

Food Technology, Ce Drocess &

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## Anthocyanins from mulberry (morus rubra) fruits as potential natural colour additives in voghurt

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Nolor is one of the vital constituents of some foods and beverages. In addition to other functions, color plays a very important role in the acceptability of some foods by many consumers. Synthetic colorants have often been used in attempts to color some foods and beverages. However, the demand for foods with synthetic colors is diminishing drastically due to associated health problems and legislative action against some of them. Anthocyanins have been of great interest as alternatives to synthetic colorants due to their bright colors and nutraceutical value. However, their application in some foods and beverages is limited due to their low stability to several food processing and storage conditions. Nevertheless, highly acylated anthocyanins and whole fruit extract containing non-acylated anthocyanins and have been shown to exhibit high stability in some foods and beverages. The pigment and color stability of anthocyanins in the juice concentrate obtained from mulberry added to yoghurt were evaluated. The anthocyanin concentration varied between 10 to 50 mg/100 g yogurt and anthocyanin degradation during 14 days storage at <8°C was monitored spectrophotometrically. Yoghurt colored with mulberry anthocyanins between 25-40 mg concentration levels of anthocyanins produced a color which was very much comparable to commercial brand strawberry yoghurt colored with 20 mg FD & C red No. 3 in 100 g of yoghurt. Pigment and color stabilities of the anthocyanins increased with increasing concentration of anthocyanins added to yoghurt. The tendency to polymerize decreased with increasing concentration of the pigments added to yoghurt. The degradation of the anthocyanins followed first-order reaction kinetics. Moderate concentration levels (25-40 mg/100 g of yoghurt) of mulberry anthocyanins were found to be ideal to color yoghurt.

Key words: Mulberries, Anthocyanins, Cyanidin-3-glucopyranoside (cy-3-glu), Natural colorants, Color stability, Yoghurt

## Biography

Moses Andimaa has finished his master's degree in Science (Chemistry) at Makerere University. He is currently working as a teaching assistant in Busitema University in the Department of Chemistry. His interest lies mainly in evaluating the nutraceutical potential of edible tropical fruits and their application as functional foods.

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