

**DEVELOPMENT OF BUTTERMILK PUDDING  
INCORPORATING SKIM MILK POWDER,  
CONDENSED COCONUT (*Cocos nucifera*) MILK,  
AND KITUL (*Caryota urens*) TREACLE**

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## ABSTRACT

Buttermilk is the major byproduct of butter industry. Lack of utilization as a food, low total solids contains and shorter shelf life are the three major limitations associated with buttermilk. Few studies have been conducted on improving the utilization of buttermilk as a dessert. Aim of this study is to add value to buttermilk by developing buttermilk pudding incorporating skim milk powder, condensed coconut (*Cocos nucifera*) milk and kitul (*Caryota urens*) treacle. Four consecutive sensory evaluations were conducted to select the best percentages of skim milk powder, condensed coconut milk, kitul treacle and gelatin for buttermilk pudding. Skim milk powder, condensed Coconut milk and kitul treacle levels were changed as 10% (w/w), 20% (w/w), 30% (w/w) and gelatin levels were changed as 1% (w/w), 2% (w/w) and 3% (w/w), while maintaining the percentages of other ingredients constant. The selected samples were analyzed for shelf life during day 1, day 3, day 7, day 8, day 10 and day 12. Shelf life determination was done analyzing coliform, yeast and mould, total colony count, pH and organoleptic qualities. Sensory evaluations were done by 30 untrained panelists for appearance, flavor, color, texture, mouth feel and overall acceptability using five point hedonic scale, to select the best percentage of skim milk powder, condensed coconut milk, kitul treacle and gelatin. Sensory data were analyzed by Freedman non-parametric statistical method and pH, coliform, yeast and mould, total colony count were analyzed by correlation using minitab14. Overall acceptability was highest ( $p < 0.05$ ) in 20% (w/w) skim milk powder, 20% (w/w) condensed coconut milk, 20% (w/w) kitul treacle and 2% (w/w) gelatin added buttermilk pudding. Yeast, moulds and total colony count were increased ( $p < 0.05$ ) and pH decreased ( $p < 0.05$ ) after 10 days at 4 °C. According to the results buttermilk pudding incorporated with 20% (w/w) skim milk powder, 20% (w/w) condensed coconut milk, 20% (w/w) kitul treacle and 2% (w/w) gelatin (percentages were calculated by weight of buttermilk) has been selected as the best formula with highest sensory attributes. Furthermore, this buttermilk pudding can be kept under refrigeration condition (4 °C) for 10 days without any quality deterioration.