# Manufacturing and Technochemical Properties of Some Natural low Calory Juices

By
**Mohamed Ben Mahmoud Massri**
General Bachelor degree (Agriculture Engineering) 1990

A thesis submitted in partial fulfilment
of
the requirment for the degree of

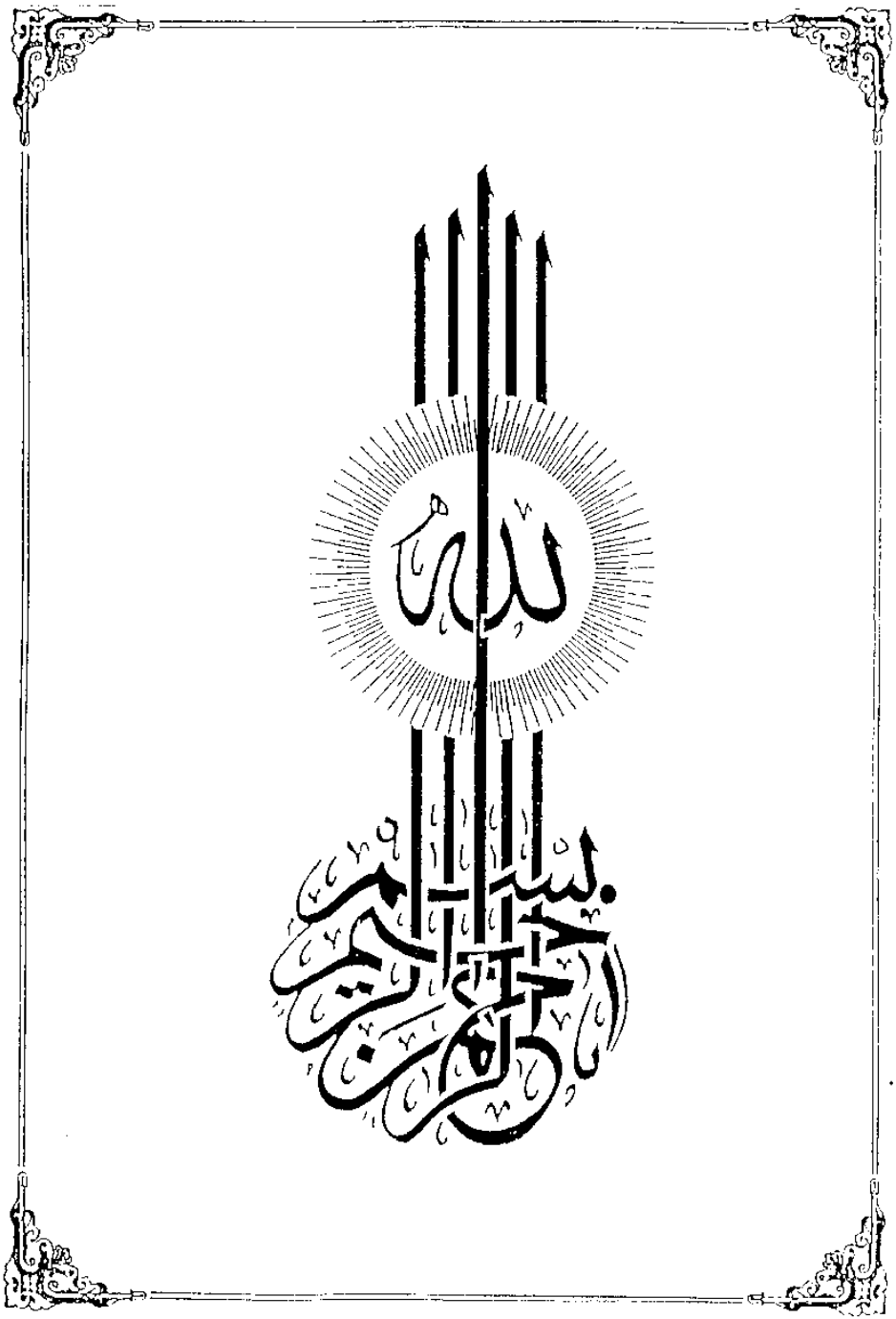
**MASTER OF SCIENCE**



**In**
**Agriculture**
**(Food Science and Technology)**

**Department of Food Science**
**Faculty of Agriculture**
**Ain Shams University**

**1996**



# Approval Sheet

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# Abstract

**Mohamed Bin Mahmoud Massri . Manufacturing and Tecnochemical Properties of Some Natural Low Calory Juices. Unpublished Master of Science , Ain Shams University, Faculty of Agriculture , Department of Food Science , 1996 .**

Low calory natural juices ( orange , carrot , orange - carrot mixture juices ) were prepared by using aspartame as artificial sweeteners in comparing with juices which sweetened with sucrose . The data proved that there is a noticeable increase in ( T.S.) , (T.S.S) , ash content , total sugars , non - reducing sugars , reducing sugars and refractive index values in the juices sweetened with sucrose or sucrose - aspartame mixture . however, no changes were occurred when aspartame was used only . On the other hand , data indicated that decrease in total acidity ( as citric acid % ) , and total carotenoids where found when adding aspartame or sucrose - aspartame mixture to the investigated juices . However using aspartame as sweetener increase ascorbic acid content and without any effect on electrical conductivity . Such trend ( adding the aspartame ) lower the calorie content in relation to the unsweetened samples . The data also proved that all the pasteurized sweetened juice samples were non - Newtonian with psoudoplastic flow behavior . Statistical analysis of sensory evaluation proved that samples containing aspartame recorded lower values in relation to other samples , a trend which indicated the successful application aspartame in fruit juices .

**Key word : Natural juices , low calory juices , sucrose , aspartame, physicochemical and rheological properties , sensory evaluation .**

# ACKNOWLEDGMENT

The author wishes to express his deepest gratitude and infinities thanks to Prof. *Dr. M.AMIN ABD ALLAH* , Professor of Food Science and Technology Department, Faculty of Agriculture, Ain Shams University , Dean of the Faculty of Specific Education , Cairo , Egypt , for his paternal guidance , supervision constructive criticism . Without his help this work could not be performed .

Special thanks are also extended to Prof. *Dr. M.H.EL-KALYOUBI* , Professor of Food Science and Technology Department , Faculty of Agriculture, Ain Shams University , for his valuable supervision , and comments during the work and preparing of this thesis .

Sincere thanks to *Dr. A. ABD EL-RASHID*, Lecturer of Food Science and Technology , for his helping and kind co-operation during supervision and experimental work and preparing of the thesis.

Much gratitude is due *to Dr. NAHED M.ABD EL-MAGUID* , Food Science and Diry Departement National Research Center, Cairo, Egypt for her valuable and greatest efforts during statistical analysis by computer program .

Thanks to all stuff member of Food Scince and Technology Department Faculty of Agriculture , Ain Shams University for their encouragement .

I would like also to offer my gratitude *to AL-BAATH UNIVERSITY* for the very kind help which give me the opportunity to study in Egypt .

I highly offer my respect and gratitude to the *EGYPTIAN GOVERNMENT* who makes me on due course for organizing my career through the scholarship offered to me .

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