

SENSORY EVALUATION OF ROSE PETAL (Rosaceae) ICE CREAM

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Chapter 1

INTRODUCTION

Background of the Study

People around the world enjoy flowers in their food. Asian cuisine, for instance, relies on lilies and chrysanthemums, squash blossoms are common in Italian and Latin cuisine and the French used carnations for chartreuse, a traditional liquor, rose petals and rose hips are popular with home cooks and professional nutrition, they do all benefits for you beyond their actual food value (Lundman, 2017).

Ice cream is a mixture of milk, cream, sugar, and sometimes other ingredients that has been frozen into a soft creamy delight using special techniques, ice cream has been a popular treat for hundreds of years but only become a common place since the widespread use of refrigerator. The exploding popularity of ice cream has led to a number of ice cream variations including frozen custard, frozen yogurt, and even non-dairy versions made with ingredients like coconut milk (Moncel, 2018).

Rose petals are edible and can be collected at any time for this purpose. However, rose petals that are to be used in recipes or to be dried require a bit of planning. The perfect time to collect rose petals is mid-morning, on a dry day when the dew has evaporated and there's been no rain for at least the past two days. Bring your fingers over an opened rose flower and tug gently on all the petals at once (Wilson, 2018).

According to Haider (2012) a master herbalist, rose petals contains Vitamin A, C, D, and E and some Vitamin B too. It also contains antioxidants and they are mild sedative, anti-depressant and enhancing agent. Flavonoids present in rose plant exhibit anti-depressant property. The extract of this plant has been scientifically proven to reduce the amyloid B, which is the pathological cause of

Alzheimer's disease. There are also compound extracted from rose that may be effective in improving the function of the heart and also showed excellent anti-activity against HIV-infected cells.

Since Roses are plentiful in Guiuan Eastern Samar the proponents conducted this study to make people realize and gain knowledge on how useful rose petal is, and that rose flowers are not only for decorations but can also be used to produce an exotic flavoured ice cream that will satisfy the customers taste and can contribute to their healthy lifestyle.

Objective of the study

The main purpose of the study was to make an Ice Cream flavoured with Rose Petals. Specifically, it aimed to evaluate and analyze the product in terms of the following:

1. develop a new ice cream product flavour with Rose Petal Ice cream.
2. evaluate the acceptability level of the Rose Petal Ice cream through the following indicator.
 - a. flavour
 - b. appearance
 - c. texture
 - d. aroma
 - e. colour
3. determine the general acceptability of the Rose Petal Ice cream.

Significance of study

The output of the study is beneficial to the following:

To unemployed members of the community. For them to be aware of the entrepreneurial potentials of the rose petal, not just for selling flowers during special occasions like Valentine's day but also for gastronomic experiences.

To businessmen and food establishment owners. For them to add a new product innovation in their sales and products so that they can welcome more costumers in their stores.

The children. This study will help to improve the health of the children.

The students. This study will give the students (future researchers) to have an idea and to innovate new products using rose petals.

The customers. The result of this study will provide health benefits to the customers. This could also help them to make new product using rose petal as flavour.

The instructors. This study will help the instructors to give an idea to their students on how to innovate a new product that is made from rose petals

Scope and Delimitations of the Study

This study was limited in testing the rose petal ice cream. The respondents of the study were the thirty (30) selected fourth year students ten (10) from College of Business Management and Accountancy, ten (10) from College of Education and Ten (10) from College of Engineering and Technology for the pilot test, thirty Faculties in ESSU-Guiuan Campus for the Benchmark test and Ten ice cream makers and vendors for the final test. This study used a score card to determine the acceptability of Rose Petal Ice Cream indicating the following criteria, flavour, appearance, texture, aroma, colour and general acceptability.

Definition of Terms

The following terms are defined in a random order to aid the comprehension of the readers:

Rose petals. Are edible and can be collected at any times and are used in recipes. In this study, Rose Petals serves as the main ingredient and flavouring of the ice cream.

Ice cream. Is a sweetened frozen food typically eaten as snack or dessert. It usually made from dairy products, such as milk and cream, and often combined with fruits or other ingredients and flavours. It is typically sweetened with sugar or sugar substitutes. In this study ice cream is the main product for this study.

Taste. A small quantity of something eaten, drunk, or sampled to assess its effect on the sensory receptors on the surface of the tongue or in the mouth. In this study, taste is the sweetness of the ice cream.

Appearance. A food presentation which refers to the art of modifying, processing, arranging or decorating food to enhance its aesthetics appeal. In this study, appearance pertains to the palatable effect of the product.

Aroma. A noticeable and usually a pleasant smell. In this study, aroma will be the tastiness of the product.

Chapter 2

REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presents the relevant articles, studies, and literatures that will serve as the basis of this study.

Related Literature

The origins of ice cream can be traced back to at least the 4th century B.C. Early references include the Roman emperor Nero (A.D. 37-68) who ordered ice to be brought from the mountains and combined with fruit toppings, and King Tang (A.D. 618-17 of Shang, China) who had a method of creating ice and milk concoctions. Ice cream was likely brought from China back to Europe. Over time, recipes for ices, sherbets, and milk ices evolved and served in fashionable Italian and French royal courts. (Bellis, 2017)

The early 1800's, there were no accepted rules about how to flavour, prepare, or even serve ice cream other than the fact it had to be done rather quickly. An absence of mechanical refrigeration meant that chefs rely on ice houses where large chunks of ice were stored and elaborate hand-cranked machines in order to dish out the good stuff. Enjoying ice cream was an event normally only enjoyed by society's elite. (Rossen, 2017)

