PHYSICO-CHEMICAL PROPERTIES AND MICROSTRUCTURE
OF DANGKE CHEESE BY INOCULATED OF *Lactococcus lactis* at DIFFERENT
TEMPERATURE STORAGE

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**ABSTRACT**

Dangke which is a traditional cheese Enrekang South Sulawesi has self life only a few
days and have a quality that is still often varied and less good. Dangke quality can be improved
with the ripening process. *Lactococcus lactis* is usually used as a starter in the manufacture of
cheese ripening, including Dangke (traditional cheese of Indonesia). The purpose of this study is
to improve the quality of dangke by ripening and inoculation of starter culture bacteria to obtain
fermented dangke as other types of fermentation cheese. The changes in physic-chemical
properties and microstructure of Dangke cheese made from cow fresh milk, coagulated with
papaya sap and inoculated by *Lactococcus lactis* were investigated during 0 - 6 days ripening
period. Physicochemical data were statistically processed by analysis of variance followed by the
least significant difference test, while the micro data processed descriptively. The results showed
that the ripening time indicates that provide an opportunity for *L. lactis* to continue to be active
on carbohydrate metabolism, resulting in a decrease in lactose, and pH. Results also showed that
the moisture and fat content decreased, lactic acid and total protein increased. Microstructure
observations indicate that the fat globules varying magnitude and matrix proteins are not evenly
distributed but look more compact in dangke with the maturation of six days.

Keywords: Dangke, duration of ripened, *Lactococcus lactis*, physicochemical properties, micro-
structural properties.