

## **Ingredient supplementation effects on water holding capacity in Greek style yogurt**

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The study reported in this Research Communication was carried out to investigate the effects of pectin and whey protein concentrate (WPC) on water holding capacity (WHC) in Greek style

yogurt. Pectin (0.05%) and WPC (1%) were added into the skim milk. The yogurt mixes were heated at 90°C for 10 min, inoculated with 3.0% of starter culture, and incubated at 40°C for 4 h (pH ~ 4.6), then refrigerated overnight at 5°C. Control yogurt sample was prepared without addition of these ingredients. Yogurt made with WPC and pectin had a significantly higher WHC ( $P < 0.05$ ) and lower syneresis than the control. The WHC of yogurt with both pectin and WPC was ~ 56%, which is 23% higher than the control (33%). Similarly, yogurt supplemented with both pectin and WPC exhibited 15% less susceptibility to syneresis compared to the control. Native PAGE analysis showed an interaction between pectin and WPC. Pectin hinders the formation of large oligomeric aggregates of whey protein which correlates with an increase in WHC and a decrease in syneresis. Our results demonstrated that a combination of pectin and whey protein concentrate can reduce acid whey and could thus have positive implications for industry in the production of Greek style yogurt.