صفاء أبو السعود محمد

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

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شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

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شبكة المعلومات الجامعية

بالرسالة صفحات لم ترد بالأصل

Hydrochemical Studies on the Groundwater At El Khanka Region-Egypt

Thesis

Submitted to the Faculty of Science

Cairo University

For

Ph. D. Degree in

Inorganic Chemistry

Presented by

Hanem Ahmed Ahmed Zamzam

M. Sc. In Inorganic Chemistry

Faculty of Science - Cairo University

Supervised by

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2002

Approval Sheet for Submission

Title of the Ph.D. thesis: **"Hydrochemical Studies on the Groundwater at El Khanka Region –Egypt."**

Name of the candidate: **Hanem Ahmed Ahmed Zamzam**

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ABSTRACT

Name: **Hanem Ahmed Ahmed Zamzam**

Title of Thesis: "**Hydrochemical Studies on the Groundwater at El Khanka Region – Egypt**".

Degree: **Ph.D. Thesis, Faculty of Science, Cairo University**.

This work has been carried out to investigate the hydrochemical characteristics of the groundwater, shallow water and surface water at El Khanka region (Egypt) as well as the pollution of the groundwater by heavy metals and by coliform bacteria. The study also investigates the suitability of the groundwater for drinking and irrigation purposes. The study revealed the variation in the groundwater salinity from fresh water near Ismalia canal to very saline water at El Obour city, Cairo Ismailia and Cairo Belbeas desert roads. This variation is due to the presence of many different aquifers in the studied area. The study revealed that the abundance of Fe, Mn and Zn in the groundwater is due to geogenic aspects not to pollution sources. The study revealed the absence of Cu, Cr, Ni. The study revealed that most of the groundwater wells are not polluted by coliform groups but most shallow wells are. The study also revealed that most of the groundwater, all shallow water and surface water are suitable for irrigation. On irrigation with high saline and alkaline water wells, special irrigation precausions will be required and high salt tolerance plants should be selected.

Key Words: Hydrochemical, Groundwater, Salinity, El Khanka, Environmental, Pollution, Gabal El Asfar, Ismailia canal, El Obour, Suitability, Irrigation.

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