APPLICATION OF HACCP IN PULP PRODUCTION OF SOME FRUITS AND UTILIZATION OF THEIR WASTE IN MANUFACTURE OF SOME FOODS

By

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B.Sc. Agric. Sc. (Food Science and Technology), Ain Shams University, 1997

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ABSTRACT

Haitham Mohamed Mohamed Hendawy: Application of HACCP in Pulp Production of some Fruits and Utilization of their Waste in Manufacture of some Foods, Unpublished M. Sc. Thesis, Department of Food Science, Faculty of Agriculture, Ain Shams University, 2014.

Implementation of Hazard Analysis Critical Control Point (HACCP) system was investigated among fruit pulp (apricot, guava, mango and strawberry) production in the factory lines. The seven steps of HACCP were applied on equipments, hand of workers, raw and final products. CCPs were determined and critical limits (CL) were established among production steps. Monitoring, corrective action, verification and documentation processes were also established for fruit pulp production. The data suggested that, CCPs among fruit pulp production were refining and metal detector, heat treatment and filling.

Drinking fermented milk containing 10% and 20% fruit pulp by product (Apricot and Guava) were produced and subsequently refrigerated stored at 5±1°C for 28 days. Samples were microbiologically analyses, also sensory evaluation were performed along refrigerated stored (When 7, 14, 21 and 28 days).

Control and drinking fermented milk with 10 % fruit pulp by product had the highest microbiological quality along the storage period.

On the contrary, drinking fermented milk with 20 % fruit pulp by product had slightly different microbiological quality less than control drinking fermented milk.

There were no remarkable differences in sensory evaluation (flavor, color and appearance, acidity and total scores) at drinking fermented milk when fresh and along refrigerated storage.

It could be recommended that, the replacement of 10% and 20% of fruit pulp in production of drinking fermented milk had no defects on microbiological quality and organoleptic properties.

Key Words: HACCP, fruit pulp, Apricot, Guava, Mango, Strawberry, CL, CCP, Monitoring, corrective action, drinking fermented milk, fruit waste and by product.

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LIST OF ABBREVIATIONS

/	Per
%	Percentage
A	Acidity
°C	Centigrade degree
CA	Corrective Action
CAC	Codex Alimentarius Commission
CCP	Critical Control Point
cfu	Colony-forming unit
CL	Critical limits
Cm^3	Cubic centimeter(s)
CP	Control Point
ES	Egyptian standard
et al.	And others (et alli)
g	Gram(s)
GHP	Good Hygienic Practice
GMP	Good manufacturing Practice
h	Hour(s)
HACCP	Hazard Analysis Critical Control Point
ICMSF	International Commission on Microbiological Specification of Foods
ISO	International Standard Organization
kg	Kilogram
mg	Milligram