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MEGA INNOVATION CARNIVAL 2020
For Knowledge and Humanity

PROCEEDING BOOK

6 - 8 MARCH 2020

CENTRE OF FOUNDATION STUDIES
UNIVERSITI TEKNOLOGI MARA
CAWANGAN SELANGOR KAMPUS DENGKIL



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Flos Potentia

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ABSTRACT

Flowers are always regarded as a symbol of love, beauty and gift of nature. People often use flowers to portray their feelings and happiness. In such events like weddings, graduations, and valentine's day, people express their appreciations towards loved ones with bouquet of fresh flowers. However, these flower bouquets only last for a certain period of time. Therefore, a product named Flos Potentia is introduced to preserve the freshness of the flowers and make them last longer. The list of ingredients tested to make this product are water, paracetamol, glycerine, eggshells and distilled water. The eggshells are boiled and extracted by using distilled water which produced a new solution called hyaluronic acid. Therefore, there are two main solutions considered to preserve the freshness of the fresh flowers which are glycerine and hyaluronic acid. Next, five containers of constant size are used to place the flowers with the solutions, where these five different solutions are tested to get the best results. The experiment took about two to three weeks where the best preservation for the flowers turns out to be the handmade hyaluronic acid, followed by glycerine with boiled water, glycerine with warm water, paracetamol with water, and lastly, water.

Keywords: Flower; preserver; glycerine; hyaluronic acid; paracetamol

1. INTRODUCTION

Flowers play an important part in human's life as they are used to portray feelings and happiness. Fresh flowers are commonly used compared to artificial flowers due to its natural properties such as their smells, colours, textures and structures. However, fresh flowers have a short lifespan when they are cut off from the plants. Therefore, a product named Flos Potentia is introduced to overcome this problem. The list of possible ingredients tested to make this product are water, glycerine, eggshells, distilled water and paracetamol. However, after some extractions and separation processes, there are five different solutions used to test the freshness of the flowers. They are handmade hyaluronic acid, combination of glycerine and boiled water, combination of glycerine and warm water, combination of water and paracetamol and finally plain water. In order to avoid unnecessary factor that might affect the correct result, five containers of similar size have been chosen and used to fill in the solutions. The time taken to proceed this experiment is between two to three weeks. This experiment needs a prolonged observation, where the

changes of the flowers are recorded every three days. Based on the observation and results from the experiments, it was found that the handmade hyaluronic acid gives the best preservation to the flowers.

2. INNOVATION DEVELOPMENT

The production of this product is simple and it is made of only several ingredients. Even so, these ingredients produce solutions with suitable properties to preserve the flowers. Figure 2.1 to Figure 2.5 show the list of ingredients used in this research.



Figure 2.1: Water

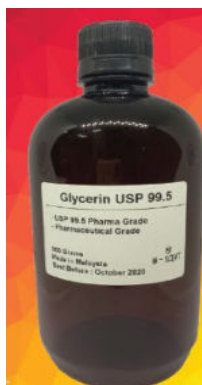


Figure 2.2: Plant glycerine



Figure 2.3: Distilled water



Figure 2.4: Eggshells



Figure 2.5: Paracetamol

In order to prove the effectiveness of the ingredients, these ingredients have been extracted and separated into five main solutions which consist of handmade hyaluronic acid, glycerine with boiled water, glycerine with warm water, paracetamol with water, and water. Throughout this research, red rose is chosen for the experiment. Figure 2.6 and Figure 2.7 show the red roses and container used to fill in the solutions.






Figure 2.6: Red rose



Figure 2.7: Container

The method of the experiment is simple and easy to proceed. Before that, the process of making the hyaluronic acid by using eggshells are first discussed in Table 2.1.

Table 2.1: Steps in making the hyaluronic acid

Step	Process
Step 1: Crack the shell of the eggs. Pour the egg white and yolk into a container. Store the egg white and yolk in the refrigerator for future use.	
Step 2: Wash the inside and outside of the egg with warm water. Remove all remaining yolk and egg membrane. Place the egg shells in a plastic bag. Close the bag. Push on the shells from the outside of the bag. Crack the shell into small pieces.	
Step 3: Boil distilled water in a cooking pot. Fill the cooking pot halfway to avoid spillage when boiling. Distilled water is used to maintain the purity of the hyaluronic acid. Put the cracked egg shells into the boiling water. Place a cover on the cooking pot. Boil the egg shells and water. Top up water as necessary.	
Step 4: Grind the shells using pestle and mortar until smooth.	
Step 5: Pour the liquid through a fine strainer into a glass Mason jar. The strainer removes the egg shell particles. Store the hyaluronic acid solution in a glass Mason jar. The solution contains a large amount of hyaluronic acid.	

Next, the process of the experiment is discussed. Firstly, five red roses that are freshly cut from their plants are chosen. In this experiment, these fresh roses are cut together with their stems for about 16 cm long. After the roses have been cut, the mixtures or solutions for the preservation process are prepared. After the solutions are ready, the roses are placed into the containers that are filled with the prepared solutions. The roses are left in the mixture for two to three weeks. Starting from day one, the changes of the roses which includes their colour, petals and stems are recorded every three days.

The research methodology of this product are presented in the following steps.

- Step 1: Cut the stem of red roses diagonally for about 16cm long.
- Step 2: Prepare five mixtures or solutions for the roses which includes handmade hyaluronic acid, glycerine with boiled water, glycerine with warm water, paracetamol with water, and water.
- Step 3: Place the roses into the container and left for two to three weeks.
- Step 4: Observe and check the differences of the roses which includes their colour, petals and stems.

Following that, five different solutions of the experiment are given in the following figures.



Figure 2.8:
Hyaluronic acid



Figure 2.9:
Glycerine with
boiled water



Figure 2.10:
Glycerine with
warm water



Figure 2.11:
Paracetamol
with water



Figure 2.12:
Water

3. COMMERCIAL POTENTIAL

The target market for this product are housewife, woman, florist, wedding planner, and event organizer. The cost for one bottle of handmade hyaluronic acid of 100 ml is around RM5.

4. CONCLUSION

In order to choose the best preservatives for the fresh flowers, an experiment have been conducted by using five different types of solutions. The solutions include handmade hyaluronic acid, glycerine with boiled water, glycerine with warm water, paracetamol with water, and water. After three weeks, it was found that handmade hyaluronic acid gives the best preservation to the flowers since the colour, petals and stem of the red rose remain fresh and bright.

ACKNOWLEDGEMENT

The authors would like to thank Universiti Sultan Zainal Abidin for the financial support given throughout this project.

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ISBN 978-967-17072-4-1



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