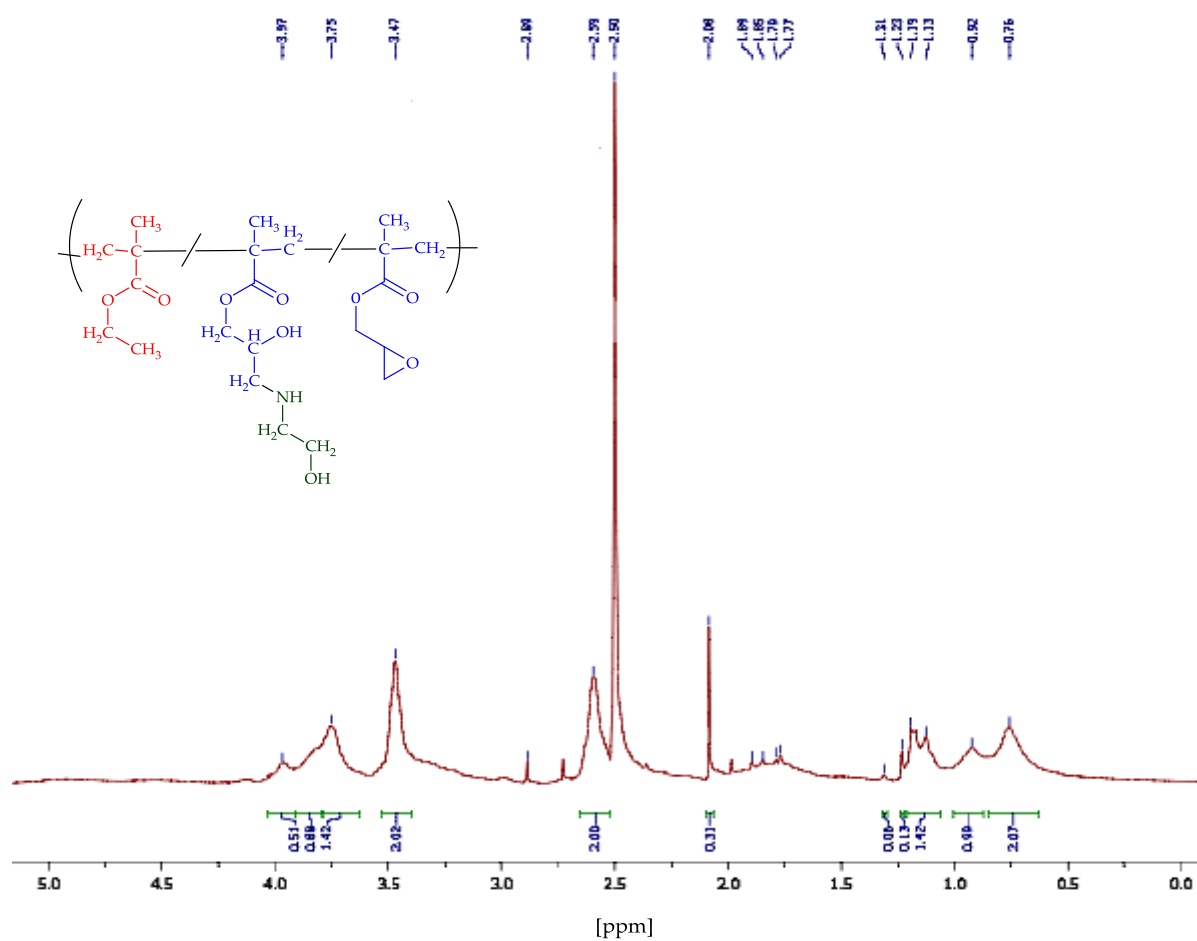


Figure S3. ^1H NMR spectrum of [P(EMA)-*co*-(GMA)]-ETA(2). ^1H NMR (400 MHz, DMSO-d_6), δ (ppm): 0.76 and 0.92 (br, backbone CH_3), 1.12-1.17 (m, ethyl ester CH_3), 1.77-1.89 (m, backbone CH_2), 2.59 (br, $-\text{CH}_2\text{-NH-CH}_2-$), 3.34-3.37 (m, $\text{O-CH}_2\text{-CH}<$), 3.75 (br, $\text{CH}_2\text{-OH}$), 3.97 (br, CH_2 in Et).

