# LENGTHENING THE SHELF LIFE OF PALMYRAH DRIED AND BOILED TUBER FLOUR

A dissertation submitted to the

Faculty of Animal Science and Export Agriculture

Uva Wellassa University

In partial fulfilment of the requirement for the award of

Bachelor of Science in Palm and Latex Technology and Value Addition

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**UWU/PLT/15/019**

**Palm & Latex Technology and Value Addition Degree Programme**

**Faculty of Animal Science and Export Agriculture**

**Uva Wellassa University of Sri Lanka**

**2019**

# ABSTRACT

Palmyrah (*Borassus flabellifer*) is widely distributed in the Northern and Eastern province of Sri Lanka, South India and in most other tropical countries. Tuber products are included in edible products of the palm. Dried Tuber has carbohydrate, fiber, calcium, magnesium, iron, fat and protein in several levels and palmyrah tuber flour also has natural medicinal and therapeutic values. But, as these are seasonal products, most of them are spoiled and wasted due to the microbial and insects attack. So overall objective is to increase the shelf life of these products by using suitable preservation method. For both fresh and boiled tuber's optimum drying time for sun drying is 6 days and oven drying is 36 hours. Normal Packaging, Vacuum packaging, Roasting, Fumigation and addition of preservative were the treatments done to increase the shelf life of the flour. Variations of TPC count and Yeast and moulds count were compared for normal and all treated Normal Packaging, Vacuum packaging, Roasting, Fumigation and addition of preservative palmyrah tuber flours. Fumigation and roasting are suggested as the best treatments for dried tuber flour .TPC count for fumigated and roasted dried tuber flour were $(6.2 \pm 0.07)\ 10^6$ and $(8.7 \pm 0.14)\ 10^6$. Yeast and moulds count for fumigated and roasted dried tuber flour were $(3.9 \pm 0.1)\ 10^4$ and $(8.1 \pm 0.1)\ 10^4$ . Fumigation and addition of preservative are suggested as a best treatments for boiled tuber flour .TPC count for fumigated and addition of preservative boiled tuber flour were $(8.8 \pm 0.14)\ 10^6$ and $(3.1 \pm 0.14)\ 10^6$. Yeast and moulds count for fumigated and addition of preservative boiled tuber flour were $(1 \pm 0.07^c)\ 10^4$ and $(3.9 \pm 0.14^c)\ 10^4$. Chemical parameters such as moisture, ash, starch were tested for normal and all treated tuber flours. Bulk density was tested as the functional property. None of the treatments affect the tested chemical and physical properties of flour.