The history of ice cream street vendors dates back to the 19th century and is shaped by advances in technology, and fortunately, sanitation. While much has changed since peddlers first sold dishes of ice cream from carts cooled with ice blocks, for the last few generations, much has changed about the ice cream truck. Children in the 1970s and 1980s also ran toward the truck as soon as the same recognizable music was heard. The main difference is that the treats sold back then (Fat Frogs and Micky Mouse shaped ice cream bars) have been replaced by today's popular cartoon characters. While some companies now allow parents to track the truck with GPS, the time-honoured set-up is still the same: customers approach a truck with an open side window, review the menu, and place an order. In the U.S, the ice cream cart began as an urban phenomenon in which Working class labourers bought a small dish of ice cream that they licked clean. The dish was returned to the vendor, wiped down, and loaded with a fresh scoop for a new customer. Customers with more money-or a healthy fear of infectious diseases-opted for ice cream sandwiches. (Lucchesi, 2016)

Ice cream has a long history as what many might call a “decadent” food. Even now, a store-bought pint is reserved for a certain occasions: when it’s hot, or when a celebratory dessert is called for. This “special” association is sent new to ice cream; for the greater part of this storied life (the act of turning milk into a creamy, frozen treat has been around four thousands of years), ice cream was a rare and priced dessert. Only the very wealthy could tap into this delicacy because without the resources in part, namely access to some form of freezing apparatus ice cream is a good as melted. (Tesauro,2016)

Back in 30’s, the Russian state made from different changes in the food policy of the country and established standard of ice cream production. According to the new rules, the factories were allowed to use only fresh ingredients, no chemical additions. That’s why the ice cream had a particularly fresh milky taste. Plombir, chocolate Eskimo, and Lokamaka were kinds of ice cream popular among children and their parents. (Yulia S., 2018)

Most people who have to pay the price for a particularly hard night of drink nurse their wounds prostrate on the couch or slouching at a desk with greasy deliver and some ibuprofen. But many people who have felt the crippling effects of a particularly cruel hangover one too many times take it upon themselves to devise their own creative hangover treatments, sourcing inspiration from any number of bizarre hangover cure concoctions that exist in some unwritten drinker’s almanac sourced from “wild” aunts the world over. But in South Korea, Asia’s hardest drinking country, the hangover cure is a \$125 million per year industry unto itself, with pills, cosmetic products to hide the effects of boozing, and of course, stomach-calming foods like hangover soup. But in a new step forward to humanity hangover course will be more delicious than ever. A South Korean convenience store chain has introduced a hangover-curing ice cream bar. (Marshall, 2016)

Sorbetes is still made in the Philippines today thanks to the *sorbeteros* who peddle the ice cream in the streets. The *sorbetero*’s carts are distinctly decorated like a Philippine jeepney, while three ice

cream flavours are stored inside three metal canisters. Blocks of ice keep the sorbets frozen. Popular flavours or the dirty ice cream include avocado, melon, strawberry, cookies and cream, chocolate and cheese. Now coconut milk is also used to give the sorbetes its creaminess. Sorbetes is scooped and served in sugar cones or in between bread buns. (Upton, 2013)

Ice cream was introduced the same time cooling device like refrigerators are thought in during the time of America colonization. American ice cream was made from cow's milk, "Sorbetes" was made out of carabao's milk resulting to a cheaper produce. Both kinds of milk are widely used these days. Coconut milk and cassava flour are other ingredients used to make the local ice cream, making "sorbetes" distinct from ice cream in other countries. I cannot think of other reason why the modern Filipinos called sorbetes "dirty ice cream" rather than these. (Siojo, 2018)

In a discovery that will give nutritionists the shivers, Japanese scientist has discover that consuming ice cream for improves a person's alertness and mental performance. Yoshihiko Koga, a professor at Tokyo's Kyorin University, has carried out a series of clinical trials in which test subjects were required to eat ice cream immediately after waking up. The eating ice cream the same "pleasure spots" of the brain that are lit up by winning money, are listening to a favorite piece of music. (Ryall and Rothwell, 2016)

Related Studies

In conducting the preparation for Rose Petals Ice Cream, we the researchers find studies that directly relate study. The information gathered ideas and concept from the project and report that showed some degree relevance to the study is stated below.

Castro (2015), conducted a research on the acceptability of powdered ginger as a main ingredients in making ice cream and it was rated acceptable in terms of general acceptability.

Mags (2013), conducted similar study of sweet potato ice cream .The study came up with positive result obtained from varied respondents.

Chocolate, vanilla and strawberry are the favorites, and cool treats made with other flavourings and fruits also are common. What's more unusual are vegetable ice creams. Vegetables as a flavour base for ice cream might seem strange into same, "but we're trying to use what's in season, and people before us have done stranger things," says Holmes, who has been churning his specialty ice creams and sorbetes since 2014. He offers Jeni's splendid ice creams as an example. The artisan ice cream company based in Columbus, Ohio, lists sweet corn and fennel among its flavours. (McKay, 2016)

Studies have revealed that craving for ice cream - or – anything sweet – could help after mood swings. In addition, according to health.com, the reason behind the craving is often associated with long-term patterns such as our childhood sweet memories – like when mom gives us cookies or rewarded for doing well with an ice cream fix. Although the downside of eating these sweets could lead to Diabetes, you can still enjoy them by trying these artisanal ice cream made by Fog City Creamy. (Manahan, 2016)

Students Cassidy Cowger mixes liquid nitrogen with other ice cream ingredients. This was the winning combination for Jordan Comish of highland and Matt Vanguten of East Peoria during an ice cream-making contest Friday afternoon in Millikin University's Leighty-Tabor Science Center. Ice cream making was part of the workshop for chemistry majors, and because of cooling agent was liquid nitrogen rather than ice, the process required taking safely precautions, such as wearing goggles. (Churchill, 2015)

Work Flow

The study of this product includes input, process and output of the products. In these aspects it speaks on how the product acceptability of rose petal is being produce, what the ingredients and what materials needed.