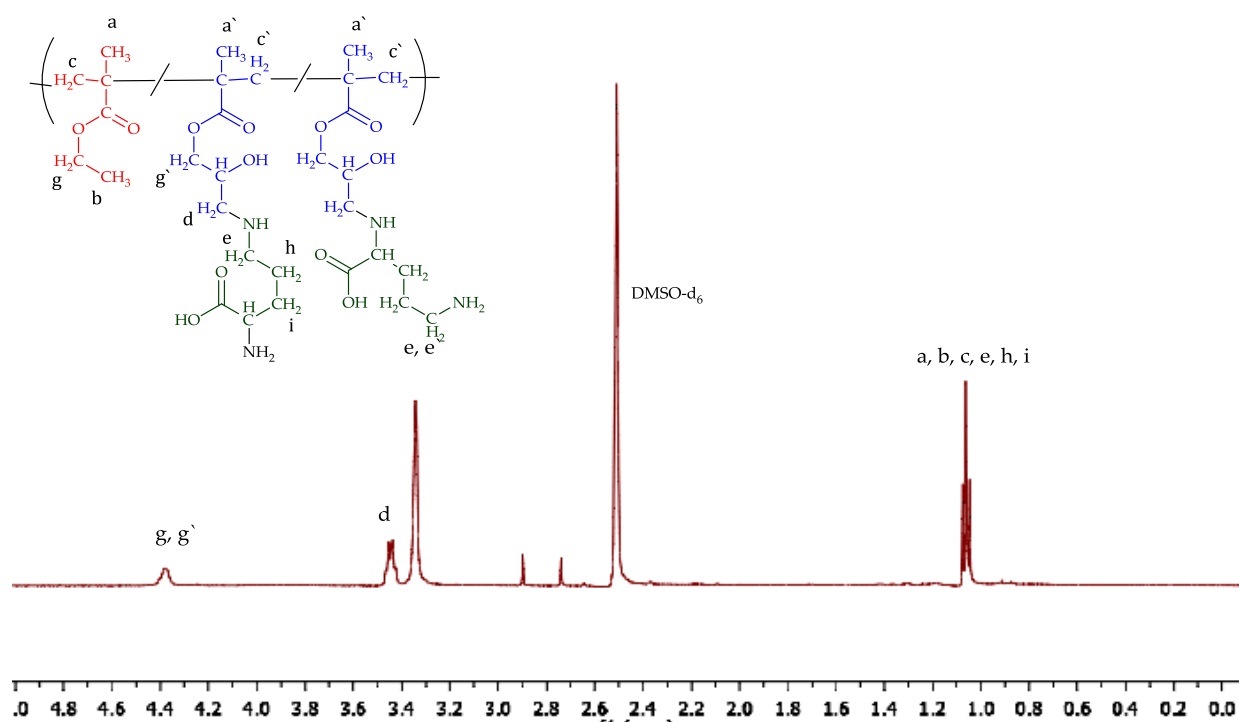


Figure S4. ^1H NMR spectrum of $[\text{P}(\text{EMA})\text{-co-}(\text{GMA})]\text{-Orn}(2)$.

