

WHEAT AND CHICKPEA STARCH BLENDS; EFFECT ON PASTING, THERMAL AND TEXTURAL PROPERTIES

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Starches are modified by several means including physical, chemical and enzymatic. The use of chemicals and enzymes sometimes makes the resultant product toxic and expensive. Alternative methods like blending of two different starches can be a good choice to get the desired results. In this study, Wheat starch (WS) and Chickpea starch (CS) blends were prepared in different proportions like 100WS, 10CS/90WS, 30CS/70WS, 50CS/50WS and 100CS. Pasting, thermal, textural and functional properties of the different blends were studied. Additive effect of starch blends was observed from the Differential scanning calorimetry (DSC) thermograms. Gelatinization enthalpy of individual CS was higher as compared to individual WS. Amylose lipid complex was observed in individual WS and all blends. Increasing the level of CS, resulted in more syneresis from starch gels at 0, 30 and 60 days of freeze thaw cycles. All the blends showed a linear trend regarding gel chewiness and hardness values. Our studies suggest that blending of WS with CS in can be useful in high temperature processing.

Keywords: Starch blends, Chickpea, Wheat, RVA, DSC

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