بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

Comparative Studies on the Removal of Organic MicroPollutants from Drinking Water by Chlorine Dioxide, Ozone and Activated Carbon

Thesis

Submitted by

Tarek Samir Jamil Mahmoud

(B.Sc. of science, Cairo University)

Water Pollution Control department

National Research Center

For

The Degree of M.Sc

To

Chemistry Department

Faculty of science

Cairo University

2001

APPROVAL SHEET FOR SUBMISSION

Title of M.Sc: Comparative Studies On the Removal of Organic Micro-Pollutant from Drinking Water by Chlorine Dioxide, Ozone and Activated Carbon

Name of the Candidate: Tarek Samir Jamil Mahmoud

This thesis has been approved for submission by the supervisors:

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Abstract

Name: Tarek Samir Jamil Mahmoud

Degree: M.Sc, Faculty of Science, Cairo University

Specialization: Organic Chemistry

Title of the Thesis: Comparative Studies On the Removal of Organic Micro-Pollutants from Drinking Water by Chlorine Dioxide, Ozone and Activated Carbon.

Survey and analysis for the River Nile water indicated normal conditions for physico-chemical parameters but high concentration of oil and grease and some organic pollutants such as phenol and its derivatives. The use of chlorine in the disinfection step in drinking water treatment may produce chlorinated derivatives, which are hazardous compounds. In this study ozone and chlorine dioxide were used as alternatives of chlorine. It was found that these organic pollutants were oxidized to simple aliphatic compounds and carbon dioxide. The removal of the organic pollutants or the by-products produced during the disinfection by ozone or chlorine dioxide can be achieved by adsorption on activated carbon.

Key Words: Ozone, Chlorine dioxide, Oxidation, Activated Carbon, Adsorption, Aminophenols and Chlorophenols.

Supervisors: 1- Prof. Dr. Hamed Abd El-Reheem Ead

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Note: -

Beside the work carried out in the thesis the candidate has attended and passed successfully the following post graduate courses as a partial fulfillment of the requirements of the degree of Master of Science.

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2. Design.
3. Biochemistry.
4. Natural products.
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6. Spectroscopy.
7. Dyes.
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9. Photochemistry.
10. Functional group.
11. Polymer.
12. Carbohydrate.
13. Technique of molecular structure.
14. Advanced analytical chemistry.
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16. Elective coarse.
17. Mathematics.

This certificate is issued at his own request.

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