

Digestion of isolated legume cells in a stomach-duodenum model: three mechanisms limit starch and protein hydrolysis

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Supplementary data

S1. First order and LOS fits for starch and protein hydrolysis in intact cells

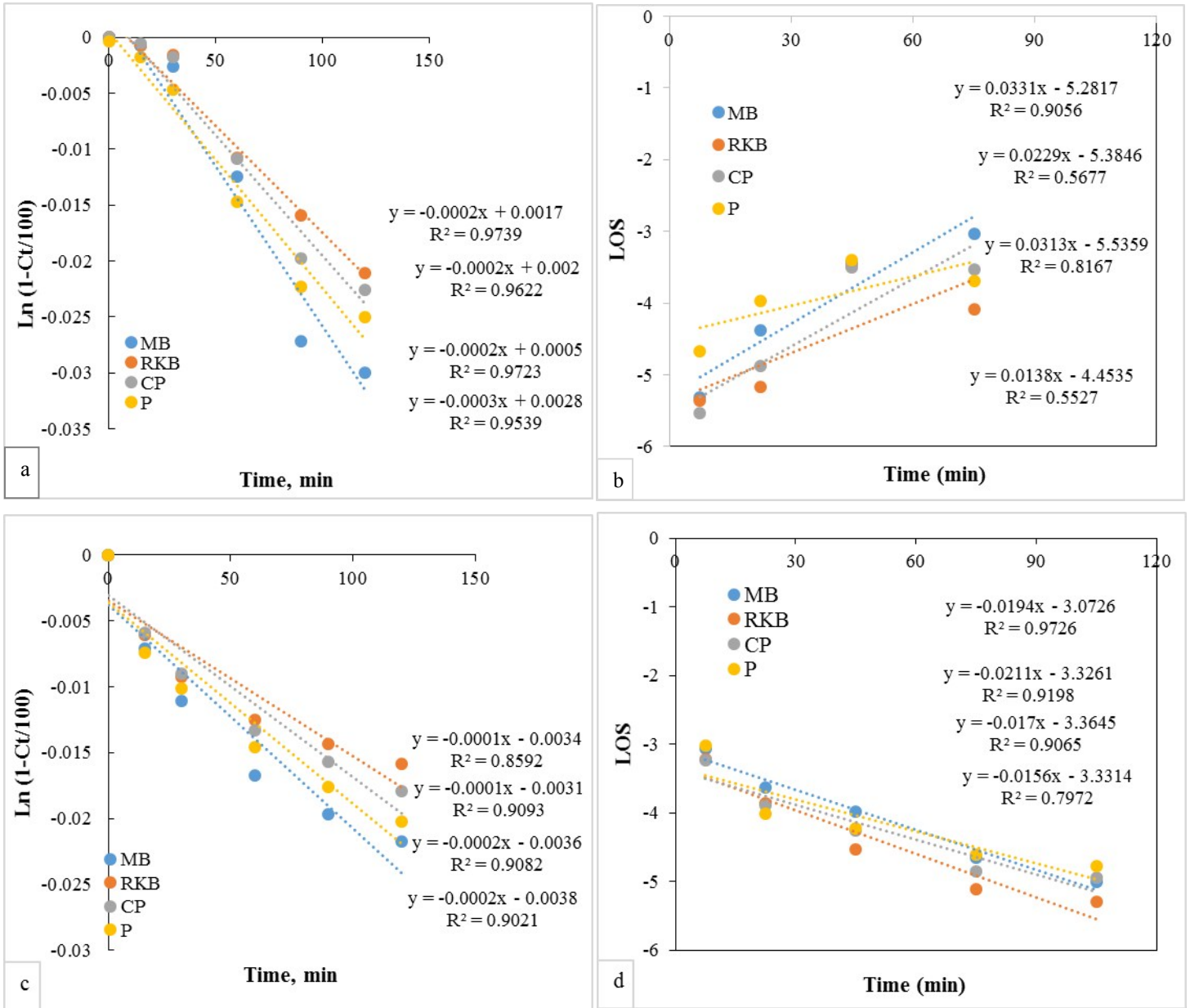
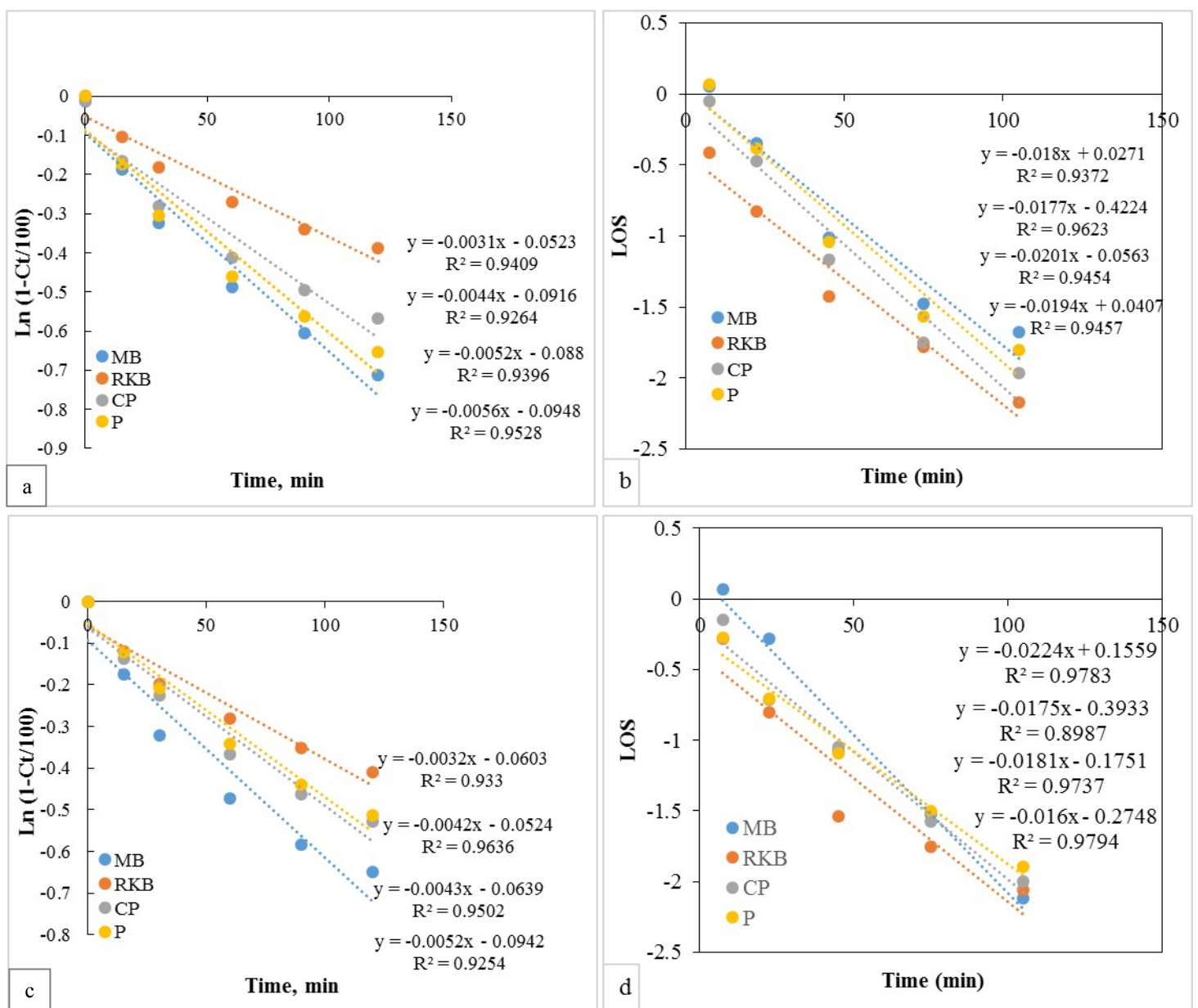


Fig. S1. First order and LOS fits of data for intact cells where (a, b): starch hydrolysis, (c, d): protein hydrolysis; MB= mung bean, RKB= red kidney bean, CP= chickpea and P= pea.

