

Supplementary data

Table S1. The gelatinization onset temperatures of native and partially gelatinized potato starch samples pre-heated at 59 °C and 60 °C for different times (min) by calculating temperatures at the maximum points of Tan δ .

Temperature	0	1	3	6	9	12	15	18
59 °C	60.13 \pm 0.58 ^D	58.40 \pm 1.21 ^E	63.90 \pm 0.00 ^C	63.90 \pm 0.00 ^C	64.90 \pm 0.00 ^{BC}	65.90 \pm 0.00 ^{AB}	66.90 \pm 0.00 ^A	65.90 \pm 0.00 ^{AB}
60 °C	60.13 \pm 0.58 ^e	63.35 \pm 0.78 ^d	63.90 \pm 0.00 ^d	65.40 \pm 0.71 ^c	65.90 \pm 0.00 ^{bc}	66.90 \pm 0.00 ^{ab}	66.90 \pm 0.00 ^{ab}	67.90 \pm 0.00 ^a

Data are means \pm SD. ^{A, B, C, D} represent the significant difference of starch samples in row by heating at 59 °C ($p < 0.05$); ^{a, b, c}, ^{d, e} represent the significant difference of starch samples in row by heating at 60 °C ($p < 0.05$).

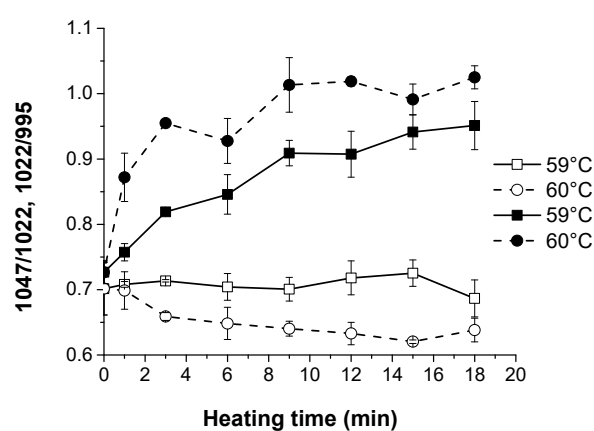


Figure S1. Ratios of absorbance 1047/1022 cm⁻¹ (open symbols) and 1022/995 cm⁻¹ (solid symbols) of native and partially gelatinized potato starch samples as a function of heating time.

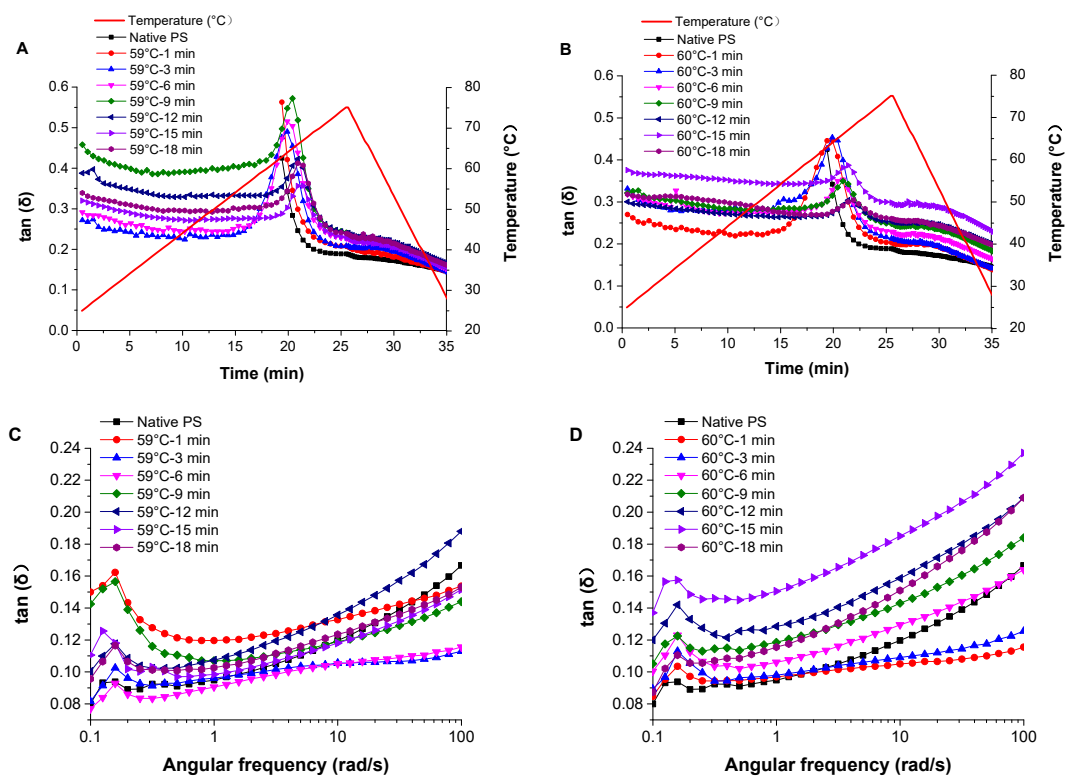


Figure S2. Temperature (A, B) and frequency (C, D) dependence of $\tan \delta$ of native and partially gelatinized potato starch samples (A, C: pre-heated at 59 °C; B, D: pre-heated at 60 °C).