

Table S1: Estimated kinetic parameters (\pm standard deviation) of the fractional conversion model (Eq. 3) for *in vitro* amylolysis of whole lentil seeds (CL) cooked for 30 minutes. CL30_{rep1} and CL30_{rep2} indicate independent evaluations of lentils of the same batch, independently cooked, mechanically disintegrated, and *in vitro* digested in duplicate using separately characterized enzyme batches. Estimated parameters are the rate constant k and final extent of amylolysis C_f . Within a column, different letters in superscript indicate significant difference between means, based on 95% confidence intervals. The kinetic parameters do not differ significantly over independent repetitions of the digestion experiments, proving the reproducibility of the experimental set-up and digestion evaluations.

| | C_f (%) | k (/min) |
|----------------------------|------------------------------|----------------------------------|
| CL30 | 97.6 \pm 2.1 ^a | 0.0258 \pm 0.0015 ^a |
| CL30_{rep1} | 92.9 \pm 3.4 ^a | 0.0329 \pm 0.0033 ^a |
| CL30_{rep2} | 100.3 \pm 2.6 ^a | 0.0302 \pm 0.0018 ^a |

CL: Mechanically disintegrated whole lentil seeds cooked for 30 minutes;

rep: Repetitions of the whole experimental approach. Lentils of the same batch of raw material were cooked and mechanically disintegrated independently. Digestion experiments were carried out separately, using separately characterized enzyme batches.