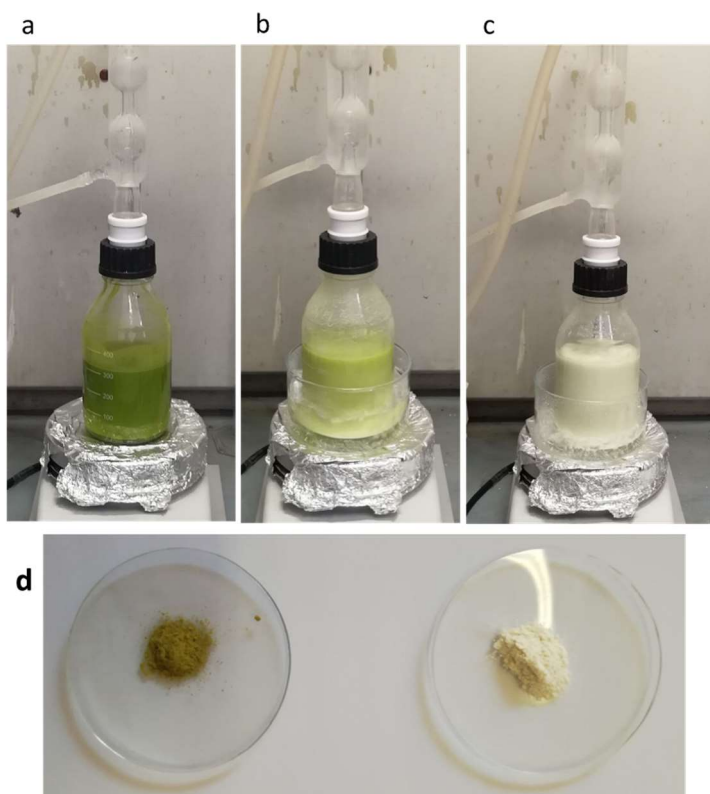


## Supplementary materials

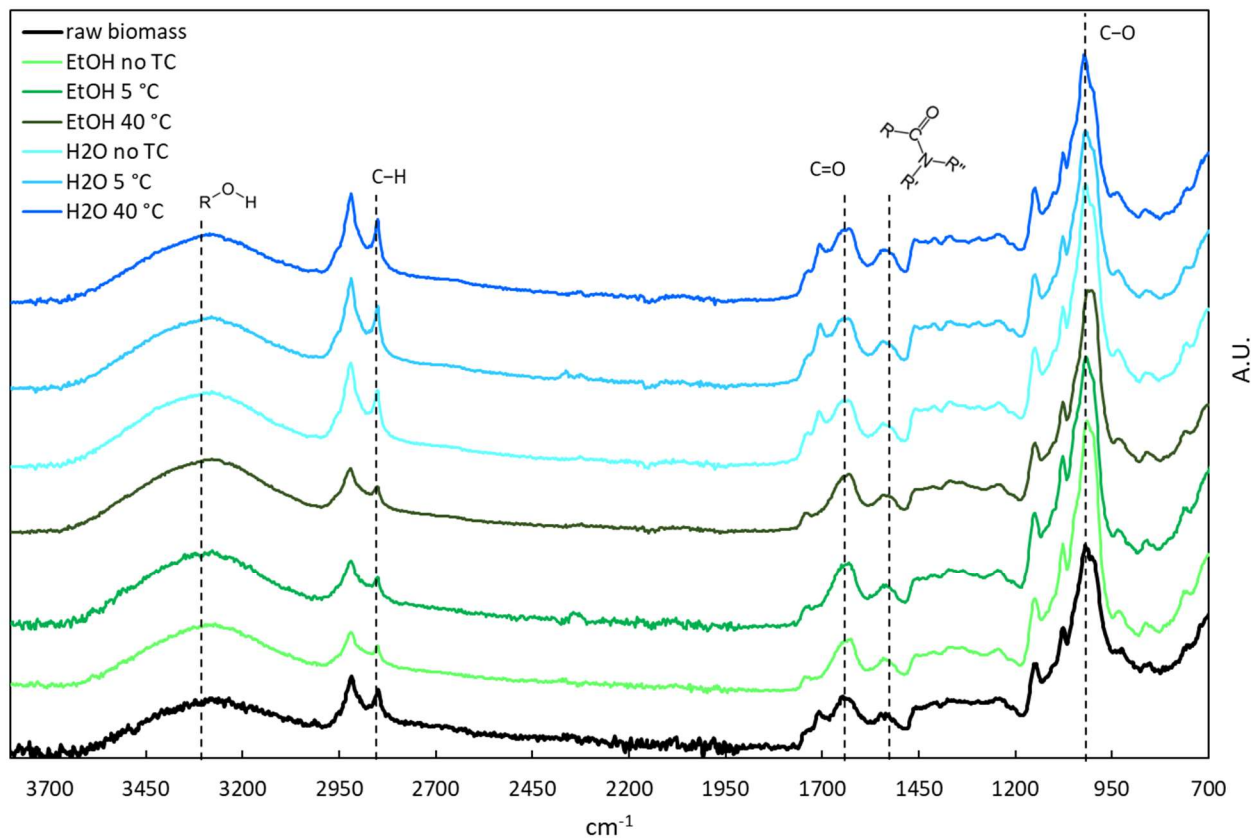
Exploring different processes for starch extraction from microalgae and synthesis of starch-chitosan plastic films

