SAFETY RECYCLING OF GINNING COTTON WASTES (GIZA90) BY USING THE BACTERIAL SYSTEM INTO MEDICINAL SUBSTANCES (ANTIBIOTIC)

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Abstract - This research project deal with biological experiments and methodic development of photochemistry &analytical biochemistry emphasizing solution of ecological problems affect on people as health hazards and recycling the wastes into economic substance without any ecological harmful effect.

Keywords - Bacteria, Cotton, Recycling, Safety, Wastes.

I. INTRODUCTION

Previous work in the Bacillus licheniformis is a saprophytic bacterium that is widespread in nature and thought to contribute substantially to nutrient cycling due to the diversity of enzymes produced by members of the species. It has been used in the fermentation industry for production of proteases, amylases, antibiotics, and specialty chemicals for over a decade with no known reports of adverse effects to human health or the environment [1].]

The evidence supporting organic dust as a cause of occupationally related lung disease has substantially increased in the post two decades. The aim of this project was to test an assay which could be used to detect cytotoxic potential of organic dusts found in working environments. but in our research we will study safety recycling of ginning cotton wastes (Giza90)by using the bacterial system.

II. PROCEDURE FOR PAPER SUBMISSION

Collection of Ginning Cotton Waste Samples:
Five Samples of ginning cotton from the EL – Delta company of ginning cotton , Sohag , Egypt were collected

Sample (A) Silicon dust.
Sample (B) Treatment dust.
Sample (C) Maxed of wastes.
Sample (D) Residues of seeds of wastes .
Sample (E) Residues cellulotic cotton of wastes.

The isolation of bacteria from wastes of ginning cotton (soil) by using serial dilution method procedures:

1. 5 g soil put it in a glass bottle contains 45ml of sterilized dist .H2O & shacked for 10 min
2. 1 ml of previous solution in test tube contains 9 ml of dist . H2O &shacking.
3. 1 ml of previous diluted solution from test. tube to another test tube contains 9 ml of dist.H2O and shacking.
4. Repeat pervious steps for desirable dilution.
5. transfer 1ml of any pervious diluted solution to sterilized Petri dishes by using liquefied medium (nutrient agar)which was poured in Petri dishes contained the inoculum & rotated them until completely mixed. let the medium to solidify then put it in the incubator at 37 ºC for 48 hours. Uses one media structure nutrient a gar media

1. 1000 ml distilled water .
2. 5 gm peptone .
3. 5 gm yeast extract.
4. 10 gm Nacl
5. 15 gm agar.(6) PH= 7.1

III. CONCLUSION

Identify the bacteria by under Temperature pyschophilic hadn't anything of all the samples of the wastes.

Under Temperature (Mesophilic bacteria) 37°C (See Ref. [2].

Sample (A) Bacillus cereus and Bacillus subtilis grow on silicon dust
Sample (B) Bacillus cereus, Bacillus subtilis and Pseudomonas fluorescens grows on Treatment dust

Sample (C) Bacillus cereus, Bacillus subtilis, Pseudomonas fluorescens and Echerichia coli grows on Maxed of wastes
Sample (D) Bacillus cereus, Bacillus subtilis, Pseudomonas fluorescens and Echerichia coli grows on residues seeds of wastes
Sample (E) Bacillus subtilis grows on residues cellulotic cotton of wastes.



