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### **PRODUCTION OF FUNCTIONAL YOGURT: EFFECT OF NATURAL ANTIOXIDANT FROM GUAVA (*PSIDIUM GUAJAVA*) LEAF EXTRACT**

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#### **ABSTRACT**

The possibility of producing a functional yogurt from a skimmed buffalo's milk using guava (*Psidium guajava*) leaf extract was investigated. Methanol exhibited slightly higher extraction ability for phenolic compounds than ethanol and water. The total phenols were 894, 882 and 877 $\mu\text{g/g}$  powder, respectively, when extraction ratio was 1:12. Addition of water extract of guava leaf by different concentrations to a functional yogurt, showed significant changes of pH, titratable acidity during cold storage up to 5 days. The reducing activity of all samples significantly ( $P>0.05$ ) decreased up to the end of storage period, while the inhibition of ascorbate autoxidation significantly increased with increasing of the amount of phenolic compounds till 300  $\mu\text{g}$  phenolic components /100ml yogurt followed by a slight decrease. During storage, the average viable cell counts on MRS increased in yogurt contained guava leaf extract 75  $\mu\text{g}$  phenolic component /100ml from log CFU/ml 9.60 after one day to 10.17 on day 5. Notwithstanding, there was a decline in log CFU/ml on M17 throughout storage. Sensory evaluation data indicated no significant differences ( $P>0.05$ ) between the control and treated samples. Based on the above results, technology can be proposed for productions of a functional yogurt with water extract of guava leaf, as natural antioxidant source.