**Table S1.** Composition of modified M8 medium (initial pH 6.7):

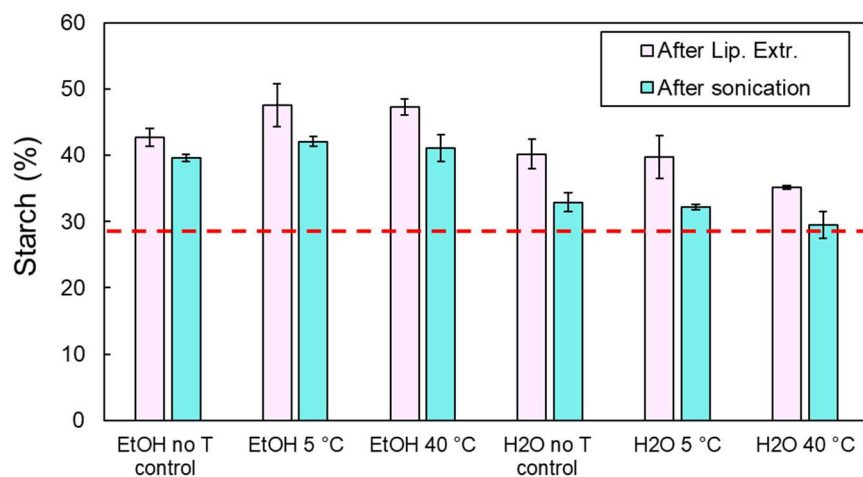
Salt	Final concentration (mol/L)
KNO <sub>3</sub>	29.9
KH <sub>2</sub> PO <sub>4</sub>	5.4
Na <sub>2</sub> HPO <sub>4</sub>	1.5
MgSO <sub>4</sub> 7H <sub>2</sub> O	1.6
CaCl <sub>2</sub> 2H <sub>2</sub> O	0.09
EDTA ferric sodium salt	0.3
Na <sub>2</sub> EDTA 2H <sub>2</sub> O	0.1
H <sub>3</sub> BO <sub>3</sub>	0.001
MnCl <sub>2</sub> ·4 H <sub>2</sub> O	65.6 10 <sup>-3</sup>
ZnSO <sub>4</sub> ·7 H <sub>2</sub> O	11 10 <sup>-3</sup>
CuSO <sub>4</sub> 5H <sub>2</sub> O	7.3 10 <sup>-3</sup>



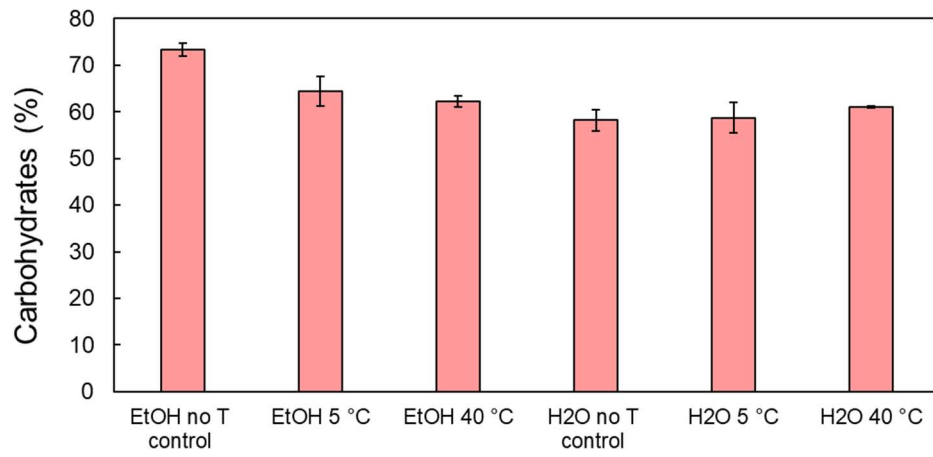
**Figure S1.** Biomass discoloration during lipid extraction with ethanol. A), B) and C) indicate biomass at the beginning, at the middle and at the end of the extraction treatment, respectively. D) Dried microalgal biomass before (right) and after (left) lipid extraction.



**Figure S2.** FTIR spectra of the pellets obtained with the different cell lysis treatments, compared with raw biomass.



**Figure S3.** Content of starch after cell lysis and after the following lipid extraction treatment, for the samples treated with different cell lysis protocols.



**Figure S4.** Content of total carbohydrates after lipid extraction carried out after cell lysis, for the samples treated with different cell lysis protocols.