



**9th INDES 2020**  
**LIMITLESS MIND:**  
EMPOWERING INNOVATION THROUGH VISUALIZATION



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ABSTRACTS BOOK

The 9th International Innovation, Invention  
& Design Competition  
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# **FRUIT-ALL DEWAXING WIPES**

The Amethyst

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## **1. INTRODUCTION**

The Fruit-All Dewaxing Wipes project was implemented based on the observations of group members on the pattern of nutritious food selection by matriculation program students. Through the brainstorming process carried out, there are some major problems faced by them that lead to the emergence of the idea to produce a product realized through the Fruit-all Dewaxing Wipes project. Through observations, matriculation program students were found to quickly look lethargic by noon which affected the PdP process carried out. This condition leads to the tendency of students to take unhealthy snacks to cover the stomach which leads to health problems. Students who like to take fruit as a snack are found not to wash the product thoroughly before eating it in addition to lack of awareness and concern related to the content of harmful chemicals in the food taken.

## **2. METHOD OF STUDY**

To formulate solutions to these problems, for a start, group members conducted a series of questionnaires on a total of 200 KMS citizens. Of these, it was found that 40% (80 people) of college students took fruit as a snack. Subsequent questionnaires were conducted to find out the practice of washing fruits before eating includes methods and manner of washing and the level of knowledge related to the presence of chemicals in wax used to maintain the freshness of imported fruits. The findings of the questionnaire show that 60% (48 people) of college students who take fruit as a snack do not wash this product before eating. The study also found that 80% (64 people) of college residents had no knowledge of the existence of wax on imported fruits. Of the 40% (32 people) in college who washed fruits before eating, 90% (30 people) of them washed fruits using water.

## **3. PRODUCT**

The next questionnaire leads to the findings of the factors that cause the lack of fruit washing practice before eating. These factors include time constraints, inaccessibility of water resources, the perception that fruits are clean and safe to eat and do not realize the existence of a layer of wax on fruits. Based on these findings, group members are motivated to find a solution to this problem that leads to the production of Fruit-All Dewaxing Wipes products. Some ideas are generated by group members using brainstorming methods. Among the main ideas is the use of clean water using spray bottles to overcome the problem of water inaccessibility up to the use of vinegar mixed water which has proven to be more effective in removing wax on fruits. Improvement after improvement has been made until the group members are finally satisfied with the production of Fruit-All Dewaxing Wipes products that are effective in washing fruits and removing wax layers. In addition to the effectiveness of the main ingredients used for this purpose, this product is also very practical and very easy to use anywhere.

#### **4. IMPACTS**

The production of Fruit-All Dewaxing Wipes successfully achieved expected and unexpected results and impacts. This product is very effective in washing imported fruits so as to be able to remove wax that contains chemicals that can negatively affect the health of the body in the long run. The use of this product provides cost savings compared to using water. Its simple and practical use can save time compared to the usual washing practice. In addition, the use of apple cider vinegar as the main ingredient in the product adds value to the health of the body because it has been proven to contain nutrients and be a cure for certain diseases. The use of Fruit-All Dewaxing Wipes can also replace the practice of peeling the fruit to remove the wax layer where this practice causes the loss of nutrients that are abundant in the skin of the fruit.

Apart from that, the production of Fruit-All Dewaxing Wipes products is able to produce a healthy society because it can encourage fruit consumption and in turn help increase national productivity. The use of environmentally friendly materials, in the production of products helps in the preservation of the environment. Product production also enhances the image of the department.

#### **5. CONCLUSION**

For the purpose of dissemination, this product has been competed in several innovation and creativity competitions at the district level to the state level. Indirectly, this product has been introduced to the community and their response and interest in trying this product is seen as very encouraging.



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Tarikh : 30 Ogos 2022

YBhg. Profesor Ts Sr Dr Md Yusof Hamid, PMP, AMP  
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YBhg. Profesor

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Kelulusan daripada pihak YBhg. Profesor dalam perkara ini amat dihargai.

Sekian, terima kasih.

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