UTILIZATION OF CUCUMBER FOR THE PRODUCTION OF MAYONNAISE

BY

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IN PARTIAL FULFILLMENT OF THERE QUIREMENT FOR THE AWARD OF NATIONAL DIPLOMA (ND) IN HOSPITALITY MANAGEMENT, KWARA STATE POLYTECHNIC, ILORIN.

JULY,2025.

CERTIFICATION

This research work has been read and approved as meeting the requirement for the award of National Diploma (ND) in Hospitality Management, Institute of Applied Science Studies, Kwara State Polytechnic, Ilorin, Kwara State.

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DEDICATION

This project is dedicated to ALMIGHTY GOD the beginning and the end, for sparing my life up till today.

ACKNOWELDGEMENT

All praise being only to the supreme being, God of all creations. The beginning and the end of everything

I particularly express my profound gratitude to my parent **MR.** & **MRS. ABDULKAREEM** for their immeasurable contribution towards my education both morally and financially. You all have been my rock, I can't thank you enough.

I acknowledge the much contribution of my project supervisor **MRS. ADEBAYO S.M** for supporting me during the processing of this project. I wish you and your family long life and prosperity (Amen).

I sincerely appreciate the head of Department of Hospitality Management Ms. R.A. Alabi and I also thank my project coordination Mrs. Haruna Z.A.B and also to all my amiable lectures in the Department of Hospitality Management for their knowledge which they impacted in me. I pray that God will continue to bless them (Amen).

Am using this medium to appreciate the effort of my lovely parent Mr

I am also grateful to my family and friends Who gave all necessary encouragement and offered several pieces of advice and constructive criticisms on this project work and my study. God be you all (Amen).

ABSTRACT

Cucumber *(Cucumis sativus) is a widely-cultivated creeping vine plant in the Cucurbitaceous gourd family that bears usually cylindrical fruits, which are used as vegetables. Considered an annual plant, there are three main varieties of cucumber slicing, pickling, and burbles/seedless within which several cultivars have been created. The cucumber originates from South Asia, but now grows on most continents, as many different types of cucumber are traded on the global market. Cucumbers can help prevent dehydration. Cucumbers consist mostly of water, and they also contain important electrolytes. They can help prevent dehydration in hot weather or after a workout. For people who do not enjoy drinking water, adding cucumber and mint can make it more attractive. Staying hydrated is essential for maintaining a healthy intestine constipation, avoiding kidney stones, and more.*

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CHAPTER ONE

1.1 INRODUCTION

Cucumber *(Cucumis sativus)* is a widely-cultivated creeping vine plant in the *Cucurbitaceous* gourd family that bears usually cylindrical fruits, which are used as vegetables. (Silver Jonathan, 2005). Considered an annual plant, there are three main varieties of cucumber slicing, pickling, and burbes / seedless within which several cultivars have been created. The cucumber originates from South Asia, but now grows on most continents, as many different types of cucumber are traded on the global market. In North America, the term wild cucumber refers to plants in the genera *Echinocystis* and *Marah*, though the two are not closely related.

Cultivated for at least 3,000 years, the cucumber originated from India, where a great many varieties have been observed, along with its closest living relative, *Cucumishystrix*. It was probably introduced Europe by the Greeks or Romans. Records of cucumber cultivation appeared in France in the 9th century, England in the 14th century, and in North America by the mid-16th century. (Mariod, H.A (2017).

Roman Empire

According to Pliny the Elder, the Emperor Tiberius had the cucumber on his table daily during summer and winter. In order to have it available for his table every day of the year, the Romans reportedly used artificial methods of growing (similar to the greenhouse system), whereby mirror stone refers to Pliny's lapis specularis, believed to have been sheet mica:

Indeed, he was never without it; for he had raised beds made in frames upon wheels, by means of which the cucumber were moved and exposed to the full heat of the sun; while, in winter, they were withdrawn, and placed under the protection of frames glazed with mirrorstone.
Pliny the Elder, Natural History "Vegetables of a Cartilaginous Nature Cucumbers. Pepones"

Reportedly, they were also cultivated in speculation, cucumber houses glazed with oiled cloth. Pliny describes the Italian fruit as very small, probably like a gherkin. He also describes the preparation of a medication known as elaterium. However, some scholars believe that he was instead referring to Ecballium elaterium, known in pre-Linnaean times as Cucumis silvestris or Cucumisa sininus (wild cucumber 'or 'donkey cucumber') , a species different from the common cucumber. Pliny also writes about several other varieties of cucumber ,including the cultivated cucumber, and remedies from the different types (9 from the cultivated; 5 from the "anguine;" and 26 from the "wild").

