



**Figure S1:** DSC thermograms obtained for (A) lentils cooked for 15, or 60 minutes, and (B) lentil cells isolated from lentils cooked for 15, 30, or 60 minutes. These thermograms indicate complete gelatinization of starch due to the absence of a peak around 68-69 °C, with the peak around 55 °C representing gelatinization of retrograded starch. The peak around 83 °C is probably due to the formation of amylose-lipid complexes and/or residual protein denaturation.