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Microbial Behavior of Imine Compounds on Bacteria

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Abstract
In our past studies , some imine compounds were prepared m investigated , spectral characterization , it gave good evidence for formation these compounds , but in this studying , these imine derivatives were screened against some types of bacteria and microbes.

Keywords: Comp , main , strong comp .

INTRODUCTION

Imine compounds are an important types of organic compounds presented in many of boilogically active compounds inclusive of bactericidal, anticancer, antitubercular activities, etc , it is the most thermally stable compounds[1-5] which have attracted special atention, this is primarily due to the large number of uses in many diverse areas, including drugs, scintillation materials, dyes[6-10]and surface active agents [11-17].It has been reported[18-25]that anil compounds are themselves important chemotherapyeutic agents and exhibit antitubercular, bacteriostatic, hypoglycemic, antiviral, antifungal, antithyroid, carcinostatic and strong herbicidal activities[26-33].

During the last fifteen years, synthetic organic chemistry has been enormous growth, not only in terms of development of new methodologies for construction of carbon-carbon and carbon-hetero atom bonds but also in terms of development of new strategies, reagents, catalysts, transformations and technologies[34-40]. From the last survey appears that Schiff bases have played a vital role in developing the synthetic organic chemistry[41-50]. The presence of nitrogen atom along with other features may impart interesting biological activities to the parent compound[51-60].The essential feature of Schiff base reaction is the condensation of aldehyde or ketone with a primary amine to produce the imine compoundwhich are important synthetic intermediates for various pharmaceuticals and natural products[12]. It is well-known from the earlier work that the compounds containing imine moiety as functional group have been found to possess donor properties and exhibit a wide range of biological activities, literature study also reveals that a broad spectrum of biological activity is reported to be associated with a number of heterocyclic compounds[22].Imine compounds have been studied extensively in the recent years due to the selectivity and sensitivity of the ligands towards biological important metal ion.

EXPERIMENTAL &MATERIALS

All chemicals and instrumentals carried out in college of education, biological studying carried out in Bio – lab in biological department.,Chemical Studying carried out in chemistry department

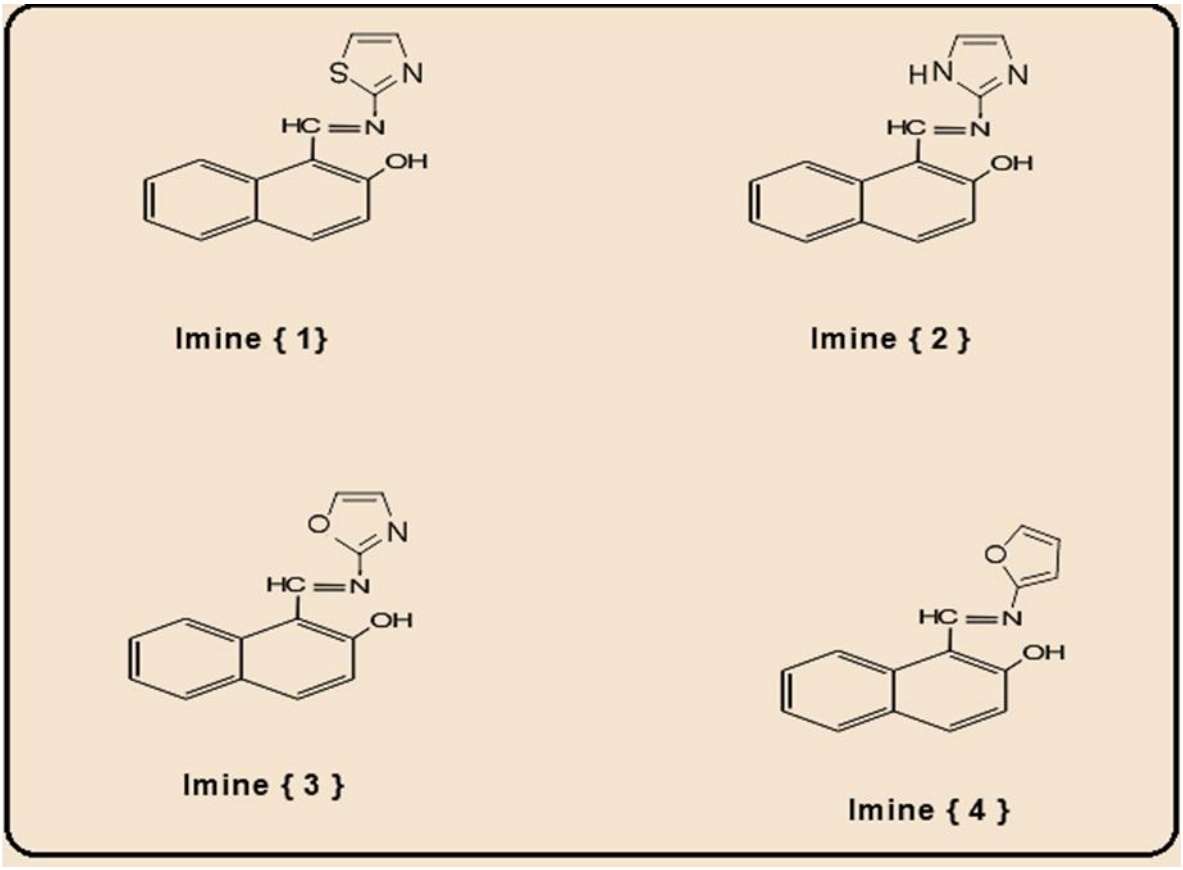
EXPERIMENTAL PROCEDURES

The in vitro biological testing effects of the identified compounds were tested against selected types of bacteria which include (Escherichia coli) and (Staphylococcus aureus) through using the Well Diffusion Method[31] using agar nutrient as the medium. Stock solutions (10^{-4}M) were prepared by dissolving the compounds in DMSO solution. In a typical procedure, a well was made on the agar medium inoculated with microorganisms. The well was

filled with the test solution using a micropipette and the plat was incubated at ((35°C)) for((72)) hrs. During this period, the test solution diffused and the growth of the inoculated microorganisms was affected

