

**UNIVERSITI TEKNOLOGI MARA**

**MICROBIAL ISOLATED ON RING WORN BY  
FOOD HANDLER IN UiTM PUNCAK ALAM AND  
SHAH ALAM**

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**Project paper submitted in partial fulfillment of the  
requirements for the degree of  
Bachelor in Environmental Health and Safety (Hons.)**

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### Declaration by Student

Project entitled "Microbial Isolated on Ring Worn by Food Handler in UiTM Puncak Alam and Shah Alam" is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Mr. Nasaruddin bin Abd Rahman and Mr. Hashim bin Ahmad Co-supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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## ABSTRACT

### Microbial Isolated on Ring Worn by Food Handler in UiTM Puncak Alam and Shah Alam

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People are likely to wear rings because ring is part of everyday life. One of the factor people wear ring is because ring can display the beauty to the wearer. Ring is also symbol of marriage to someone. This study is about the ring wearing by food handler. Food handler who are wearing ring during food handling can contaminate the food. The aim of the study is to detect and measure the bacterial present on ring worn by food handler in food premises at UiTM Puncak Alam and Shah Alam. Through sterile procedure 60 rings of plain and non-plain rings were shaken into 10 mL buffered peptone water. The solution was transferred to agar and kept incubated overnight in an incubator at 37°C. The sample was taken from food handler in food premises in UiTM Shah Alam and Puncak Alam. The result showed that *Staphylococcus aureus* were found at all plain and non-plain ring (100%). However, *E-coli* were found on 15 plain rings (50%), and all at non-plain rings (100%). There was significant different for *E-coli* present on plain and non-plain ring worn by food handler in UiTM Puncak Alam and Shah Alam,  $p= 0.001(p<0.05)$ . Colony Count for *Staphylococcus aureus* and E-coli on non-plain ring are more than in plain ring. The finding show there are significant different of *Staphylococcus aureus* and E-coli for plain and non-plain ring,  $p<0.05$ . The present *staphylococcus aureus* and E-coli on ring may associate with the surface physicochemical properties of material such as surface roughness, surface area and hydrophobicity. Other factors such as nutrient, temperature and pH were also assist the adhesion and growth of bacterial on the rings. Although the findings show that there are fewer bacteria on plain rings compared to non-plain rings, plain rings also may contribute danger of food contamination.

Key Word: Food handler, plain ring, non-plain ring, *Staphylococcus aureus* and *E-coli*