

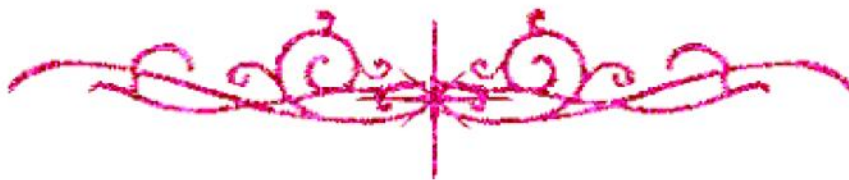
بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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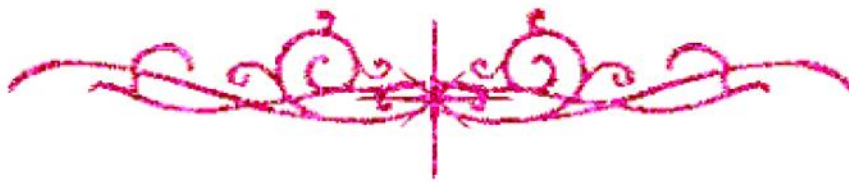
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بعض الوثائق الأصلية تالفة



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بالرسالة صفحات

لم ترد بالأصل



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Analytical Determination of some Trace and Major Elements in some Environmental Samples

B164 73

A Thesis

submitted for partial fulfillment for
the degree of M. Sc.
(in Chemistry)

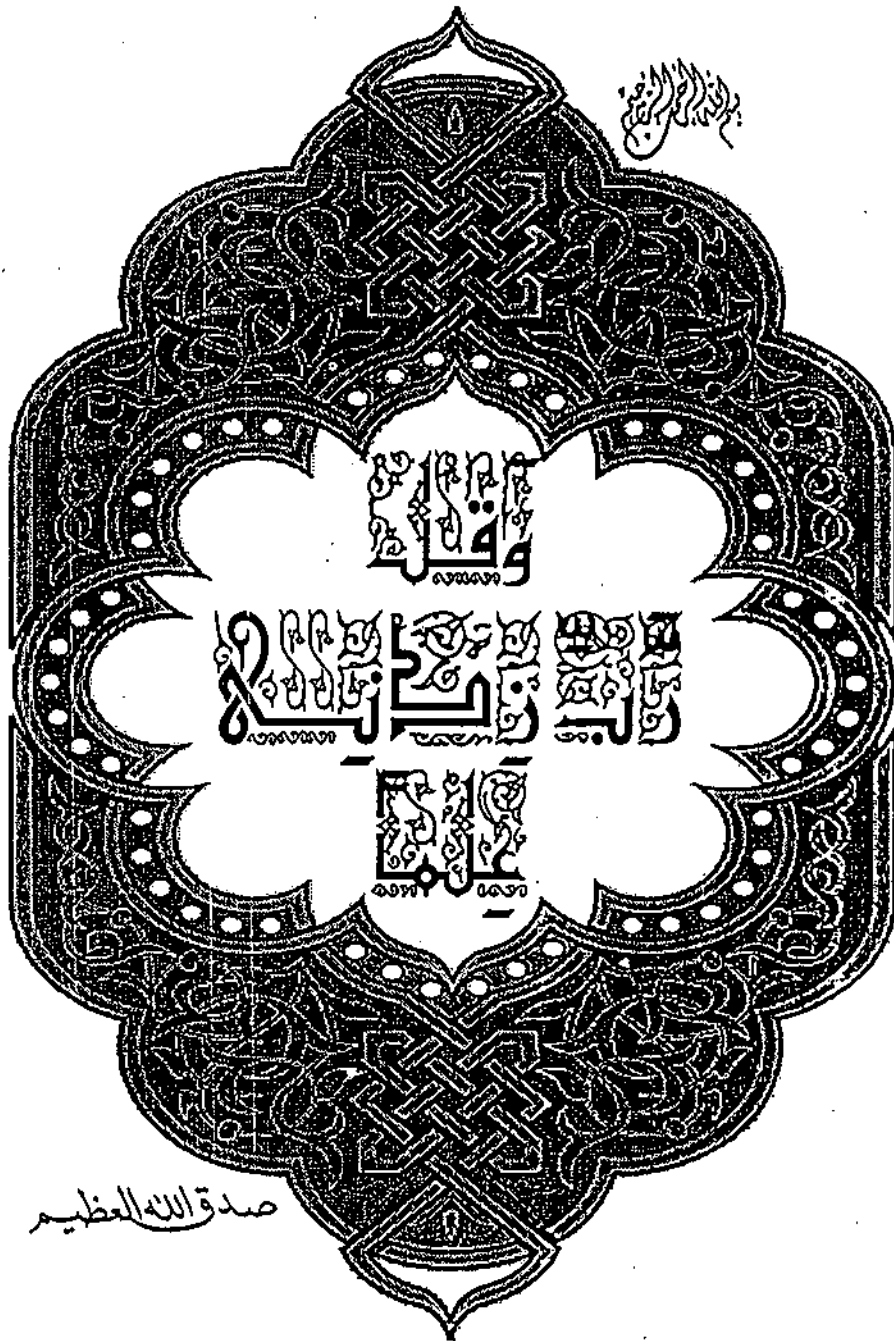
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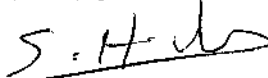
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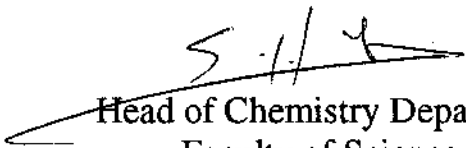
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STATEMENT

This thesis is submitted in partial fulfillment of the requirements for the M. Sc. Degree. In addition to the work carried out in this thesis, the candidate has accomplished with success the post graduate studies in the following topics :

- 1- Electrochemistry.
- 2- Chemical Kinetics.
- 3- Photochemistry.
- 4- Group Theory.
- 5- Molecular Spectroscopy.
- 6- Organic polymers and adhesives.
- 7- Inorganic Chemistry.
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Aim of the Work

The main sources of contamination in urban areas may be characterized according to several broad descriptions such as construction of buildings and demolition, household activities, waste disposal, transport, industry, power stations and agriculture and forestry. Soils in urban areas are frequently disturbed and have several inputs and the dispersion of heavy metals due to one specific source is often difficult to ascertain.

Tanta city is one of the largest cities in Egypt and there are a lot of industries, power stations, heavy transportation, waste disposal, building constructions and demolition and agricultural activities around it. Until now, the available information on metals in urban agricultural soils of Tanta city region is generally insufficient to provide the background data necessary to interpret the possible health effects of these materials.

In the present study, there were a number of goals:

- (i) To optimize the excitation conditions of the energy-dispersive X-ray fluorescence (EDXRF) instrument for analysis of essential soil elements. These elements include macronutrients elements (P, S, K and Ca), micronutrients elements (Al, Si, Ti, Mn, Fe, Co, Ni and Se) and pollutant elements (Cr, Cu, Zn, As, Sr, Pb, Hg and Bi).
- (ii) To establish procedure for preparing multi-element soil standards, to be used for the calibration of the energy-dispersive X-ray fluorescence (EDXRF) instrument, since the commercial standards are very expensive.
- (iii) To test the performance of the energy-dispersive X-ray fluorescence (EDXRF) technique by using the prepared multi-element soil standards. This can be achieved, also, by comparing the EDXRF data of the soil samples