Middle Ages

Charlemagne had cucumbers grown in his gardens in the 8th / 9th century. They were reportedly introduced into England in the early 14th century, lost and then reintroduced approximately 250 years later. The Spaniards (through the Italian Christopher Columbus) brought cucumbers to Haiti in 1494.In 1535, Jacques Cartier, a French explorer, found "very great cucumbers" grown on the site of what is now Montreal.

Early- modern age

Throughout the 16th century, European trappers, traders, bison hunters, and explorers bartered for the products of American Indian agriculture. The tribes of the Great Plains and the Rocky Mountains learned from the Spanish how to grow European crops. The farmers on the Great Plains included the Mandan and Abenaki. They obtained cucumber and watermelons from the Spanish, and added them to the crops they were already growing, including several varieties of corn and beans, pumpkins, squash, and gourd plants.

The Iroquois were also growing them when the first Europeans visited them.

In 1630, the Reverend Francis Higginson produced a book called New – Englands Plantation in which, describing a garden on Conant's Island in Boston Harbor known as The Governor's Garden, he states. The countries abundant naturally with store of roots of great varieties and good to eat. Our turnips, parsnips, and carrots are here both bigger and sweeter then is ordinary to be found in England. Here are store of pompions, cucumbers, and other things of that nature which I know not.

In New England Prospect (1633, England), William Wood published observations he made in 1626 in America as he said:

The ground affords very good kitchen gardens, for Turneps, Parsnips, Carrots, Radishes, and Pompions, Muskmillons , Isquoter squashes, cucumbers, Onyons, and whatever grows well in England grows as well there, many things being better and larger.

1.2 STATEMENT OF THE PROBLEM

Much research has not been made on the production of cucumber mayonnaise from cucumber

We shall be looking at ways of producing cucumber mayonnaise and the analysis of the importance of cucumber and cucumber mayonnaise

1.3 AIMS AND OBJECTIVES OF THE STUDY

The objective of the study is to critically examine the utilization of cucumber for the production of mayonnaise. However, other objectives will be looked into which are:

- To produce the utilization of cucumber for the production of mayonnaise.
- To identify the problems facing utilization of cucumber for the production of mayonnaise.
- To find out the nutritional value of cucumber

1.4 RESEARCH QUESTION

- What are the processes involved in the production cucumber mayonnaise?
- What are problems of producing cucumber mayonnaise from cucumber?
- What are the nutritional value to consumers of cucumber mayonnaise?

1.5 SIGNIFICANCE OF THE STUDY

This research project is very important as it will showcase to the reader and other researchers some of the importance of cucumber.

The research will also state the nutritional composition and health importance of cucumber in human nutrient.

The research will also lead us to ways on the production of mayonnaise from cucumber.

1.6 SCOPE OF THE STUDY

This research focuses on a comparative study on utilization of cucumber for the production of mayonnaise.

The scope of the study therefore is to examine some authorship work postulating nutritional analysis of the constituent of cucumber and how it can be use to produce mayonnaise.

1.7 LIMITATION OF THE STUDY

The following are some of the implications or constraints which the researcher encountered during the course of writing the research.

- **Time constraint:** The research will simultaneously engage in this study with other academic work. This consequently will cut down on the time devoted for the research work.
- **Financial constraint:** Insufficient funds tend to impede the efficiency of the researcher in sourcing for the relevant materials, literature, or information and in the process of data collection (internet, questionnaire and interview).

However, it should be noted the researcher improvised where necessary in order for the mentioned limitations not to negatively affect the quality of the research.

1.8 DEFINITIONS OF TERMS

Production: The action of making or manufacturing from components or raw materials, or the process of being so manufactured.

Importation: The act or an instance of carrying or conveying, especially into some system, place, area or country.

Substance: The real physical matter of which a person or thing consists and which has a tangible, solid presence.