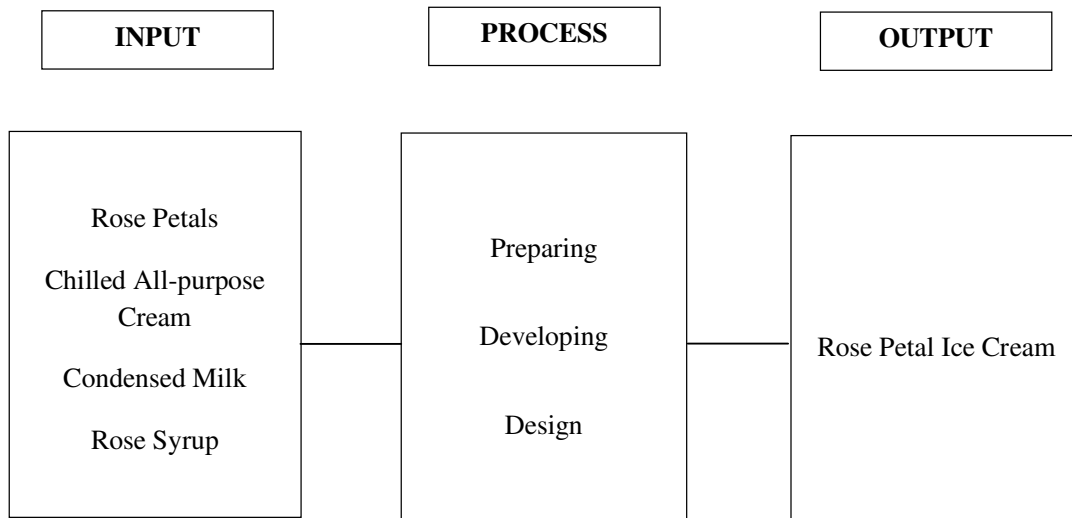


Figure1. Workflow of the study

CHAPTER III

METHODOLOGY

This chapter presents the research design, locale of the study, and respondents of the study, research instruments, and data collection procedure, measurement of variables and analysis of data.

Materials and Equipment

Casserole pot

- Around or oval shaped baking dish with a lid that used to cook a wide variety of ingredients that are made into food.

Electric mixer

- A mixer is a kitchen utensil which uses a gear-driven mechanism to rotate a set of beaters in a bowl containing the food to be prepared. It automates the repetitive task stirring, whisking or beating. When the beaters replaced by a dough hook, a mixer may also be used to knead.

Wooden spoon

- A spoon is use for stirring sauces and for mixing ingredients in cooking. It is made of wood and as a ladle.

Stove

- A portable or fixed apparatus that burns fuel or uses electricity to provide heat as for cooking or heating.

Chopping board

- Also known as cutting board, are kitchen tool used as a surface for foods being cut with knives.

Mixing bowl

- Round bowls varying sizes that are made of plastic ceramic, glass, copper, and stainless steel used for combining foods ingredients in preparing recipes.

Knives

- A kitchen knife is any knife that is intended to be used for food preparation. It is known as knives that is notably a large chef's knives, a tough cleave, and the small paring knife-also many specialized knives that are designed for specific task.

Procedure

The following procedure is used in order to develop the rose petal ice cream.

1. Wash the rose petal in running water.
2. Remove the petals.
3. Combine the chilled all-purpose cream and condensed milk in a mixing bowl, and then mix using electric mixer.
4. Start mixing the rose syrup and continue mixing until you get the right consistency.
5. Transfer to the proper container and place in to freezer.
6. Wait until the rose petal ice cream becomes frozen.

Rose syrup:

Put 750 grams white sugar in a pot and 1L water and let it boil until you meet the right consistency of syrup. Remove from the heat and cool, then put 100 grams rose petals and cover 6-8 hours. Provide the small tight container like empty bottles and fill with rose syrup, place in a refrigerator.

Benchmark Test Costing

Trial I Costing	Trial II Costing	Trial III Costing
380g. Condensed Milk ₱35.00	380g. Condensed Milk ₱35.00	380g. Condensed Milk ₱35.00
250ml. All Purpose Cream ₱52.00	250ml. All Purpose Cream ₱52.00	250ml. All Purpose Cream ₱52.00
50g. Rose Petal (for rose syrup) ₱50.00	100g. Rose Petal (for rose syrup) ₱100.00	75g. Rose Petal (for rose syrup) ₱75.00
750g. White Sugar ₱32.00	750g. White Sugar ₱32.00	750g. White Sugar ₱32.00
1g. Rose ₱1.00	1.5L. Water ₱5.00	1.5L. Water ₱5.00
1.5L. Water ₱5.00		
Total Cost: ₱175.00	₱224.00	₱199.00

Pilot Test Costing

Trial I Costing	Trial II Costing	Trial III Costing
380g. Condensed Milk ₱35.00	380g. Condensed Milk ₱35.00	285g. Condensed Milk ₱26.25
250ml. All Purpose Cream ₱52.00	250ml. All Purpose Cream ₱52.00	250ml. All Purpose Cream ₱52.00
50g. Rose Petal (for rose syrup) ₱50.00	100g. Rose Petal (for rose syrup) ₱100.00	100g. Rose Petal (for rose syrup) ₱100.00
750g. White Sugar ₱32.00	500g. White Sugar ₱22.00	250g. White Sugar ₱12.00
1g. Rose ₱1.00	1L. Water ₱4.00	1L. Water ₱4.00
1.5L. Water ₱5.00		
Total Cost: ₱175	₱213	₱194.25

