Table S1. Total recovered protein and polysaccharide across the operationally extracted SMP, LB-EPS and TB-EPS fractions.

Treatment	Total recovered PN (mg/g VS)	Total recovered PS (mg/g VS)
Untreated ADS	27.72 ± 0.37	9.56 ± 0.26
Biochar	26.74 ± 0.24	8.92 ± 0.46
ECS	24.88 ± 0.65	7.66 ± 0.32
GCS	21.86 ± 0.56	6.44 ± 0.30
Biochar → ECS	18.83 ± 0.45	6.83 ± 0.63
ECS → Biochar	20.77 ± 0.42	7.74 ± 0.35
Biochar → GCS	25.12 ± 0.23	14.64 ± 0.37
GCS → Biochar	25.46 ± 0.42	14.95 ± 0.28

Note: Values are means ± standard deviations from three independent EPS extractions performed on independently conditioned aliquots (n = 3). For each replicate, total recovered PN and PS were calculated separately by summing the corresponding recovered masses across the operationally extracted SMP, LB-EPS and TB-EPS fractions before calculating the treatment mean and standard deviation. Recovered amounts were normalised to the initial sludge VS mass, excluding the added conditioners. Discarded washing liquids and residual solids were not included.

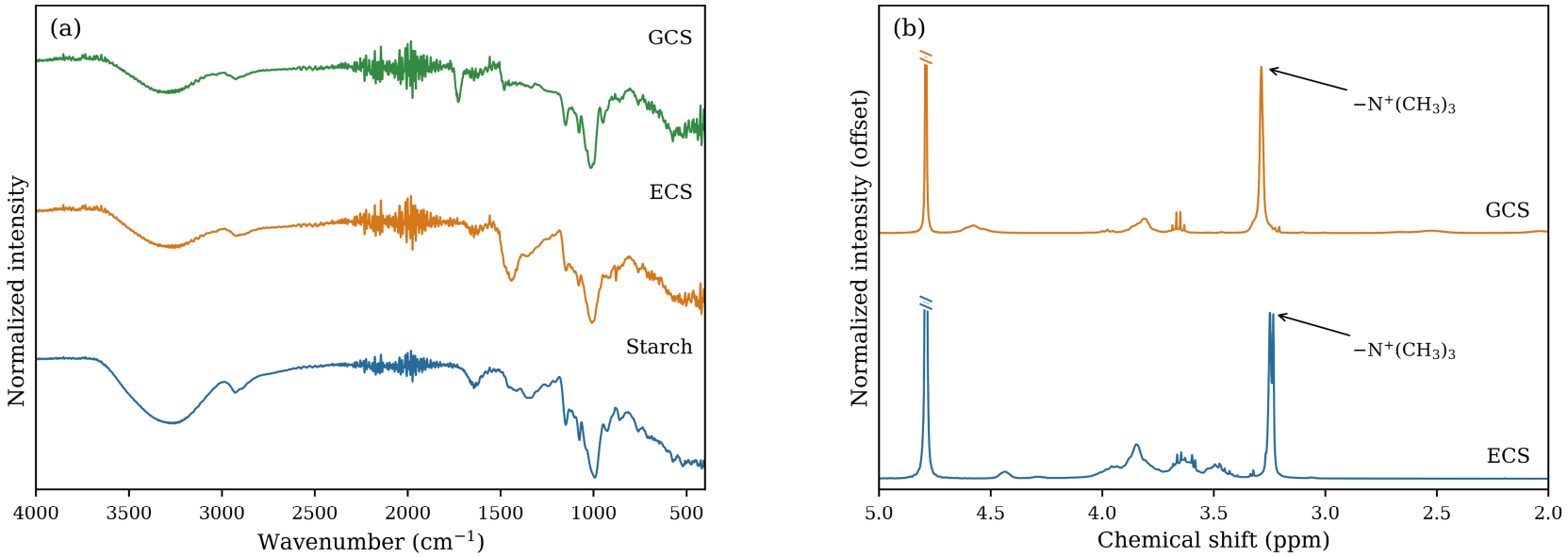


Figure S1. Structural characterisation of the starch-based bioflocculants. (a) FTIR spectra of soluble starch, ECS and GCS. (b) ^{1}H NMR spectra of ECS and GCS.