

# Supplementary Materials

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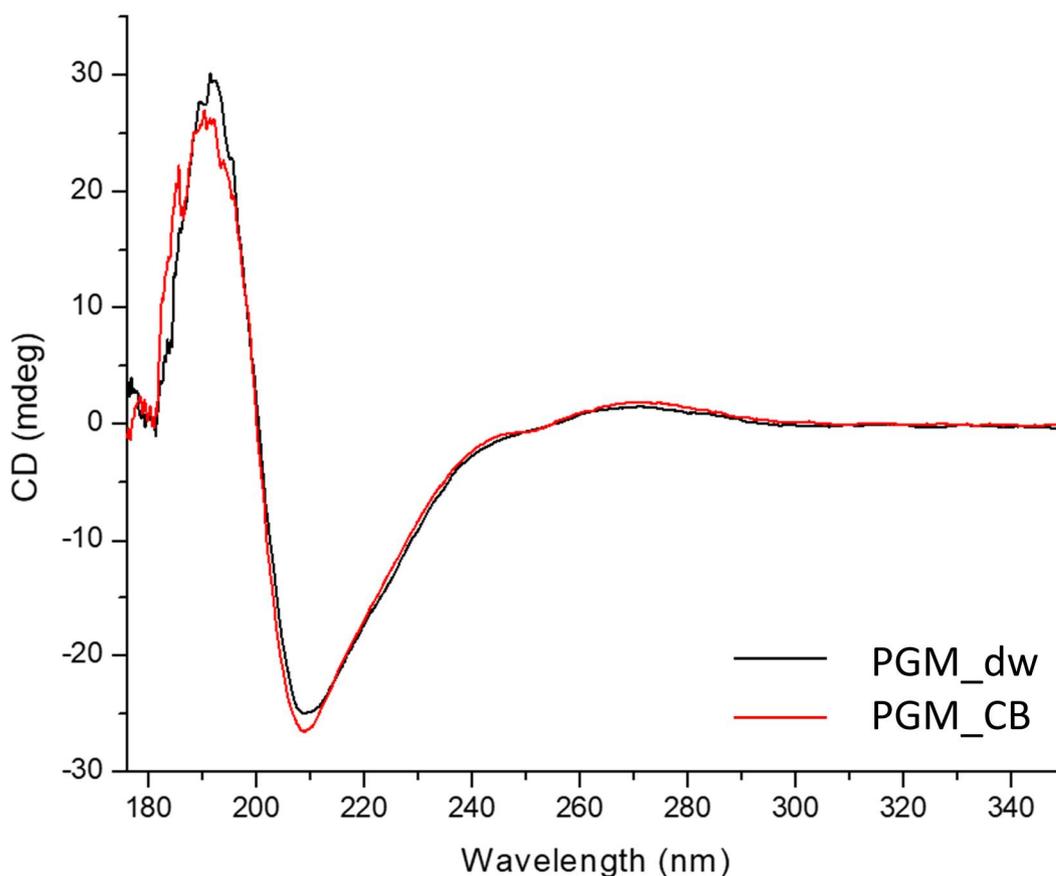
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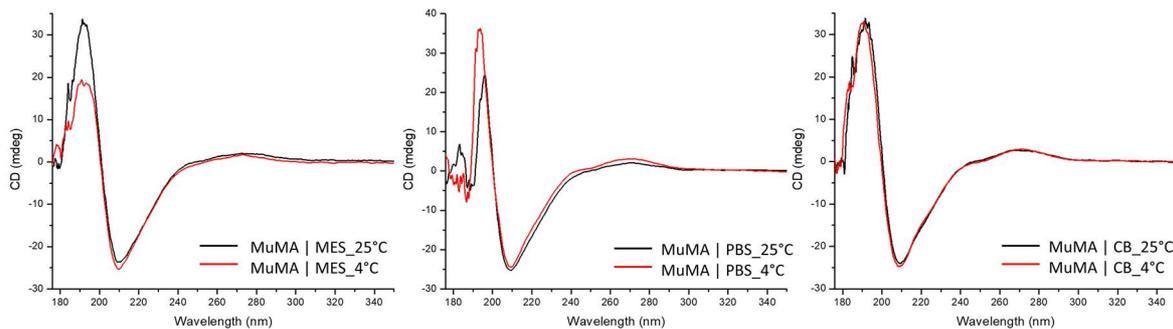
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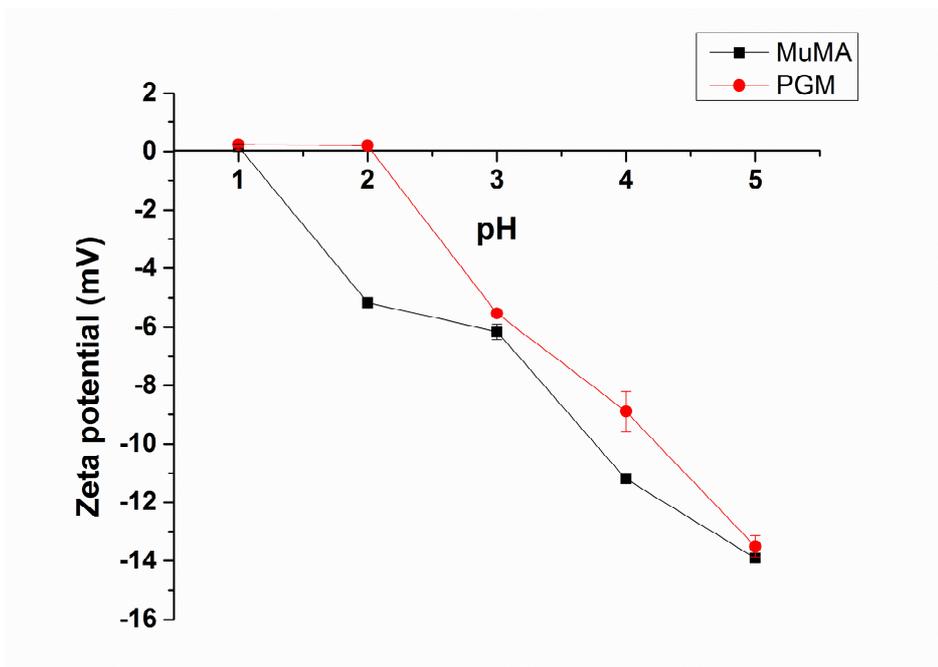
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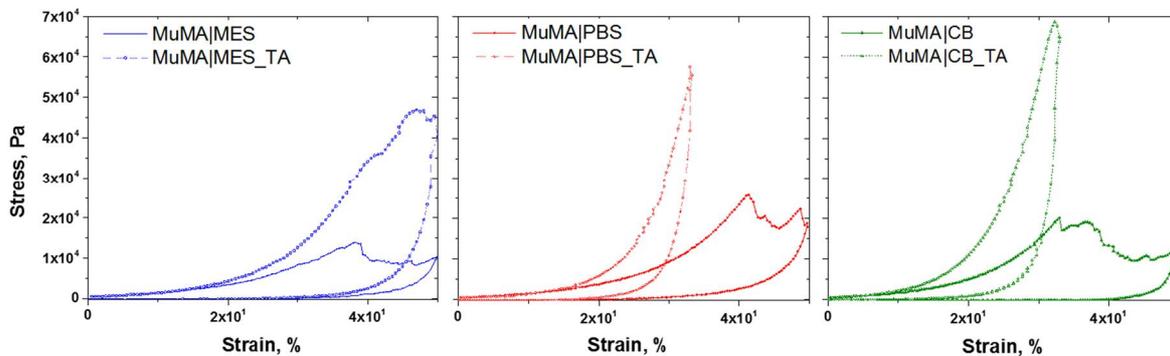
**Figure S1.** CD spectra registered for PGM in ddw and CB; the additional peak at 185 nm confirms a better exposure of the lateral groups of PGM at pH 10 (in CB) when compared to pH 6 (dw).



**Figure S2.** CD spectra for MuMA in media with different pH values (MES – pH 4, PBS – pH 7.4 and CB – pH 10) registered at 25 °C and 4 °C; the results indicate that at 4 °C MES has the most unfolded structure, while PBS presents a the most tightly packed structure.



**Figure S3.** graphical representation of the zeta potential measurements performed for the native mucin (PGM) and the methacryloyl derivative (MuMA). The results indicate that the modification with methacrylic anhydride decreases the isoelectric point from ~2.1 (PGM) to ~1.1 (MuMA).



**Figure S4.** Stress-strain curves for both SN (solid line) and DCN systems (dash line).