S2. First order and LOS fits for starch and protein hydrolysis in broken cells



S3. First order fits for starch hydrolysis in case of binding experiments

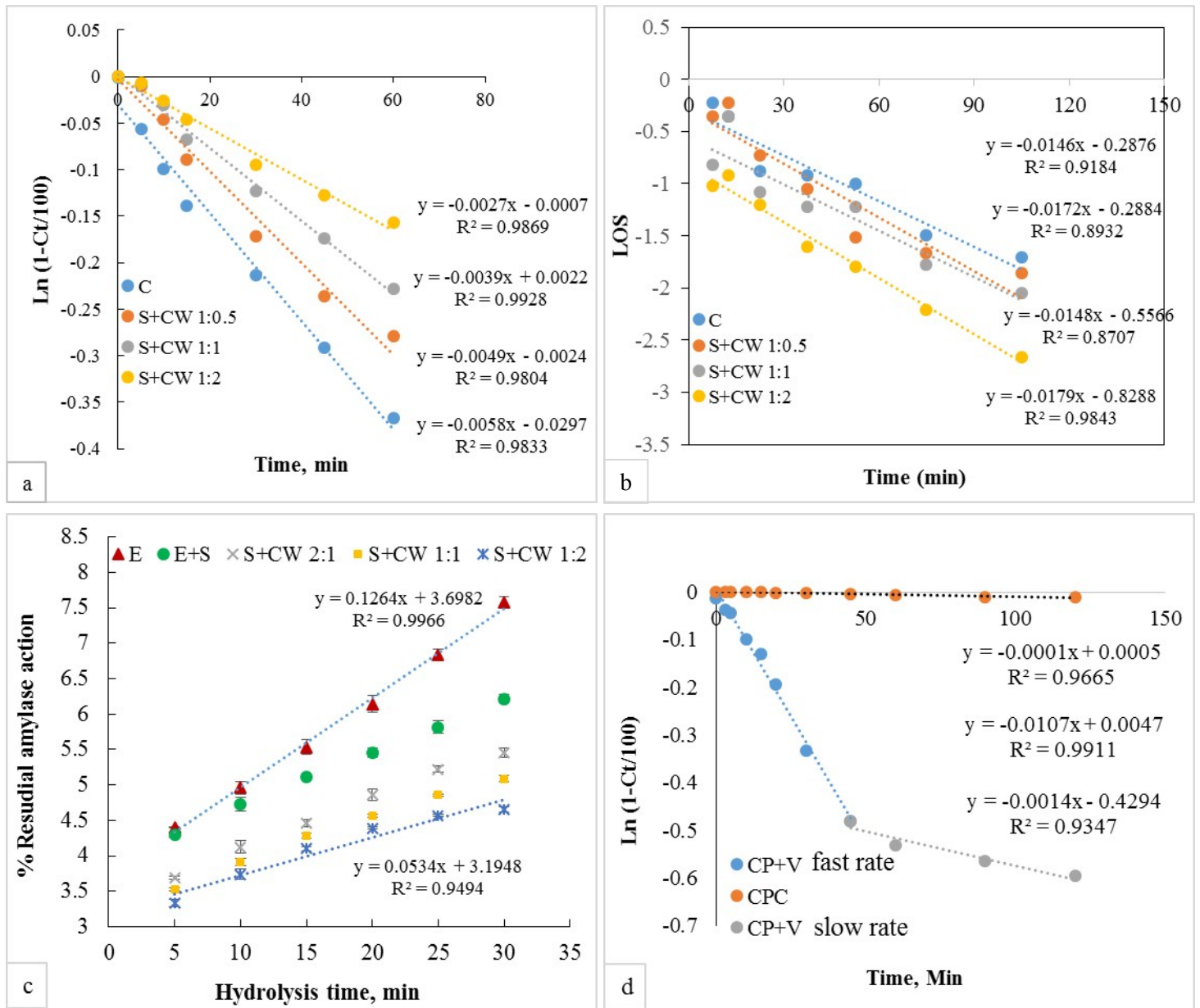


Fig. S3. First order and LOS fits of data for starch hydrolysis in binding experiments (a, b): with added cell wall components to starch-protein mixture at different ratios, (c): linear equation for solution depletion method to assay amylase activity, (d): viscozyme