Final Test Costing

Trial I Costing	Trial II Costing	Trial III Costing
285g. Condensed Milk ₱26.25	190g. Condensed Milk ₱17.50	190g. Condensed Milk ₱17.50
250ml. All Purpose Cream ₱52.00	250ml. All Purpose Cream ₱52.00	250ml. All Purpose Cream ₱52.00
100g. Rose Petal (for rose syrup) ₱100.00	100g. Rose Petal (for rose syrup) ₱100.00	100g. Rose Petal (for rose syrup) ₱100.00
250g. White Sugar ₱12.00	1L. Water ₱4.00	1L. Water ₱4.00
1L. Water ₱4.00	2tbsp. Peanut ₱5.00	
Total Cost: ₱194.25	₱178.50	₱173.50

Methods

Research Design

The study utilized the Experimental method of research particularly the completely randomized design (CRD) where all samples were randomly assigned to all panelists as this experimental design is most associated with sensory studies to avoid or minimize artifacts due to order of sample presentation. CRD is also ideal design for central location consumer test where each panelist evaluates each sample (Lawless and Heymann, 2010)

The researchers believe that this kind of research design is appropriate in the study considering that an action must be taken if problem in the development of this product persist during the span of the study.

Locale of the Study

The study was conducted at Eastern Samar State University – Guiuan Campus located at Brgy. Salug Guiuan Eastern Samar.

Respondents of the Study

There are 70 individuals considered as the respondents of the study. Thirty (30) selected fourth year students ten (30) from College of Business Management and Accountancy, ten (10) from College of Education and ten (10) from College of Engineering and Technology for the pilot test, thirty (30) Faculties in ESSU-Guiuan Campus for the Benchmark test and Ten (10) ice cream makers and vendors, as experts for the final test.

Research Instrument

The researchers used a scorecard for the acceptability test in this study that served as a guide of the respondents' evaluation process. The evaluation used the following indicators; flavour, appearance, texture, aroma, colour and general acceptability. Each indicator has a scale of 1-5. 1 is for not acceptable, 2 is for slightly acceptable, 3 is for acceptable, 4 is for highly acceptable, 5 is for extremely acceptable.

Data Collection Procedure

The researchers prepared a communication letter addressed to the campus administrator of ESSU – Guiuan where the study was conducted. After the request was approved, the researchers

distributed score card to the respondents together with the product. The researchers used the purposive sampling in which the respondents were chosen based on the characteristics needed in the investigation. Then, the researchers collected the data gathered from the score card and tallied the result ready for interpretation.

Measurement of Variables

To measure the variables, the criteria below were used:

Ranges	Scale	Interpretation
4.21-5.00	5	Extremely Acceptable
3.41-4.20	4	Highly Acceptable
2.41-3.40	3	Acceptable
1.81-2.40	2	Slightly Acceptable
1.00-1.80	1	Not Acceptable

Data Analysis

The data that were gathered and tallied in order to derive the frequency and mean ratings for each of the variables considered in this study. The mean ratings were interpreted using the 5 point Likert scale namely: 5- extremely acceptable, 4- highly acceptable, 3- acceptable, 2- slightly acceptable, 1- not acceptable

Chapter 4

RESULTS AND DISCUSSION

This chapter presents the answers to the researcher questions posed in the study based on the data gathered of the product development of Rose Petal Ice Cream.

Development of the Product

To develop the rose petal ice cream, the first thing to do is to wash the rose petal in running water. Then remove the petals. Combine the chilled all-purpose cream and condensed milk in a mixing bowl, and then mix using electric mixer. Start mixing the rose syrup and continue mixing until you get the right consistency. Transfer to the proper container and place in to freezer. Wait until the rose petal ice cream becomes frozen.

Rose syrup:

Put 750 grams white sugar in a pot and 1L water and let it boil until you meet the right consistency of syrup. Remove from the heat and cool, then put 100 grams rose petals and cover 6-8 hours. Provide the small tight container like empty bottles and fill with rose syrup, place in a refrigerator.

Testing the Product

To determine the acceptability of rose petal ice cream, the researchers conducted 3 tests, the benchmark test, the pilot test, and the final test. A scorecard with different criterion was used to test the acceptability of each indicator in the scorecard. Upon demonstrating the development of the product and giving a free taste to the respondents, the researchers handed the scorecard to determine the respondent's perception and acceptability in the rose petal ice cream.

Pilot Test

Table 1. The Result of the Pilot Test of Rose Petal Ice Cream in terms of flavor

Items	Mean	Interpretation
Trial 1	4.25	Extremely Acceptable
Trial 2	4.50	Extremely Acceptable
Trial 3	4.73	Extremely Acceptable
Total Mean	4.50	Extremely Acceptable

Table 1 shows the evaluation result of the pilot test participated by Thirty selected fourth year students ten from College of Business Management and Accountancy, ten from College of Education and Ten from College of Engineering and Technology. The researchers conducted three trials in pilot test. Each indicator has a scale of 1-5. Trial 3 got highest mean score of the flavor is 4.73 and interpreted as extremely acceptable. Trial 1 has the lowest score of 4.25 and interpreted as extremely acceptable. With an overall mean score of 4.50 and is interpreted as extremely acceptable.

Table 2. The Result of the Pilot Test of Rose Petal Ice Cream in Terms of Appearance

Items	Mean	Interpretation
Trial 3	4.76	Extremely Acceptable
Trial 3	4.46	Extremely Acceptable
Trial 3	4.61	Extremely Acceptable
Total Mean	4.61	Extremely Acceptable

Table 2 shows the evaluation result of the pilot test participated by Thirty selected fourth year students ten from College of Business Management and Accountancy, ten from College of Education and Ten from College of Engineering and Technology for the pilot test The researchers conducted three trials in pilot test. Each indicator has a scale of 1-5. In trial 1 the mean score of the appearance 4.76 and interpreted as extremely acceptable. Meanwhile, Trial 2, has a mean score 4.46 and interpreted as

extremely acceptable. In trial 3 mean score is 4.61 and is interpreted as extremely acceptable. With an overall mean score of 4.61 and is interpreted as extremely acceptable.

