

Supplementary Materials

Biopolymeric Films of Amphiphilic Derivatives of Chitosan: Physicochemical characterization and antifungal study

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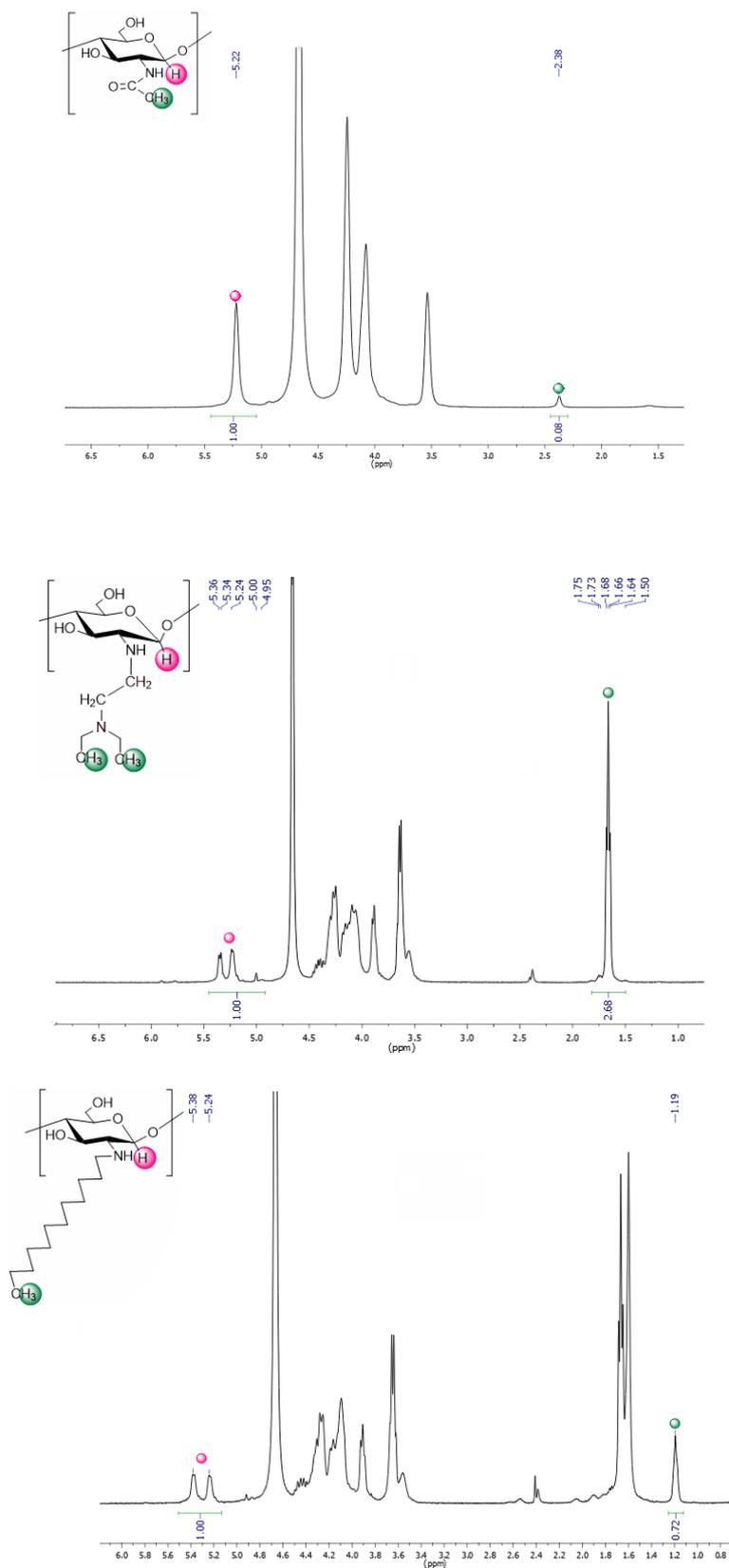


Figure S1. $^1\text{H-NMR}$ of chitosan and its amphiphilic derivatives: a) deacetylated chitosan (CH_H). b) diethylaminoethyl chitosan of low molecular weight (DEAE- CH_L) and the its hydrophobized derivative.

