

CONTENTS

	Page
1. INTRODUCTION	1
2. REVIEW OF LITURATURE	3
3. MATERIALS AND METHODS	17
3.1. Source of industrial waste-water	17
3.2. Physico-chemical characteristics of the waste-water	17
3.3. Treatment of industrial waste-water	19
3.3.1. Dilution of waster-water	19
3.3.2. Chemical treatment	19
3.3.3. Biological treatment	19
3.4. Statistical analysis	19
4. RESULTS AND DISCUSSION	21
4.1. Physical and chemical characteristics and metals concentration of raw waste-water materials	21
4.2. Treatments of industrial raw-waste water from Oil and Soap Company	32
4.2.1. Effect of modification waste-water concentration by artesian water on the chemical characteristics and heavy metals concentration of wastes during November 2000 to January 2001	32
4.2.2. Effect of chemical treatment on the physical and chemical of waste-water produced from Oil and Soap Company during February to May 2001	53
4.2.3. Effect of biological treatment on the characteri-zation of raw and treated waste-water from Oil and Soap Company during June to September 2001	69
4.2.4. Effect of the combined chemical and biological treatment of waste-water after modified by artesian water during October 2001 to March 2002	85
V- SUMMARY	101
VI- REFERENCES	105
VII- ARABIC SUMMARY	

ABBREVIATION

E.C.	Electrical conductivity
B.O.D.	Biological oxygen demand
C.O.D.	Chemical oxygen demand
P.V.	Permanganat value
D.O.	Dissolved oxygen
T.D.S.	Total dissolved solids
T.S.S.	Total suspended solids
T.H.	Total hardness
L	Liter
mg	Milligram