Table 3. The Result of the Pilot Test of Rose Petal Ice Cream in Terms of Texture

Items	Mean	Interpretation
Trial 1	4.80	Extremely Acceptable
Trial 2	4.50	Extremely Acceptable
Trial 3	4.86	Extremely Acceptable
Total Mean	4.72	Extremely Acceptable

Table 3 shows the evaluation result of the pilot test participated by Thirty selected fourth year students ten from College of Business Management and Accountancy, ten from College of Education and Ten from College of Engineering and Technology. The researchers conducted three trials in pilot test. Each indicator has a scale of 1-5. In trial 1 the mean score of the texture 4.80 and interpreted as extremely acceptable. Meanwhile, Trial 2, has a mean score 4.50 and interpreted as extremely acceptable. In trial 3 mean score is 4.86 and is interpreted as extremely acceptable. With an overall mean score of 4.72 and is interpreted as extremely acceptable.

Table 4. The Result of the Pilot Test of Rose Petal Ice Cream in Terms of Aroma

Items	Mean	Interpretation
Trial 1	4.58	Extremely Acceptable
Trial 2	4.25	Extremely Acceptable
Trial 3	4.97	Extremely Acceptable
Total Mean	4.60	Extremely Acceptable

Table 4 shows the evaluation result of the pilot test participated by Thirty selected fourth year students ten from College of Business Management and Accountancy, ten from College of Education and Ten from College of Engineering and Technology. The researchers conducted three trials in pilot test. Each indicator has a scale of 1-5. Trial 3 got highest mean score of the aroma is 4.97 and

interpreted as extremely acceptable. Trial 2 has the lowest score of 4.25 and interpreted as extremely acceptable. With an overall mean score of 4.60 and is interpreted as extremely acceptable.

Table 5. The Result of the Pilot Test of Rose Petal Ice Cream in Terms of Color

Items	Mean	Interpretation
Trial 1	4.25	Extremely Acceptable
Trial 2	4.75	Extremely Acceptable
Trial 3	4.32	Extremely Acceptable
Total Mean	4.44	Extremely Acceptable

Table 5 shows the evaluation result of the pilot test participated by Thirty selected fourth year students ten from College of Business Management and Accountancy, ten from College of Education and Ten from College of Engineering and Technology. The researchers conducted three trials in pilot test. Each indicator has a scale of 1-5. Trial 2 got highest mean score of the color is 4.75 and interpreted as extremely acceptable. Trial 1 has the lowest score of 4.25 and interpreted as extremely acceptable. With an overall mean score of 4.44 and is interpreted as extremely acceptable.

Table 6. Summary on the Overall Perceptions of the Respondents on Pilot Test.

Indicator	Mean	Interpretation
Flavour	4.5	Extremely Acceptable
Appearance	4.62	Extremely Acceptable
Texture	4.72	Extremely Acceptable
Aroma	4.60	Extremely Acceptable
Color	4.44	Extremely Acceptable
Total Mean	4.57	Extremely Acceptable

Table 6 reveals the result of the evaluation of the pilot test participated by Thirty selected fourth year students ten from College of Business Management and Accountancy, ten from College of Education and Ten from College of Engineering and Technology. Each indicator has the scale of 1-5.

Among the parameters, texture was the highest mean score of 4.72 which means that the respondents were extremely acceptable the product. However, color was the lowest mean score of 4.44 and interpreted as highly acceptable. The overall mean in the pilot test garner the score of 4.59 and was interpreted as extremely acceptable.

Benchmark Test

Table 7. The Result of the Benchmark Test of Rose Petal Ice Cream in Terms of Flavor

Items	Mean	Interpretation
Trial 1	4.89	Extremely Acceptable
Trial 2	4.93	Extremely Acceptable
Trial 3	4.91	Extremely Acceptable
Total Mean	4.91	Extremely Acceptable

Table 7 shows the evaluation result of the benchmark test participated by thirty faculty members of ESSU Guiuan Campus. The researchers conducted three trials in benchmark test. Each indicator has a scale of 1-5. Trial 2 got highest mean score of the flavor is 4.93 and interpreted as extremely acceptable. Trial 1 has the lowest score of 4.89 and interpreted as extremely acceptable. With an overall mean score of 4.91 and is interpreted as extremely acceptable.

Table 8. The Result of the Benchmark Test of Rose Petal Ice Cream in Terms of Appearance

Items	Mean	Interpretation
Trial 1	4.94	Extremely Acceptable
Trial 2	4.83	Extremely Acceptable
Trial 3	4.90	Extremely Acceptable
Total Mean	4.89	Extremely Acceptable

Table 8 shows the evaluation result of the benchmark test participated by thirty faculty members of ESSU Guiuan Campus. The researchers conducted three trials in pilot test. Each indicator has a scale of 1-5. Trial 1 got highest mean score of the appearance is 4.94 and interpreted as extremely

acceptable. Trial 3 has the lowest score of 4.83 and interpreted as extremely acceptable. With an overall mean score of 4.89 and is interpreted as extremely acceptable.