Sample (A) Silicon dust



Sample (B) Treatment dust



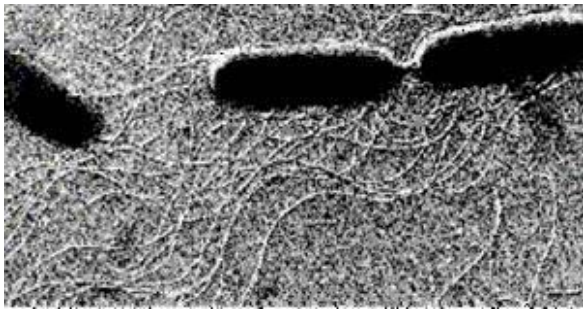
Sample (C) Maxed of wastes



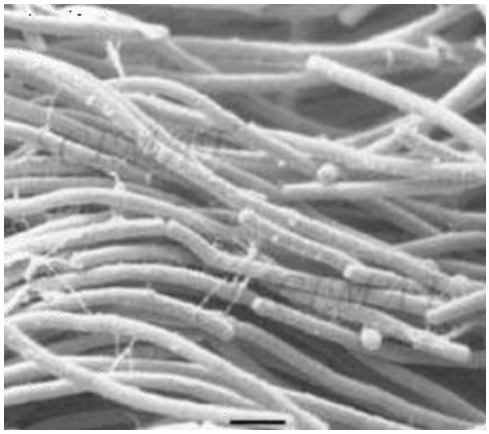
Sample (D) Residues seeds of wastes



Sample (E)Residues cellulotic cotton of wastes



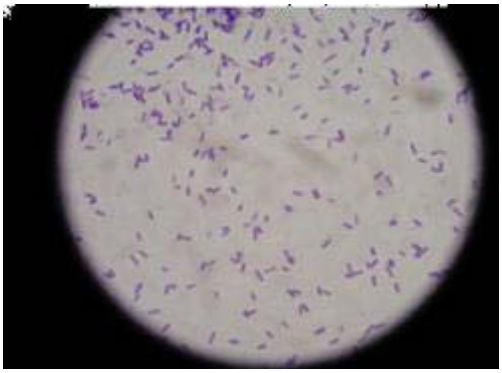
Bacillus circulans



Bacillus cereus



Echerichia coli



Bacillus subtilis



Pseudomonas fluorescens

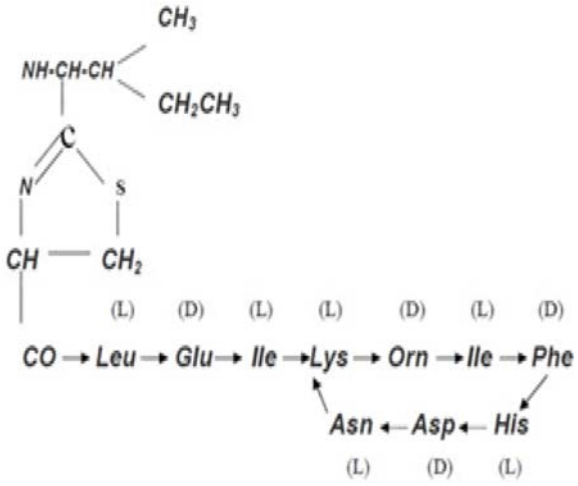
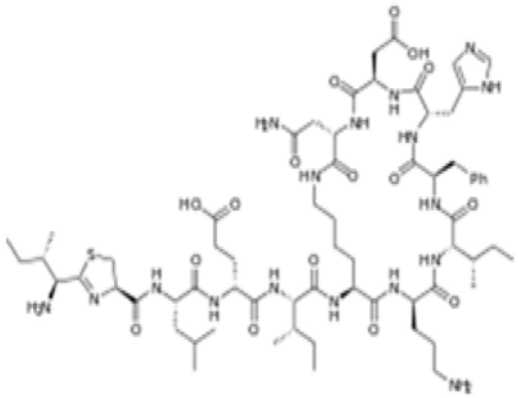


Fig. 1



Bacitracin

Under Temperature (Thermophilic bacteria) 50°C were isolated and identified

Sample (A) Bacillus cereus, Bacillus subtilis and Bacillus circulans grow on silicon dust.

Sample (B) Bacillus cereus and Bacillus subtilis grow on Treatment dust

Sample (C) Bacillus cereus Bacillus subtilis and Pseudomonas fluorescens. grow on maxed of wastes.

Sample (D) Bacillus cereus, Bacillus subtilis and Pseudomonas fluorescens grow on Residues of seeds.

Sample (E) Bacillus subtilis grows on residues cellulotic cotton of wastes isolation of cellulotic bacteria, which can grow variously on cellulose cotton wastes are Bacillus cereus, Bacillus subtilis and Pseudomonas fluorescens the isolated of bacteria under the 37°C which can grow variously on cotton seed residues are Bacillus cereus, Bacillus subtilis, Pseudomonas fluorescens and Echerichia coli. The isolated of bacteria under the 50°C which can grow variously on cotton about 20 was exhibited at about 250 nm [3].

Identification of bacitracin is carried by Ultraviolet Absorption Spectrum [4]. The ultraviolet spectrum of bacitracin was determined in water, methanol, and dilute acid and dilutes alkali. In all solvents, a small peak with an E(1%, 1cm) of about 20 was exhibited at about 250 nm. [3].

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