CHAPTER TWO

LITERATURE REVIEW

2.0 CUCUMBER

Cucumber (Cucumis sativus) is a widely-cultivated creeping vine plant in the Cucurbitaceae gourd family that bears usually cylindrical fruits, which are used as vegetables. Considered an annual plant, there are three main varieties of cucumber slicing, pickling, and burpless/seedless within which several cultivars have been created. The cucumber originates from South Asia, but now grows on most continents, as many different types of cucumber are traded on the global market. In North America, the term wild cucumber refers to plants in the general Echinocystis and Marah, though the two are not closely related. Nonnecke, I.L (2009).

Cucumbers have a mild, refreshing taste and high water content. They can help relieve dehydration and are pleasant to eat in hot weather. People eat cucumber as a savory food, but it is a fruit. It also features in some beauty products.

The cucumber is a member of the Cucurbitaceous family. Other members of the family include squash and different kinds of melon, including bitter melon. Cucumbers provide various nutrients but are low in calories, fat, cholesterol, and sodium.

People in India have grown cucumbers for food and medicinal purposes since ancient times. And they have long been part of the Mediterranean diet. Huang, S. (2014)

2.1 CUCUMBER DESCRIPTION

The cucumber is a creeping vine that roots in the ground and grows up trellises or other supporting frames, wrapping around supports with thin, spiraling tendrils. The plant may also root in a soilless medium, whereby it will sprawl along the ground in lieu of a supporting structure. The vine has large leaves that form a canopy over the fruits.

The fruit of typical cultivators of cucumber is roughly cylindrical, but elongated with tapered ends, and may be large as 62 centimeters (24 in) long and 10 centimeter (4 in) in diameter.

Cucumber fruits consist of 95% water (see nutrition table). In botanical terms, the cucumber is classified as a *pepo*, a type of botanical berry with a had outer rind and no internal divisions.

However, much likes tomatoes and squashes, it is often perceived, prepared, and eaten as a vegetable.

2.1.2 FLOWERING AND POLLINATION

Most cucumber cultivars are seeded and required pollination. For this purpose, thousands of honeybeehives are annually carried to cucumber fields just before bloom. Cucumbers may also be pollinated via bumblebees and several other bee species. Most cucumbers that require pollination are self-incompatible, thus requiring the pollen of another plant in order to form seeds and fruit. Some self-compatible cultivars exists that are related to the ‘Lemon’ cultivar.

A few cultivars of cucumber are parthenocarpic, the blossoms of which create seedless fruit without pollination, which degrades the eating of these cultivar. In the United States, these are usually grown in greenhouses, where bees are

excluded. In Europe, they are grown outdoors in some regions, where bees are likewise excluded.

Traditional cultivars produce male blossoms first, then female in about equivalent numbers. Newer gynoecious hybrid cultivars produce almost all female blossoms. They may have a pollenizercultivar interplant, and the number of beehives per unit area is increased, but temperature changes induce male flowers even on these plants, which may be sufficient for pollination to occur.

In 2009, an international team of researches announced they had sequenced the cucumber genome. Huang, S.et al (2014)

2.2 VARITIES OF CUCUMBER

The most commonly available type of cucumber is the hothouse or English cucumber. It is large, with dark green skin, and few or no seeds.

According to one source, other types of cucumber include:

- **Armenian, or snake cucumbers:** These are long and twisted with thin, dark green skin and pale furrows. People often use them for pickling.
- **Japanese Cucumbers:** These are dark green and narrow. The skin is thin with small bumps on it. People can eat them whole.
- **Kirby Cucumbers:** People often use these for dill pickles. They are crispy, with thin skin and small seeds.
- **Lemon Cucumber:** These are around the size of a lemon, with pale skin. The taste is sweet and delicate.
- **Persian Cucumbers:** Shorter and fatter than the hot house cucumber, these are crunchy to eat.

- **The wild cucumber vine (***euchinocystislobata)* is a fast growing plant that is native to north American. Gardeners consider it a weed. It a weed. Its fruits are not edible.

2.3 NUTRITIONAL VALUE OF CUCUMBER

In a 100-gram (3+ 1/2 ounces) reference serving, raw cucumber (with peel) is 95% water, 4% carbohydrates, 1% protein, and contains negligible fat. Cucumber provides 67 kilojoules (16 kilocalories) of food energy, and supplies low content of micro nutrients, as it is notable only for vitamin K at 16% of the Daily Value (Table).

