Compact Saloplastic Membranes of Natural Polysaccharides for Soft Tissue Engineering

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Supporting Information 1: Mass and density calculations

Table S1. Mass and density calculations for M0, M015 and M05 membranes. The mass was weighted in an analytical balance (0.1% precision). The dry thickness was estimated from representative SEM micrographs and the volume was determined considering the diameter of a membrane template in 55 mm Petri dishes.

Membrane type	Mass (10^{-6} kg)	Dry thickness (10^{-6} m)	Volume (10^{-9} m^3)	Density ($kg \cdot m^{-3}$)
M0	32.3±8	7	16.6	1942±481
M015	35.9±5	19	45.1	795±111
M05	32.9±3	13	30.9	1065±97

Supporting Information 2: PECs sedimentation rate PECs

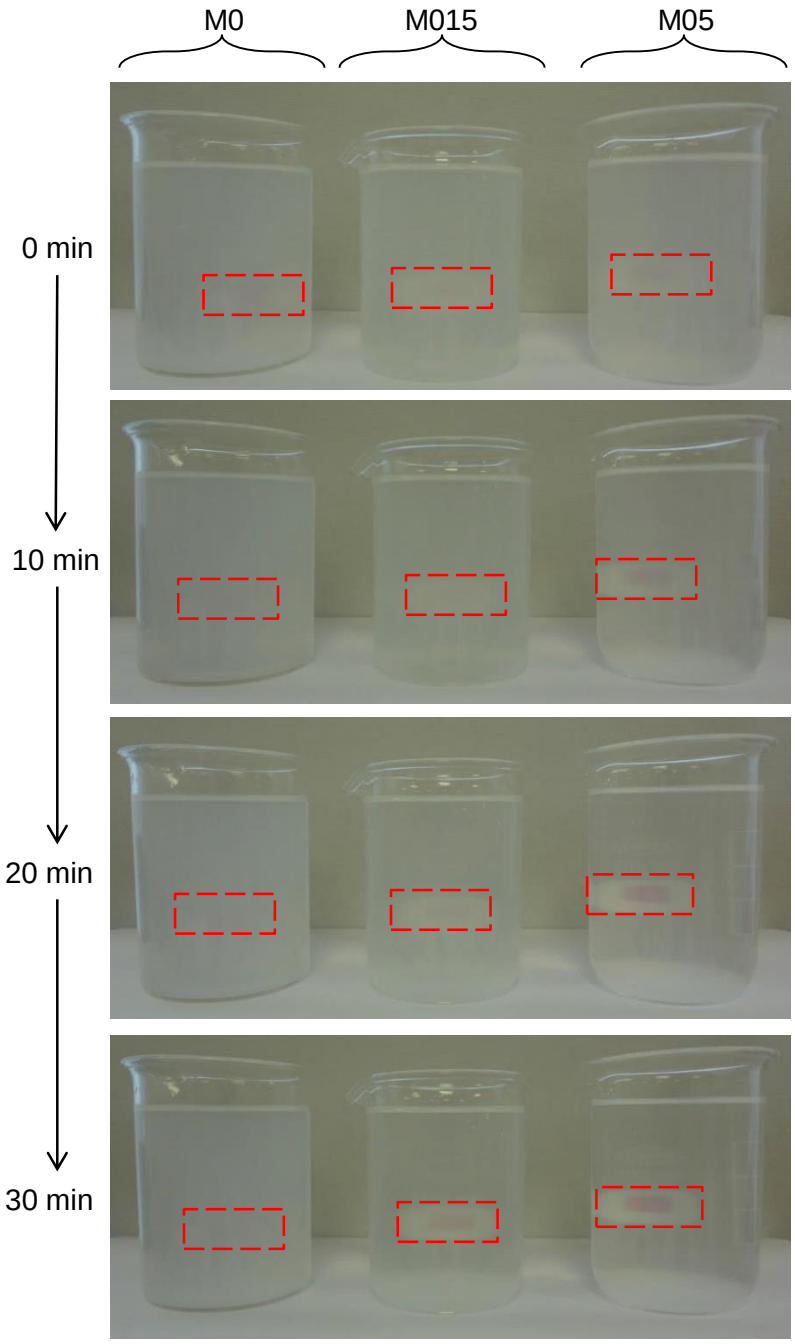

Figure S1. Photographs depicting the sedimentation rate of chitosan and alginate PECs with different salt concentrations: NaCl 0 M, NaCl 0.15 M and NaCl 0.5 M. The back of the beakers was marked with a red marker to assess the transparency of the aqueous phase over time. The red rectangles delimit