



# Inference of Antibacterial Properties in Skin Related Issues

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**Abstract:** *A flavorer inexperienced chance of perfumes is 'attar', that area unit non-alcoholic, oil-primarily primarily based completely, flavorer extracts derived from flowers, herbs, wood, etc. ottar may be an aromatic crucial oil; it's exhilarating and spiritually raising impact. ottar contains crucial oils that have a relaxing, soothing, and gratifying impact it is also recognized to supply comfort from headache. ottar in addition have healthful values, it will assist in comfort from respiratory illness, cough, and totally different respiratory issues. E. coli, enterobacteria pneumoniae, staphylococci aureus area unit the predominant organisms found on the skin. Skin microorganisms have essential roles within the protection against offensive pathogens, the education of our system and therefore the breakdown of natural merchandise. ottar might result the traditional flora of the skin attributable to the presence of lipide. The zone of inhibition may be a circular space round the spot of the antibiotic during which the microorganism colonies don't grow.*

**Keywords:** Antimicrobial properties, Skin flora

## I. INTRODUCTION

The word 'Attar' or 'Ittar' comes from associate historic Persian word 'attar', 'otto' or 'ottar', which suggests fragrance, fragrance or exciting fragrance manufacturing of athar is that the exercise of extracting exciting fragrance from flowers, herbs and completely different biological science sources. Some essential oils ar extracted from timber species as nicely. athar is a vital oil derived from biology or various natural sources. most generally these oils ar extracted via hydro or steam distillation. athar might also be expressed by chemical means but generally natural perfumes that qualify as ittars ar distilled with water. The oils ar usually distilled into a wood base resembling wood then aged. The aging quantity will last from one to ten years relying on the botanicals used and so the results desired. Attar's ar numerous|of varied|of assorted} varieties extracted from various sorts of flowers and fruits peels some common sorts of athar ar Mogra, Orange, Rose, lemon.

The skin is that the human body's largest organ, settled by a various environment of microorganisms, most of that ar harmless or perhaps useful to their host [1]. Skin microbiota plays AN Byzantine role within the human system really several immune functions and helps to defend its host against offensive microorganism pathogens [2]. Resident microbiota could become infective, generally in response to AN impaired skin barrier [2]. The athar could or might not have any antimicrobial effects on the skin. to check this the Kirby- Bauer check is completed. Kirby-Bauer disk diffusion susceptibleness check determines the sensitivity or resistance of infective

microorganism to numerous antimicrobial compounds [3]. With this methodology, just about one thousand thousand cells from one strain are touch AN agar plate employing a sterile swab, then incubated within the presence of antimicrobial object. If the microorganism or plant strain is prone to the antimicrobial agent, then a zone of inhibition seems on the agar plate. If it's immune to the antimicrobial agent, then no zone is obvious. the dimensions of the zone of inhibition sometimes is typically is sometimes} to the associated with the amount of antimicrobial activity gift within the sample or product- a bigger zone of inhibition usually associated with the amount of antimicrobial is strenuous.

## II. METHODOLOGY

### Sample Collection

1. The sample of normal skin flora was taken in sterile saline test tube.
2. The Ittar of four different aroma's were selected.

Mogra, Lemon, Orange, Rose

### Isolation of Sample on Nutrient Medium

*Escherichia coli*, *Klebsiella pneumoniae*, *Staphylococcus aureus* were isolated and inoculated in saline solution and kept in incubator at 37°C for 1 hour to observe a matte growth. After incubation, the saline suspension was pipetted out from a sterile 10ml pipette and loaded in Nutrient agar plates. The bacteria was then spread equally to all sides using spread plate technique.

### Observing Growth

The agar plates were incubated for 24 hours. After incubation it was observed that ittar with orange aroma showed visible zone of inhibition against all the bacteria's whereas other ittar showed very minimal zone of inhibition against the used bacteria.