Synthesized Compounds In Schemes:

In our schemes , we prepared iminecompounds , but now we will study the biological activity for them in this work :



Scheme (1): Prepared Imine Compounds

RESULTS AND DISCUSSION

The synthesized compounds screened forBiological Activityagainst two types of bacteria .

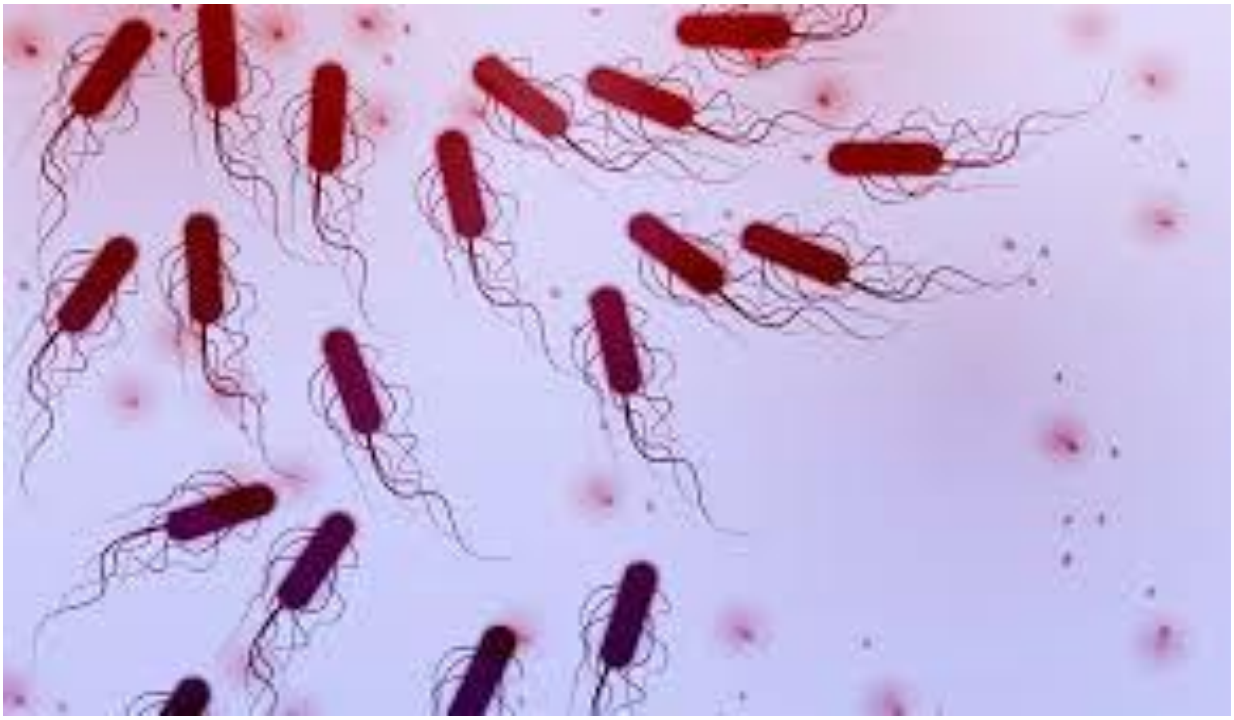
Biological Tests[61-70] :

The test of the sensitivity of the bacteria , which included work on two types of bacteria to measure the biological activity of certain compounds which bacteria positive for the dye Cram (bacteria*Staphylococcus aureu*) and negative gram (bacteria *E- Coli*), and Table (1) shows the diameter of inhibition zone for vehicles chemical measured in mm towards the bacteria.

Staphylococcus aureus is a Gram-positive, round-shaped bacterium that is a member of the Firmicutes, and it is a usual member of the microbiota of the body, frequently found in the upper respiratory tract and on the skin.

Staphylococcus aureus

E. coliis bacteria found in the environment, foods, and intestines of people and animals. *E. coli* are a large and diverse group of bacteria. Although most strains of *E. coli* are harmless, others can make you sick. Some kinds of *E. coli* can cause diarrhea.



E- Coli

Table.1:Biological Activity (Inhibition Zone in (mm)) of Compounds

in Concentration (1 X 10 $^{-4}$ M).

Comp. No.	(G +) *Staphylococcus. Aureus*	(G -) *E - Coli*
[1]	12	8
[2]	12	6
[3]	10	6
[4]	8	4

The results showed the Biological Activityfor compounds (1, 2) the effectiveness of anti-resistant bacteria is much higher than other imine compounds in the inhibition of bacteria, thiazole and imidazole cycle , which gave vital to the effectiveness of many of the bacteria, and the following photos show the following:

Picture(1).The amount of inhibition of the compounds on

Staphylococcus Aureu

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