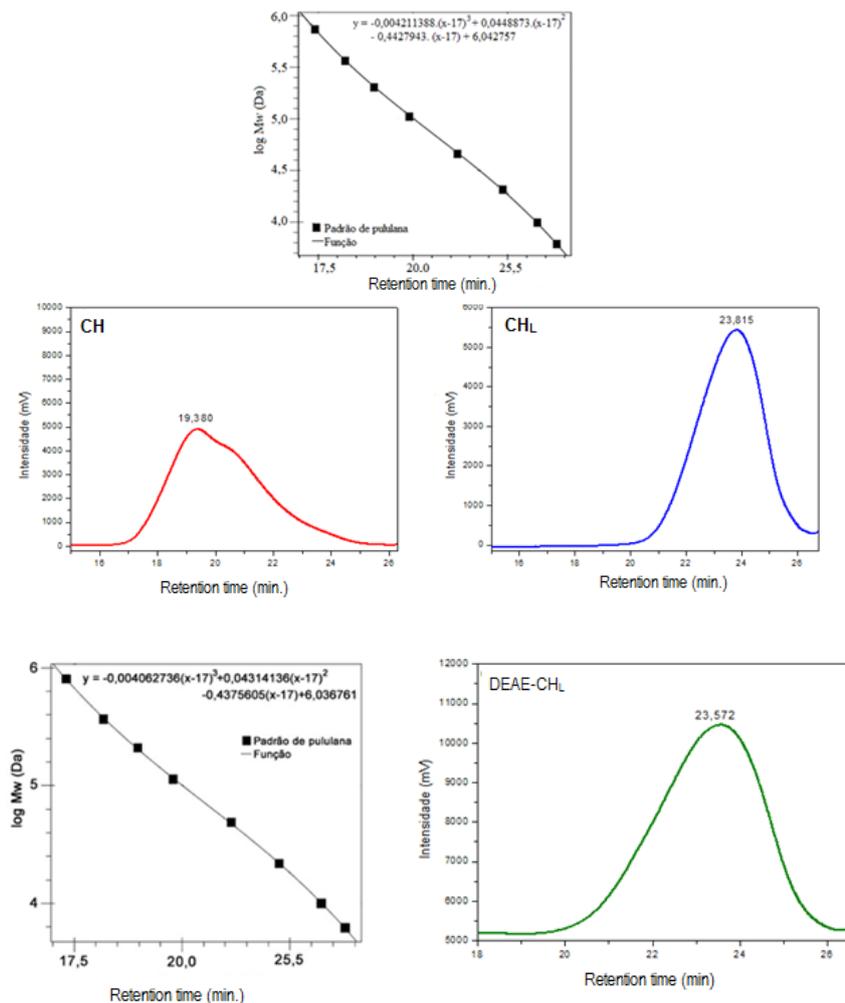


Figure S2. a) Calibration curve and chromatograms of deacetylated chitosans CH_H (143 kDa), CH_L (11 kDa) and DEAE-CH_L (14 kDa) for molecular weight determination.