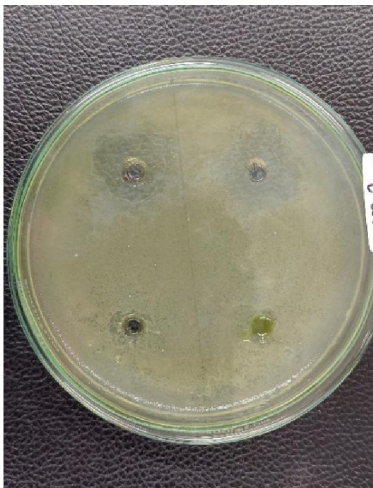


Fig.1 *Escherichia coli*



Fig.2 *Klebsiella pneumoniae*

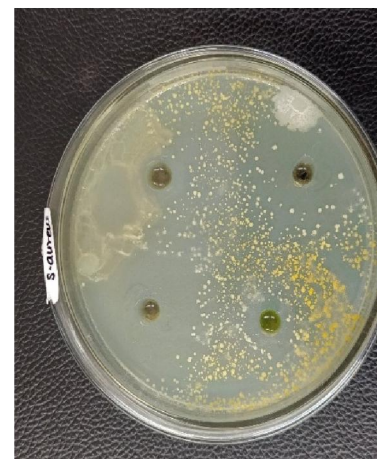
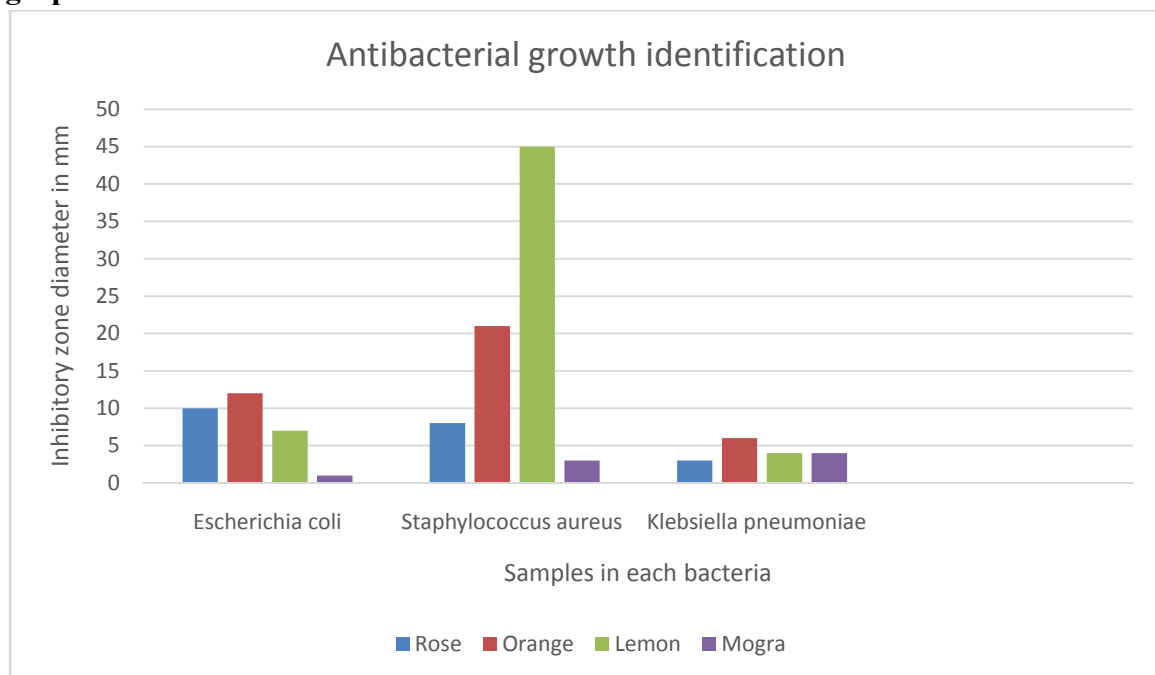
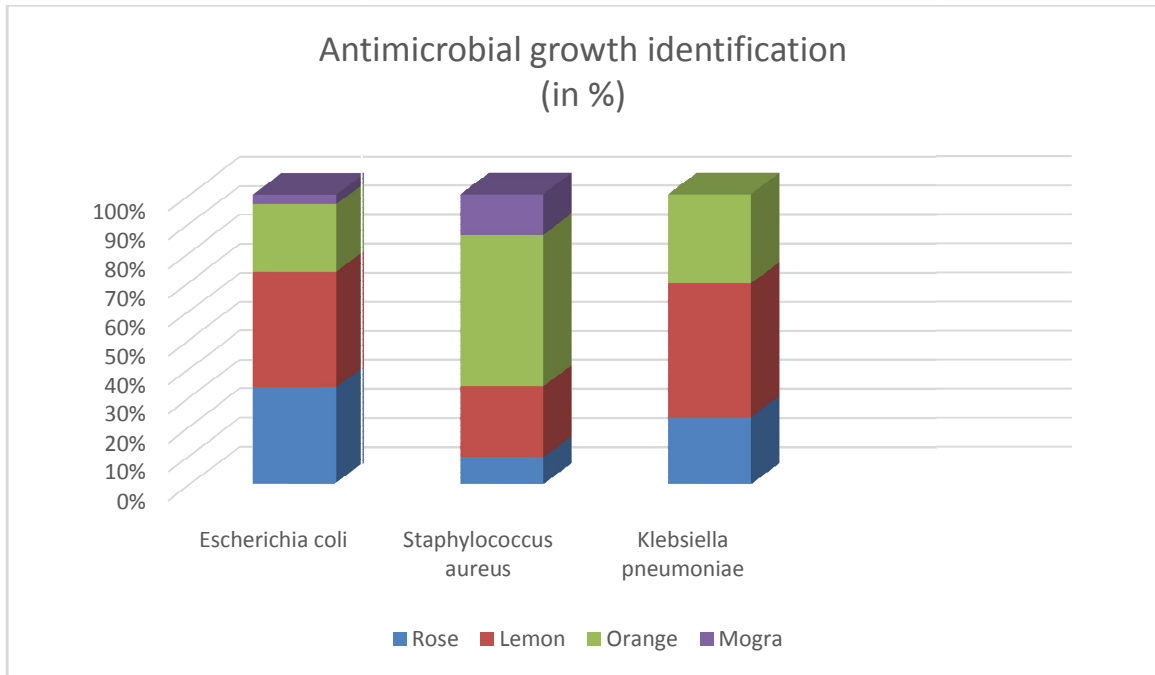