According to the USDA, one 142-g cup of unpaired, raw, chopped cucumber contains the following nutrients:

- Water: 137 g
- Calories: 17
- Proteins: 0.8g
- Fat:0.2g
- Carbohydrate:3.1g, including 2.0g of sugar
- Fiber:1.0g
- Calcium:19.9g
- Iron:0.3g
- Magnesium:17mg
- Phosphorus:29.8mg
- Pottassium 193mg

- Sodium:2.8
- Vitamin C:4.5mg
- Folate:19.9mcg
- Beta carotene:44mcg
- Lutein+zeaxamtin 22.7mcg
- Vitamin K:10.2mcg

Cucumber also contains a range of B vitamins, vitamin A, and antioxidants, including a type known as lignans.

Antioxidants help remove substances form the body known as free radicals came from natural bodily processes, and some come from outside pressures, such as pollution. If too many collect in the body, tey can lead to cell damage and various types of disease.

2.4 USES OF CUCUMBER

There are many uses and health benefit of cucumber

1. Hydration

The electrolytes in cucumbers can help prevent dehydration.

Cucumbers consist mostly of water, and they also contain important electrolytes. They can help prevent dehydration in hot weather or after a workout.

For people who do not enjoy drinking water, adding cucumber and mint can make it more attractive.

Staying hydrated is essential for maintaining a healthy intestine, preventing constipation, avoiding kidney stones and more.

Cucumber is one of the most hydrating foods.

2. Bone health

Vitamin K helps with blood clotting, and it may support bone A 142-gram (g) cup of chopped, unpeeled, raw cucumber provides 10.2 micrograms (mcg) of vitamin K, according to the United States Department of Agriculture (USDA).

The 2015-2020 Dietary Guideliness for Americans recommend an intake of:

- 90 mcg a day for females aged 19years and over
- 120 mcg for male of the same age

Cucumber also contains 19.9 milligrams (mg) of calcium. Adults need 1,000-1,200mg of calcium a day, depending on sex and age. Vitamin K helps improve calcium absorption. Together, these nutrient can contribute to good bone health.

Vitamin D is also important for bone health.

3. CANCER

As a member of the Cucurbitaceous family of plants, cucumbers contain high levels of bitters tasting nutrients known as cucurbitacin.

According to an article in the *international Journal of Health Services,* cucurbitaceous may help prevent cancer by stopping cancer cells from reproducing.

A 133-g cup of chopped cucumber with its skin also provides around 1 g of fiber. Fiber may help protect again colorectal cancer.

4. CARDIOVASCULAR HEALTH

The American Heart Association (AHA) note that fiber can help manage cholesterol and prevent related cardiovascular problems.

A 142-g cup of unpeeled cucumber also provides 193 mg of potassium and 17 mg of magnesium. The *Dietary Guideliness* recommend that adults consume 4,700mg of potassium each day and 310-410 mg of magnesium, depending on sex and age.

Reducing sodium intake and increasing potassium intake may help prevent high blood pressure.

The cucurbitaceous in cucumber may also help prevent atherosclerosis.

5. DIABETES

Cucumbers may play a role in controlling ad preventing diabetes. It contains substances that may help lower blood sugar or stop blood glucose from rising too high.

One theory is that the cucurbitaceous in cucumber help regulate insulin release and the metabolism of hepatic glycogen, a key hormone in the processing of blood sugar.

One study found that cucumber peel helped manage the symptoms of diabetes in mice. This may be due to its antioxidant content.

Fiber, too, may help prevent and manage type 2 diabetes, according to the AHA.

Cucumbers score low score on the glycerin index (GI). This means they provide essential nutrients without adding carbohydrates that can increase blood glucose.

6. INFLAMMATION

Cucumbers may have anti-inflammatory benefits inflammation is a function of the immune system.

Expert believe inflammation may help trigger the development of cardiovascular disease

- Diabetes
- Autoimmune conditions
- Depression
- Cancer

7. SKIN CARE

Some research has suggested that cucumber's nutrients may provide benefits for skin health.

