

**DEVELOPMENT OF COW MILK YOGHURT BY
INCORPORATING KITUL PANI**

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By

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ABSTRACT

Yoghurt is a fermented dairy product obtained by lactic acid fermentation of milk, and is a popular product throughout the world. Yoghurt has a smooth texture, mild sour and pleasant flavour. Yoghurt is easily digested and has high nutritional value. The yoghurt made from different concentration of kitul were analyzed for chemical (titrable acidity, pH, dry matter, ash, total sugar and reducing sugar) and physical (Colour, flavour, taste, texture and overall acceptability, syneresis) parameters. Five points hedonic scale ranking method was used to evaluate organoleptic characters.

There were differences ($p < 0.05$) between yoghurt made from without kitul and kitul added yoghurt in the pH, titrable acidity, and ash, and dry matter, total sugar, reducing sugar and syneresis at day one of storage. The means value for ash, dry matter, total sugar, reducing sugar, titrable acidity, pH and syneresis for the yoghurt made from without kitul were $0.86 \pm 0.04\%$, $18.22 \pm 0.10\%$, $12.27 \pm 0.08\%$, $2.47 \pm 0.02\%$, $0.71 \pm 0.01\%$, 4.55 ± 0.67 , $44.86 \pm 0.15\%$, respectively. The results showed that titrable acidity, ash, dry matter increased and total sugar, reducing sugar reduced over the storage period. Highest values for acidity (1.23%) and lowest values for pH (3.62) were recorded for yoghurt made with 16 % kitul at the 4 weeks of storage. The results revealed that the nutritional values of yoghurt were slightly increased with the addition of kitul pani in different concentrations. Bacterial colony count in the kitul added yoghurt was slightly higher when compared to yoghurt made without kitul.

Organoleptic parameters of yoghurt made from 12% kitul was superior than yoghurt made from 0%, 4%, 8%, 16% kitul added yoghurt. The 12% kitul added yoghurt had the highest overall acceptability (4.50 ± 0.70) scores compared to yoghurt made from without kitul. The results of the sensory evaluation revealed that flavour with respect to taste and texture had significant influence ($p < 0.05$) on overall acceptability of yoghurt. So, the yoghurt manufacturers need to improve on the sensory properties in particular flavour, taste and texture for better consumer acceptability.

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