Fig.3 *Staphylococcus aureus*

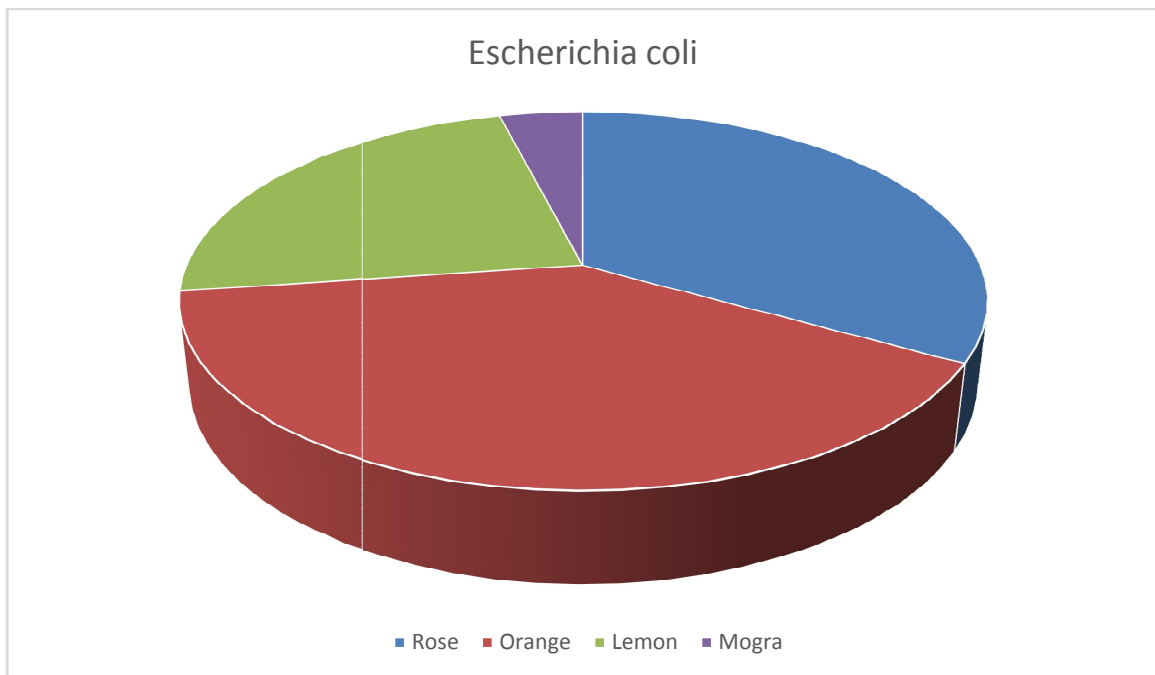
**Observation Table**

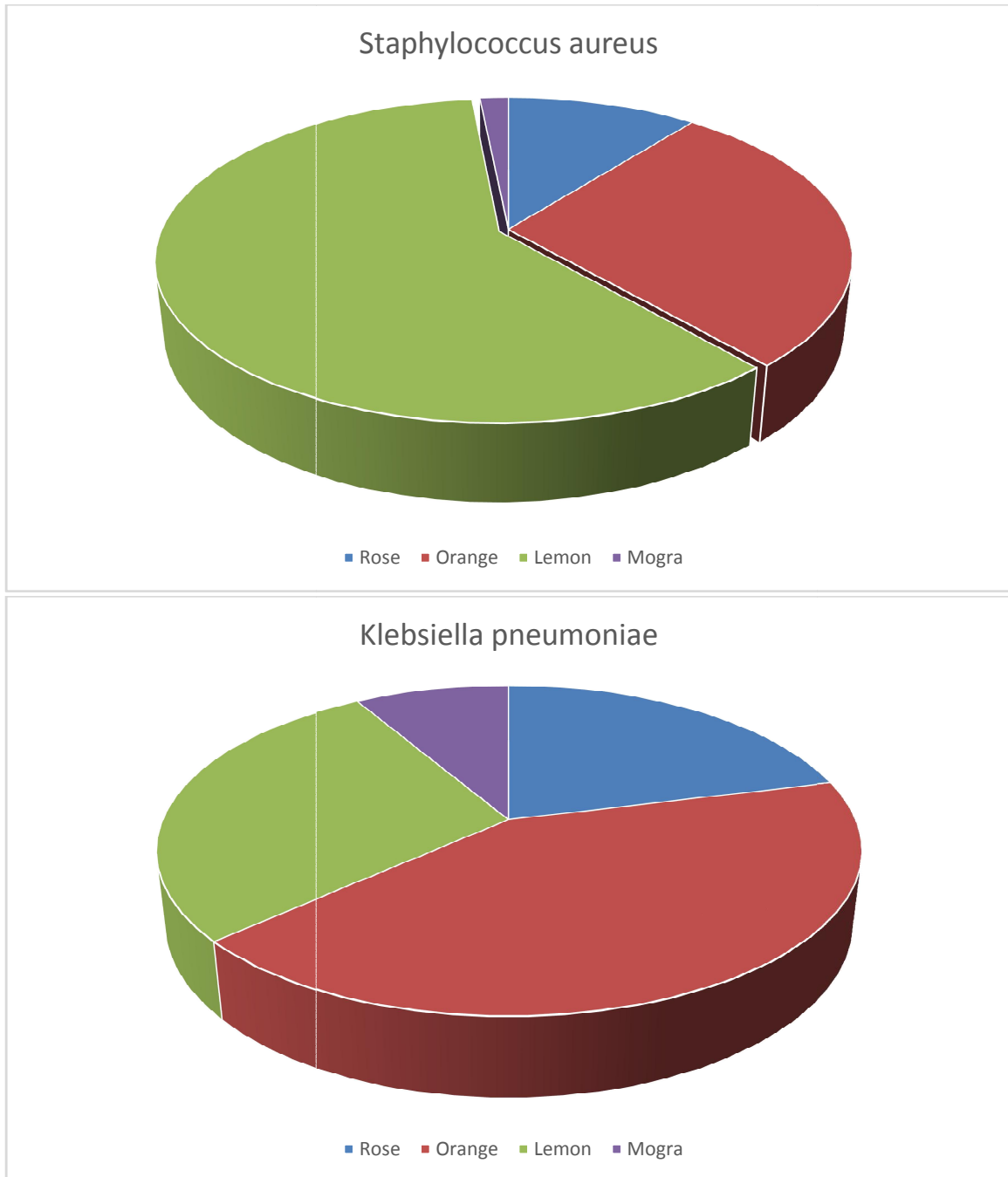
Bacteria	Sample	Inhibitory zone diameter (in mm)
Escherichia coli	Rose	10mm
	Orange	12mm
	Lemon	7mm
	Mogra	1mm
Staphylococcus aureus	Rose	8mm
	Orange	21mm
	Lemon	45mm
	Mogra	12mm
Klebsiella pneumoniae	Rose	3mm
	Orange	6mm
	Lemon	4mm
	Mogra	4mm

**GRAPH:****Bar graph:**



**Pie chart:**





### III. RESULT

After incubation, zone of inhibition were observed around the wells of each samples. Lemon and Orange showed visible zone of inhibition in all the three agar plates under the used bacteria Escherichia coli, Staphylococcus aureus and Klebsiella pneumoniae. Rose and Mogra showed minimal zone of inhibition.



#### IV. CONCLUSION

This experiment concluded that the naturally made ittar can be effective against skin microflora for e.g. *Escherichia coli*, *Klebsiella pneumoniae*, *Staphylococcus aureus*. These substances can be helpful in increasing our immunity against many skin infection causing bacteria. Finally, according to my research these substances are useful.

#### REFERENCES

- [1]. Elizabeth A. Grice and Julia A. Segre., The skin microbiome
- [2]. Lin Zhang, William K.K Wu, in antimicrobial peptides in Gastrointestinal diseases, 2018
- [3]. American Society for microbiology, 2009