Table 9. The Result of the Benchmark Test of Rose Petal Ice Cream in Terms of Texture

Items	Mean	Interpretation
Trial 1	4.85	Extremely Acceptable
Trial 2	4.97	Extremely Acceptable
Trial 3	4.94	Extremely Acceptable
Total Mean	4.92	Extremely Acceptable

Table 9 shows the evaluation result of the benchmark test participated by thirty faculty members of ESSU Guiuan Campus. The researchers conducted three trials in benchmark test. Each indicator has a scale of 1-5. Trial 2 got highest mean score of the texture is 4.97 and interpreted as extremely acceptable. Trial 1 has the lowest score of 4.85 and interpreted as extremely acceptable. With an overall mean score of 4.92 and is interpreted as extremely acceptable.

Table 10. The Result of the Benchmark Test of Rose Petal Ice Cream in Terms of Aroma

Items	Mean	Interpretation
Trial 1	4.70	Extremely Acceptable
Trial 2	4.92	Extremely Acceptable
Trial 3	4.96	Extremely Acceptable
Total Mean	4.86	Extremely Acceptable

Table 10 shows the evaluation result of the benchmark test participated by thirty faculty members of ESSU Guiuan Campus. The researchers conducted three trials in benchmark test. Each indicator has a scale of 1-5. Trial 3 got highest mean score of the aroma is 4.96 and interpreted as extremely acceptable. Trial 1 has the lowest score of 4.70 and interpreted as extremely acceptable. With an overall mean score of 4.86 and is interpreted as extremely acceptable.

Table 11. The Result of the Benchmark Test of Rose Petal Ice Cream in Terms of Color

Items	Mean	Interpretation
Trial 1	4.87	Extremely Acceptable
Trial 2	4.89	Extremely Acceptable
Trial 3	4.76	Extremely Acceptable
Total Mean	4.90	Extremely Acceptable

Table 11 shows the evaluation result of the benchmark test participated by thirty faculty members of ESSU Guiuan Campus. The researchers conducted three trials in benchmark test. Each indicator has a scale of 1-5. Trial 2 got highest mean score of the color is 4.89 and interpreted as extremely acceptable. Trial 3 has the lowest score of 4.76 and interpreted as extremely acceptable. With an overall mean score of 4.90 and is interpreted as extremely acceptable.

Table 12. Summary on the Overall Perceptions of the Respondents on Benchmark Test.

Indicator	Mean	Interpretation
Flavour	4.91	Extremely Acceptable
Apperance	4.89	Extremely Acceptable
Texture	4.92	Extremely Acceptable
Aroma	4.86	Extremely Acceptable
Color	4.90	Extremely Acceptable
Total Mean	4.89	Extremely Acceptable

Table 12 shows the evaluation result of the benchmark test participated by thirty faculty members of ESSU Guiuan Campus. Each parameter has the scale of 1-5. Among the parameters, texture was the highest mean score of 4.92 which interpreted as extremely acceptable, that means the respondents likes the texture of the product. Meanwhile, aroma was the lowest mean score of 4.86 which also interpreted as extremely acceptable. This means that in terms of aroma should be improve in order to attract customers through the smell of the product. The overall mean in the benchmark test got the score of 4.90 and was interpreted as extremely acceptable.

Final Test

Table 13. The Result of the Final Test of Rose Petal Ice Cream in Terms of Flavor

Items	Mean	Interpretation
Trial 1	4.55	Extremely Acceptable
Trial 2	4.48	Extremely Acceptable
Trial 3	4.32	Extremely Acceptable
Total Mean	4.45	Extremely Acceptable

Table 13 shows the evaluation result of the final test participated ten ice cream makers and vendors in Guiuan Eastern Samar. The researchers conducted three trials in final test. Each indicator has a scale of 1-5. Trial 1 got highest mean score of the flavor is 4.55 and interpreted as extremely acceptable. Trial 3 has the lowest score of 4.32 and interpreted as extremely acceptable. With an overall mean score of 4.45 and is interpreted as extremely acceptable.

Table 14. The Result of the Final Test of Rose Petal Ice Cream in Terms of Appearance

Items	Mean	Interpretation
Trial 1	4.40	Extremely Acceptable
Trial 2	4.60	Extremely Acceptable
Trial 3	4.38	Extremely Acceptable
Total Mean	4.44	Extremely Acceptable

Table 14 shows the evaluation result of the final test participated ten ice cream makers and vendors in Guiuan Eastern Samar. The researchers conducted three trials in final test. Each indicator has a scale of 1-5. Trial 2 got highest mean score of the appearance is 4.60 and interpreted as extremely acceptable. Trial 3 has the lowest score of 4.38 and interpreted as extremely acceptable. With an overall mean score of 4.44 and is interpreted as extremely acceptable.

Table 15. The Result of the Final Test of Rose Petal Ice Cream in Terms of Texture

Items	Mean	Interpretation
Trial 1	4.45	Extremely Acceptable
Trial 2	4.56	Extremely Acceptable
Trial 3	4.73	Extremely Acceptable
Total Mean	4.58	Extremely Acceptable

Table 15 shows the evaluation result of the final test participated ten ice cream makers and vendors in Guiuan Eastern Samar. The researchers conducted three trials in final test. Each indicator has a scale of 1-5. Trial 3 got highest mean score of the texture is 4.73 and interpreted as extremely acceptable. Trial 1 has the lowest score of 4.45 and interpreted as extremely acceptable. With an overall mean score of 4.58 and is interpreted as extremely acceptable.

Table 16. The Result of the Final Test of Rose Petal Ice Cream in Terms of Aroma

Items	Mean	Interpretation
Trial 1	4.22	Extremely Acceptable
Trial 2	4.30	Extremely Acceptable
Trial 3	4.98	Extremely Acceptable
Total Mean	4.50	Extremely Acceptable

Table 16 shows the evaluation result of the final test participated ten ice cream makers and vendors in Guiuan Eastern Samar. The researchers conducted three trials in final test. Each indicator has a scale of 1-5. Trial 3 got highest mean score of the aroma is 4.98 and interpreted as extremely acceptable. Trial 1 has the lowest score of 4.22 and interpreted as extremely acceptable. With an overall mean score of 4.50 and is interpreted as extremely acceptable.

