



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

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**STUDIES ON THE CONTAMINATION
OF DOMIATI CHEESE WITH
SOME HEAVY METALS**

BY

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A thesis submitted in partial fulfillment
of
the requirements for the degree of

**MASTER OF SCIENCE
In
Environmental Science**

**Department of Agriculture Science
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Ain Shams University**

1998

Approval Sheet

**STUDIES ON THE CONTAMINATION
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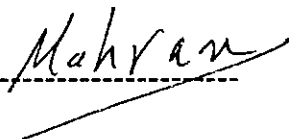
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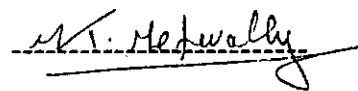
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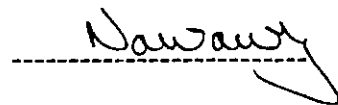
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ACKNOWLEDGEMENT

I wish to express my appreciation and gratitude to Prof. Dr. *Mohammed A. El-Nawawy*, Prof. of Dairy Microbiology, Food Science Department, Faculty of Agriculture, Ain Shams University for his general supervision, encouragement and every possible help he kindly offered throughout this study.

Grateful acknowledgment is extended to Prof. Dr. *Abd El-Aziz Farag*, Prof. of Dairy Chemistry, Dairy Chemistry Department, Animal Production Researchs Institute for his help encouragement during this study.

Thanks are also due to Dr. *Youssif Moursi El-Kenany* Food Science Department, Faculty of Agriculture, Ain Shams University for his sincere support.

Sincere thanks and appreciation should be expressed to the staff members of Dairy Chemistry Department, Animal Production Research Institute for Cooperation and help they devoted during this study.

ABSTRACT

Karima Abou El-Enein Mostafa Abou El-Enein, Studies on the contamination of Domiati Cheese with some Heavy Metals. Unpublished Master of Science, Ain Shams University, Institute of Environmental Studies and Researches (1998).

Monitoring of aluminium, cadmium, chromium, copper, iron, lead and zinc in 70 samples of Domiati cheese from the market of Cairo, Giza, Fayoum, Domiate, Dakhalya, Gharbia and Sharkya were determined. Proximate chemical analysis and microbiological content of the cheese were determined. All samples except Cairo samples were not conformed with the Egyptian standards chemically and microbiologically. All samples contained the tested heavy metals especially aluminium, chromium and lead in higher concentration than the IDF-values. Domiati cheese was manufactured under the industrial conditions, raw materials, cheese and whey were analysed periodically during pickling over 90 days. Raw milk contained higher concentration of tested heavy metals than those reported in literature. Rennet contained high concentration of aluminium and edible salt was highly contaminated with heavy metals. Over 60% reduction in aluminium, chromium, lead and zinc concentration in cheese were found after 90 days of pickling. Accordingly, it is recommended to inface strict inspection of raw

materials used in cheese industry especially edible salt to reduce the source of this hazard. Also it is necessary to reevaluate, the permissible levels of heavy metals in Egyptian food standards in order to ensure the safety of food consumption.

Key words: Domiati cheese, white pickled cheese, edible salt, rennet, heavy metals monitoring, aluminium, cadmium, chromium, copper, iron, lead, zinc.

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