

# **Development of Red Dragon Fruit Yogurt**

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## ABSTRACT

The aim of this study was to utilize red dragon fruit in the development of a yogurt product and to evaluate the yogurt's sensory acceptability. The red dragon fruit content correlates with the intensity of the colour of the yogurt. Higher fruit concentrations result in a darker colour. The samples were fermented according to their respective fermentation time. From the experiment, final pH corresponded with fermentation time because longer fermentation time resulted in lower pH. The yogurt samples were evaluated based on their appearance, colour, aroma, fruit flavour, sourness, texture and overall acceptability, using the nine point hedonic scale. From the sensory evaluation, sample S521 with 10% fruit content and fermented for 6.5 hours had the highest overall acceptability (6.45), rating (2.88) and purchase intent (71.19% would buy) among the yogurt samples. The mean scores for the sensorial attributes are appearance (6.40), colour (6.37), aroma (6.25), fruit flavour (6.32), sourness (6.28) and texture (6.23). There were significant differences between the control sample and red dragon fruit samples ( $P < 0.05$ ), for appearance, colour, aroma, texture and overall acceptability. There were no significant difference for fruit flavour and sourness ( $P > 0.05$ ). Chemical and microbiological analysis was also carried out for each of the yogurt samples. The chemical analysis includes pH (pH 4.23), titratable acidity (1.06g lactic acid/100g sample) and total solids content (20.77%) were determined. There were 6.72 log<sub>10</sub> cfu/ml of *L. bulgaricus* and 6.45 log<sub>10</sub> cfu/ml of *S. thermophilus* in sample S521.

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