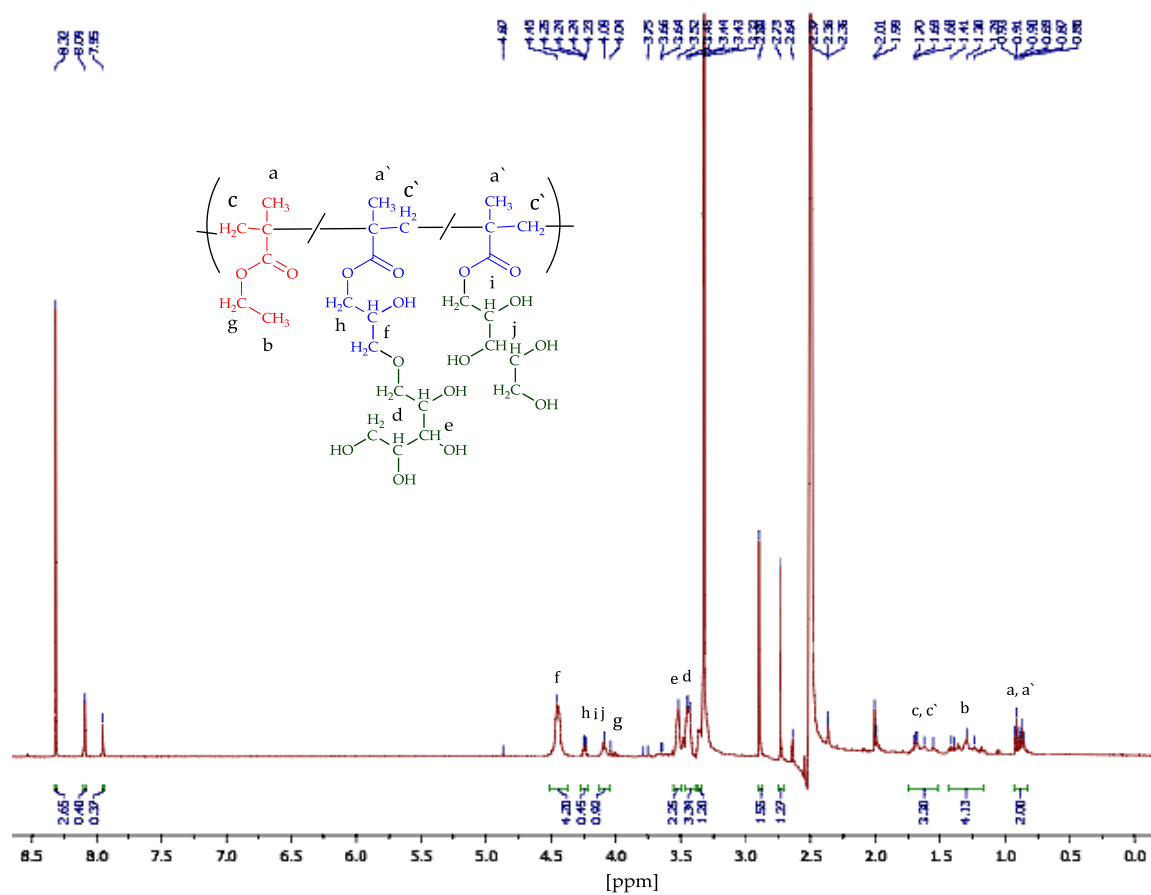


Figure S5. ^1H NMR spectrum of [P(EMA)-co-(GMA)]-Xyl.

Table S1. Molecular mass distribution for [P(EMA)-*co*-(GMA)].

Mass range (Da)	[P(EMA)- <i>co</i> -(GMA)]
	Percentage (%)
1482.8-1202.2	0.50
1202.2-1004.3	0.77
1004.3-601.2	4.18
601.2-300.8	86.84
300.8-234.4	7.71

Table S2. Molecular mass distribution for [P(EMA)-*co*-(GMA)]-Xyl.

Mass range (Da)	[P(EMA)- <i>co</i> -(GMA)]-Xyl
	Percentage (%)
2754.7-2007.2	0.38
2007.2-1004.1	5.61
1004.1-601.3	28.34
601.3-270.5	65.67

Table S3. Molecular mass distribution for [P(EMA)-*co*-(GMA)]-ETA(2).

Mass range (Da)	[P(EMA)- <i>co</i> -(GMA)]-ETA
	Percentage (%)
2664.4-2001.2	0.01
2001.2-1004.2	2.45
1004.2-601.3	9.91
601.3-217.1	87.64

Table S4. Molecular mass distribution for [P(EMA)-*co*-(GMA)]-Orn(2).

Mass range (Da)	[P(EMA)- <i>co</i> -(GMA)]-Orn
	Percentage (%)
2560.1-2007.4	0.50
2007.4-1004.2	5.72
1004.2-601.3	57.75
601.3-217.1	36.03

Table S5. Determination of epoxy groups for [P(EMA)-*co*-(GMA)] using hydrochloric acid-acetone-standing method.

Sample	Mass of oligomer (g)	Volume of titrant (mL)	L_{ep} (%)
blank	0	30.55	-
1	0.1999	18.40	26.25
2	0.2003	18.70	25.44
3	0.2003	18.30	26.30