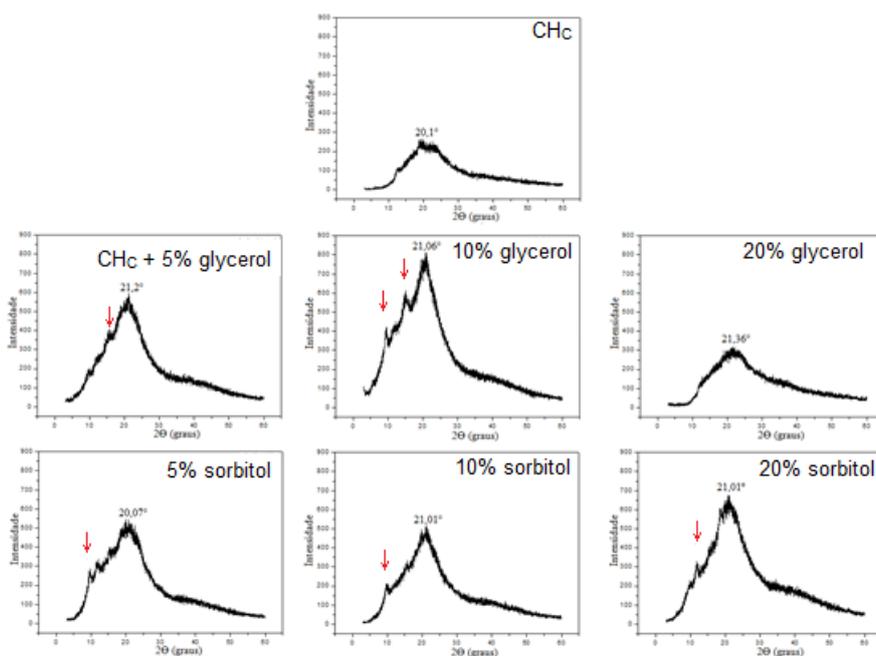


Figure S3. X-ray diffraction for films of commercial chitosan (CH_c) and its composite films containing 5%, 10% and 20% of glycerol and sorbitol. Red arrows indicate the appearance of new peaks at ~ 2θ 10-11°, not seen for CH_c without plasticizers.

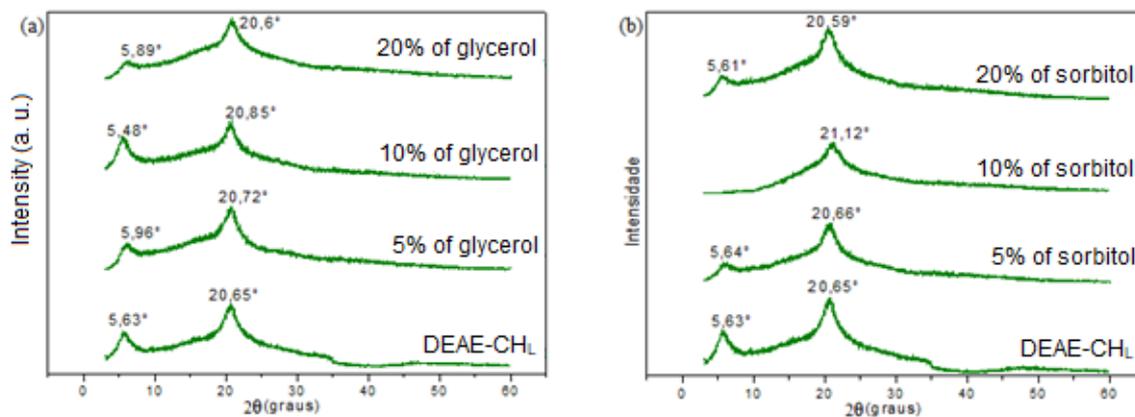


Figure S4. X-ray diffraction of diethylaminoethyl chitosan film (DEAE-CHI) and its composite films containing 5%, 10% and 20% of glycerol and sorbitol.

Table S1– Solubility of films prepared with CH_C and CH_H at increasing concentration of glycerol and sorbitol

Solubility of chitosan films (%)							
Films	Glycerol (%)				Sorbitol (%)		
	0	5%	10%	20%	5%	10%	20%
CH _C	6.10 ± 0.50	8.18 ± 0.72	8.90 ± 1.01	8.51 ± 1.17	9.48 ± 0.38	11.00 ± 0.65	15.53 ± 0.97
CH _H	9.22 ± 1.27	8.08 ± 0.07	10.84 ± 1.71	6.69 ± 0.28	24.24 ± 2.72	17.39 ± 2.14	21.81 ± 1.35