PRODUCTION OF FUNCTIONAL YOGURT: EFFECT OF NATURAL ANTIOXIDANT FROM GUAVA (PSIDIIUM 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 μg/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 μg 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 μg 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.