

## "ANTIMICROBIAL ACTIVITY OF HONEY AND THEIR EFFECT ON SELECTIVE PATHOGENIC BACTERIA"

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### ABSTRACT

Honey has natural antimicrobial properties due to its low pH, high sugar content and production of hydrogen peroxide. The present study is on honey product like organic honey, Patanjali honey, Dabur honey, Zandu honey. All these products were checked for activity against four bacterial organisms which included *E.coli*, *Staphylococcus spp.*, *Streptococcus spp.* and *Salmonella spp.* by the well diffusion method using cup borer to make wells and fill with honey and observe the zone of inhibition.

### AIM AND OBJECTIVE

To assess the antimicrobial activity of honey like Organic honey, Dabur honey, Patanjali honey, Zandu honey against the *E.coli*, *Staphylococcus spp.*, *Streptococcus spp.* and *Salmonella spp.*

### INTRODUCTION

Honey is a natural product that has been with mankind since the most ancient times using it for nutritional and medicinal purposes. This natural product contains around 180 biochemical compounds. Several studies have disclosed that honey has numerous activities like wound healing, antioxidants, antimicrobics, nematocides, anticancer and anti-inflammatory. Honey is mainly used to treat infected wounds and chronic wounds, infected burns, infected post-surgical wounds and infant respiratory tract infections.

### METHOD AND MATERIAL

#### Material:

Inoculum culture, Test sample, Cup borer, Spreader, Agar plate, Micro pipette, Incubator, Microscope.

#### Method :

- Isolation of pathogenic bacteria from selective sample for checking Antimicrobial activity of honey.
- Take a different sample of honey.
- Perform Agar well diffusion method and observe the zone of inhibition.



Fig.2. Procedure

### RESULT

Bacteria	Natural	Zandu	Dabur	Patanjali
<i>E.coli</i>	2.5mm	2mm	1mm	1.5mm
<i>S.aureus</i>	3.5mm	2mm	1.5mm	2mm
<i>Streptococcus spp.</i>	9mm	3mm	2mm	3mm
<i>Salmonella Spp.</i>	2mm	1.5mm	1.5mm	1mm

Table 1. Zone of inhibition



Fig 3.S.aureus

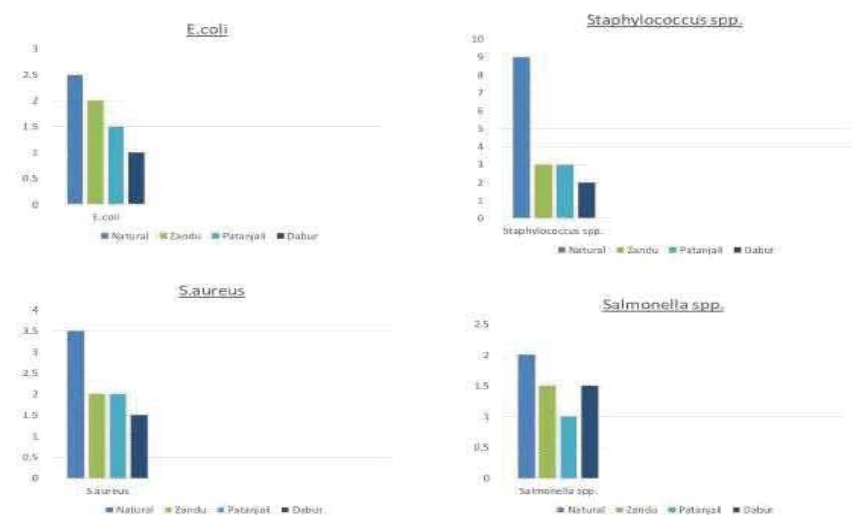
Fig.4. Streptococcus Spp.

Fig.5. Salmonella Spp.

Fig.6. E.coli



Fig.1 Sample Of Honey



### CONCLUSION

During this research work we concluded that Natural honey gives maximum antimicrobial activity against the bacteria like *Streptococcus spp.*, *Staphylococcus spp.*, *E.coli*, and *Salmonella*.