

Abstract

Lacto-products processed by lactic acid fermentation are known to have nutraceutical attributes and create variety in the beverage composition. Due to their high nutritive value, they are beneficial to human health when consumed regularly. In this study orange fleshed potato varieties (Zapallo, Nyathiudiewo and SPK004/08) were fermented with *Lactobacillus plantarum* M100 1407 at $25 \pm 2^\circ\text{C}$ for 48 h and kept for 28 days to make lacto-pickles. An optimization of process conditions was done by varying brine levels with fermentation time. The fermented products were subjected to panelist evaluation for flavour profiling. The product sensory scores were (1.5-2.5) on a 5 point hedonic scale ranging from dislike slightly to like much. The product with brine levels at 4 and 6% were found to be most preferred. The findings from this study indicate the acceptability of the developed lacto-pickles and suggest that the development of new products from sweet potato with functional attributes could improve its consumption among families while enhancing the shelf life of the product. It was concluded that the β -carotene rich, sweet potato lacto-pickle is a novel product which could find wide acceptance with good prospects for commercialization in small-scale industries.