treated chickpea cells; E= α -amylase, S= starch, CW= cell wall components, CP= chickpea, C= control and V= viscozyme.

S4. First order and LOS fits for protein hydrolysis

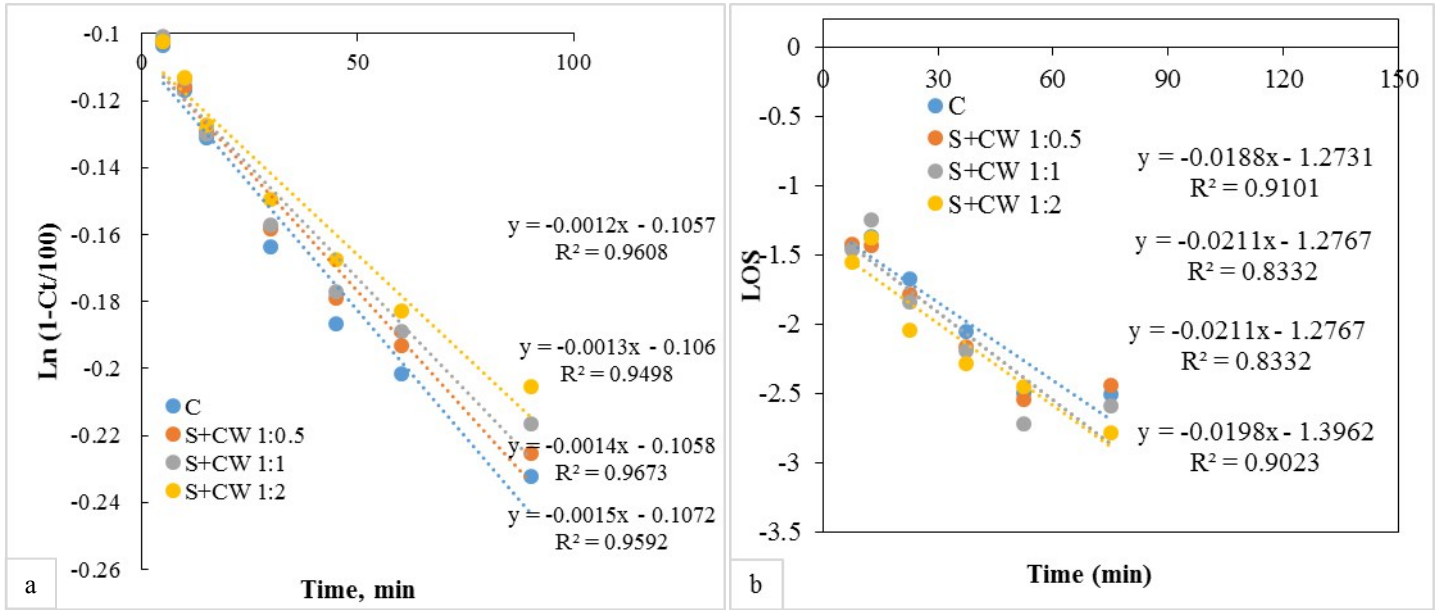


Fig. S4. First order (a) and LOS (b) plots of data for protein hydrolysis for binding experiments with added cell wall components to starch-protein mixture at different ratios; MB= mung bean, RKB= red kidney bean, CP= chickpea and P= pea.