Table 17. The Result of the Final Test of Rose Petal Ice Cream in Terms of Color

Items	Mean	Interpretation
Trial 1	4.56	Extremely Acceptable
Trial 2	4.60	Extremely Acceptable
Trial 3	4.52	Extremely Acceptable
Total Mean	4.56	Extremely Acceptable

Table 17 shows the evaluation result of the final test participated ten ice cream makers and vendors in Guiuan Eastern Samar. The researchers conducted three trials in final test. Each indicator has a scale of 1-5. Trial 2 got highest mean score of the color is 4.60 and interpreted as extremely acceptable. Trial 3 has the lowest score of 4.52 and interpreted as extremely acceptable. With an overall mean score of 4.56 and is interpreted as extremely acceptable.

Table 18. Summary on the Overall Perceptions of the Respondents on Final Test.

Indicator	Mean	Interpretation
Flavour	4.45	Extremely Acceptable
Appearance	4.46	Extremely Acceptable
Texture	4.58	Extremely Acceptable
Aroma	4.5	Extremely Acceptable
Color	4.56	Extremely Acceptable
Total Mean	4.51	Extremely Acceptable

The table 18 shows the evaluation result of the final test participated ten ice cream makers and vendors in Guiuan Eastern Samar. Each parameter has 1-5 scale. Among of the parameters, appearance and general acceptability was the highest mean score of 4.61 which is interpreted as extremely acceptable. This means that the respondents of the final test are pleased with the appearance they feel whenever they eat the rose petal ice cream. In the other hand, the indicator Flavoring ranked lowest among the group and was rated 4.45 but still, interpreted as an extremely like. This just proves that in

terms of flavoring, the researcher’s needs to improve the flavor of the product enable to become more palatable for the target customers.

Overall Mean Result

Table 19. *Overall Perception of Respondents for Rose Petal Ice Cream.*

Items	Benchmark Test	Pilot Test	Final Test	Overall Result	Interpretation
Flavour	4.50	4.91	4.45	4.62	Extremely Acceptable
Appearance	4.61	4.89	4.46	4.65	Extremely Acceptable
Texture	4.72	4.92	4.58	4.74	Extremely Acceptable
Aroma	4.60	4.86	4.5	4.65	Extremely Acceptable
Color	4.44	4.90	4.56	4.63	Extremely Acceptable
General Acceptability	4.72	4.95	4.61	4.76	Extremely Acceptable
TOTAL	27.59	29.43	27.16	28.05	Extremely Acceptable
Grand Mean	4.59	4.90	4.52	4.67	Extremely Acceptable

Table 19 shows the overall perception on a sensory evaluation result of the respondents. For the pilot test it has a total mean score of 4.59 with corresponding interpretation of extremely acceptable; the benchmark test has a total mean score of 4.90 with corresponding interpretation of extremely acceptable; the final test has a total mean score of 4.52 with corresponding interpretation of highly acceptable. This means that the respondents of Eastern Samar State University Guiuan Campus rated the product development known as the Rose Petal Ice Cream to be extremely acceptable.

General Acceptability of Rose Petal Ice Cream.

Table 20.The Result of the Pilot Test of Rose Petal Ice Cream in Terms of General Acceptability

Items	Mean	Interpretation
Trial 1	4.70	Extremely Acceptable
Trial 2	4.82	Extremely Acceptable
Trial 3	4.64	Extremely Acceptable
Total Mean	4.72	Extremely Acceptable

Table 20 shows the evaluation result of the pilot test participated by thirty selected fourth year students ten from College of Business Management and Accountancy, ten from College of Education and Ten from College of Engineering and Technology.. The researchers conducted three trials in pilot test. Each indicator has a scale of 1-5. Trial 2 got highest mean score of the general acceptability is 4.84 and interpreted as extremely acceptable. Trial 3 has the lowest score of 4.64 and interpreted as extremely acceptable. With an overall mean score of 4.72 and is interpreted as extremely acceptable.

Table 21.The Result of the Benchmark Test of Rose Petal Ice Cream in Terms of General Acceptability

Items	Mean	Interpretation
Trial 1	4.90	Extremely Acceptable
Trial 2	4.98	Extremely Acceptable
Trial 3	4.97	Extremely Acceptable
Total Mean	4.95	Extremely Acceptable

Table 21 shows the evaluation result of the benchmark test participated by thirty faculty members of ESSU Guiuan Campus. The researchers conducted three trials in benchmark test. Each indicator has a scale of 1-5. Trial 2 got highest mean score of the general acceptability is 4.98 and interpreted as extremely acceptable. Trial 1 has the lowest score of 4.90 and interpreted as extremely acceptable. With an overall mean score of 4.95 and is interpreted as extremely acceptable.

Table 22. The Result of the Final Test of Rose Petal Ice Cream in Terms of General Acceptability

Items	Mean	Interpretation
Trial 1	4.49	Extremely Acceptable
Trial 2	4.63	Extremely Acceptable
Trial 3	4.71	Extremely Acceptable
Total Mean	4.61	Extremely Acceptable

Table 22 shows the evaluation result of the final test participated by ice cream makers and vendors of Guiuan Eastern Samar. The researchers conducted three trials in final test. Each indicator has a scale of 1-5. Trial 3 got highest mean score of the general acceptability is 4.71 and interpreted as extremely acceptable. Trial 1 has the lowest score of 4.49 and interpreted as extremely acceptable. With an overall mean score of 4.61 and is interpreted as extremely acceptable.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATION

This chapter presents the summary findings, conclusions and the recommendation of the study.