the area where the mark is positioned in each photo. In NaCl 0 M, PECs precipitate slower than in NaCl 0.15 M and NaCl 0.5 M. In the latter case, the PECs are almost completely accumulated at the bottom of the beaker.

Supporting Information 3: FITC-dextran permeation into M015 samples

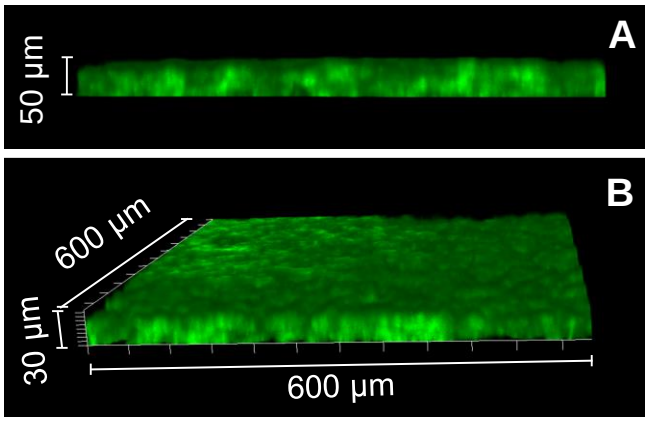

Figure S2. Fluorescence of a 20 kDa FITC-dextran absorbed into M015 compact PEC membranes after an incubation period of 7 days at 37 ºC. (A) Cross-section observation. (B) Three dimensional reconstruction of a 600×600 µm² membrane area. Observations were made on fully hydrated samples after rinsing with ultrapure water.

Supporting Information 4. Damping properties

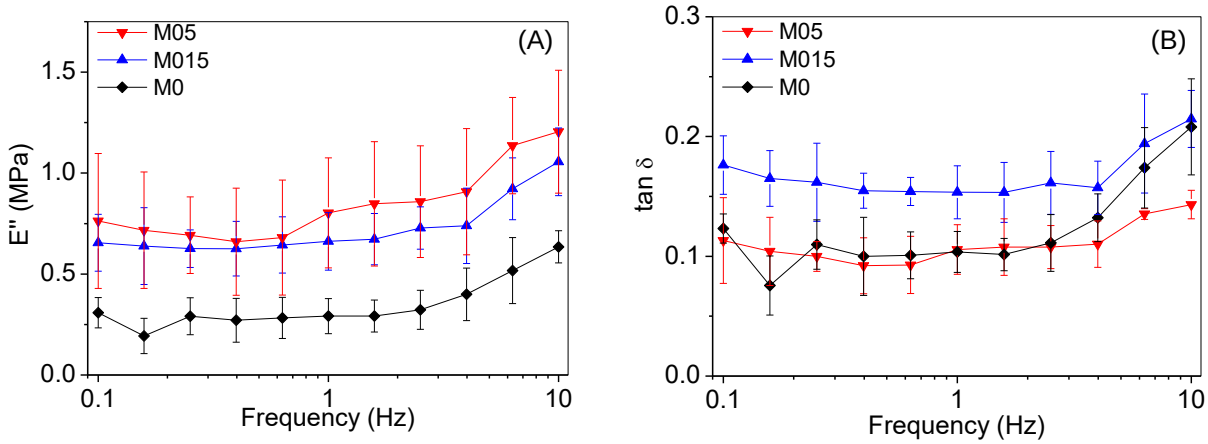

Figure S3. Loss moduli (A) and loss factor (B) for M0, M015 and M05 membranes obtained from the dynamic mechanical assays. The represented data was acquired simultaneously with the data shown in Figure 7B (storage moduli) of the main manuscript. The higher *E"* for M05 membranes reflects its higher water uptake capacity and damping properties.