Summary of Findings

The study determined the sensory of acceptability of Rose Petal Ice Cream with the following objectives:

1. Develop a new flavour of Rose Petal Ice Cream
2. Evaluate the acceptability level of the Rose Petal Ice Cream through the following indicator:
 - 2.1 Flavour
 - 2.2 Appearance
 - 2.3 Texture
 - 2.4 Aroma

2.5 Colour

3. Determine the general acceptability of the Rose Petal Ice Cream.

This study determined the sensory acceptability of rose petal ice cream based on commercial flavor for making an ice cream.

The development of rose petal into ice cream evident to the following characteristics: flavour, appearance, texture, aroma, colour, and general acceptability.

A total of 70 individuals considered as the respondents of the study. Thirty selected fourth year students ten from College of Business Management and Accountancy, ten from College of Education and Ten from College of Engineering and Technology for the pilot test, thirty Faculties in ESSU-Guiuan Campus for the Benchmark test and Ten ice cream makers and vendors for the final test.

A score card was used as an instrument to determine the acceptability of the consumers. To quantify the responses, mean was used to know the acceptability of rose petal ice cream in terms of flavour, appearance, texture, aroma colour and general acceptability.

The pilot test was participated by Thirty selected fourth year students ten from College of Business Management and Accountancy, ten from College of Education and Ten from College of Engineering and Technology.. Each indicator has the scale of 1-5. Among the parameters, texture was the highest mean score of 4.72 which means that the respondents were extremely like the product However color was the lowest mean score of 4.44 and interpreted as extremely like. The overall mean in the pilot test garner the score of 4.59 and was interpreted as extremely like. This means that during the pilot testing, the acceptability of rose petal ice cream had been tested and approved by the respondents in the said test.

In the benchmark test, among the parameters, texture was the highest mean score of 4.92 which interpreted as extremely like, that means the respondents likes the texture of the product. Meanwhile, aroma was the lowest mean score of 4.86 which also interpreted as extremely like. This means that in terms of aroma should be improve in order to attract customers through the smell of the product. The overall mean in the benchmark test got the score of 4.90 and was interpreted as extremely like. The overall mean in the benchmark test garner the score of 4.90 and was interpreted as extremely liked.

Moreover, during the Final Test, appearance and general acceptability was the highest mean score of 4.61 which is interpreted as extremely like. This means that the respondents of the final test are pleased with the appearance they feel whenever they eat the rose petal ice cream. In the other hand, the indicator Flavoring ranked lowest among the group and was rated 4.45 but still, interpreted as an extremely like. This just proves that in terms of flavoring, the researcher's needs to improve the flavor of the product enable to become more palatable for the target customers. This just proves that in terms of flavoring, the researcher's needs to develop more designs in able to give life of packaging that would attract more target customers.

Conclusion

A conclusion had been drawn based on the finding of the study.

Based in the result of the test conducted, Rose Petal Ice Cream was extremely liked by the consumer. Rose Petal Ice Cream is not only for adults but also for children, and for everyone who seeks pleasure and new flavor in eating ice cream. Therefore, rose petal is not only used for decoration but based on the result of our study rose petal is also acceptable as a food flavoring especially for ice cream.

Recommendation

Based on our conclusion the following recommendation is drawn:

1. To the future researchers may conduct another research using rose petal as an ingredient.
2. To the dirty ice cream maker and ice cream producer or manufacturer, the researchers highly recommend venturing the product as one of the flavors in ice cream as it is very well accepted by the community.

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Appendix A

Letter for the Campus Administrator

Republic of the Philippines
EASTERN SAMAR STATE UNIVERSITY
Guiuan Campus
Guiuan Eastern Samar

February 08,2019

Dr. Andres C. Pagatpatan, Jr.
Campus Administrator
ESSU Guiuan
Guiuan Eastern Samar

Sir;

We would like to ask permission from your good office to conduct a study entitled **SENSORY EVALUATION OF ROSE PETAL (Rosaceae) ICE CREAM**. The output of the study will be submitted to the Research Office of this University.

We are anticipating a favorable action on this request.

Respectfully yours,

(Sgd.) IVON L. LAVILLA

(Sgd.) CENBY EPIE G. GAYTOS

(Sgd.) REMEDIOS DOBLON –MERILLES

(Sgd.) TERESITA VILLA G. LACABA, Ed.D.

Researchers

(Sgd.) ANDRES C. PAGATPATAN, JR.PH.D
CAMPUS ADMINISTRATOR

Appendix B

Letter for the Respondent

Republic of the Philippines
EATERN SAMAR STATE UNIVERSITY
Guiuan Campus
Guiuan Eastern Samar

Dear Respondents:

The undersigned are presently conducting a study entitled: “**SENSORY EVALUATION OF ROSE PETAL (Rosaceae) ICE CREAM**”. In this regard, we may solicit your kind cooperation by answering checklist.

Rest assured that your responses to the questionnaire will be treated with strict confidentiality and will be used solely for the intentions of this study.

Thank you very much.

Respectful yours,

(Sgd.)The Researchers

Appendix C

SCORE CARD FOR ACCEPTABILITY OF ROSE PETAL ICE CREAM

Name: _____ Date: _____

Direction: Evaluate the samples presented as to flavour, appearance, texture, aroma, color and general acceptability by checking the number of your choice.

Rating	Interpretation
5	Highly acceptable
4	Acceptable
3	Moderately acceptable
2	Slightly acceptable
1	Not acceptable

Criteria	Flavor	Appearance	Texture	Aroma	Color	General Acceptability
5						
4						
3						
2						
1						

Comments and Suggestions:

Evaluator's Signature: _____