Applying sliced cucumber directly to the skin can help cool and soothe the skin and reduce swelling and irritation. It can alleviate sunburn. Placed on the eye, they can help decrease morning puffiness.

Other cucumber beauty tips include:

Toner: Blend and sieve cucumber to collect juice for a natural toner. Leave on the skin for 30minutes, then rise. Cucumber may have astringent properties, and it may help clear the pores.

Face pack: Mix equal amount of cucumber juice and yogurt to make a face pack that helps reduce dry skin and blackheads.

Cucumbers is safe for most people to use on the skin. People should start by applying a small amount. If they do not experience an adverse reaction, it is probably safe to use.

CHAPTE THREE

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

In this chapter the researcher will present the material and the methods adopted in experimenting the research topic. The researcher will be present the ingredient needed to prepare the cucumber mayonnaise.

3.2 STUDY AREA

The study Area in which the research is taken place is Kwara State Polytechnic, Ilorin located along Old-Jebba Road, Moro Local Government Area, of Kwara State.

3.3 TARGET POPULATION OF THE STUDY

According to Aladebe (1993), population can be defined as the set of all possible value of variable in one or more geographical location. In respect to this research work, the targeted Kwara State Polytechnic students and staff.

3.4 SAMPLING TECHNIQUE

The sampling technique implies the methods of collecting data and information for the research purpose, which are:

a. Observation method

b. Interview

c. Sensory Evaluation Questionnaire

3.5 SAMPLING SIZE

For the purpose of this research the sample size will include (30) people of which 30 will be for selected business across Kwara State Polytechnic, 15 student of the Kwara State Polytechnic, Ilorin and 15 staffs of the Kwara State Polytechnic, Ilorin.

3.6 RESEARCH INSTRUMENT

The research instrument used for this research study is experiment, observation and sensory evaluation form. Questions were prepared by the researcher and administered to the respondent to respond.

3.7 MEASURMENT OF VARIABLE

The focus of this study is preparation of cucumber mayonnaise from cucumber. Therefore, the variable that will be employed in this study will be preparation of Cucumber mayonnaise from cucumber.

3.8 DATA COLLECTION METHODS

The researcher designed sensory evaluation by appearance, taste, lever texture and colour will be use to collect necessary information from the respondents

3.9 METHOD OF DATA ANALYSIS

The method used in analyzing the data in this research is the use of sale percentage and frequency tables.

3.10 MATERIAL AND METHODS

Fresh Cucumber

Peeling of Cucumber

Grating

Sieving

Blending

Storing

How to make cucumber mayonnaise

	Recipe	**Quantity**
➢	Cucumber	1 big
➢	Egg	3
➢	Mustard	1 Table Spoon
➢	Lemon Juice or Vinegar	2 Table Spoon
➢	Olive Oil	1 cup
➢	Salt	1 Tea Spoon

METHOD OF PREPARATION

- Peel the back of the cucumber
- Grate and sieve the cucumber and take the milk in a bowl and pit aside
- Add an egg to the bowl of your food processor and process for about 20 seconds.
- Add cucumber milk, vinegar, and salt then process for another 20 seconds.
- Slowly add the oil, in tiny drops, until about a quarter of the oil has been added. Adding the oil slowly is really important
- Taste the mayonnaise and adjust with additional slat and vinegar or lemon juice.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

The research sensory evaluation questionnaire distributed to some randomly selected staff and student of the hospitality department in Kwara Stare Polytechnic, Ilorin. A total of the respondents after effective testing of mayonnaise made form cucumber.

4.2 DATA ANALYSIS AND RESULTS

The following data presented and analyzed. Data presentation were made under two sub-headings, section A and B. section A consists of demographic characteristics of respondents while section B consists of main sensory evaluation, data analysis.

SECTION A: DEMOGRAPHIC CHARACTERISTICS OF PESPONDETS.

The following demographic data are analyzed in this research project based on the responses received from the administered questionnaire:

TABLE 4.1: SEX OF RESPONDENTS

SEX	FREQUENCY	PERCENTAGE
FEMALE	16	55
MALE	14	45
TOTAL	30	100

Source: Field Survey 2025

The table 1 above shows that 16 respondent representing 55% are female, while the remaining 14 respondent representing 45% are male.

TABLE 4.2: EDUCATIONAL QUALIFICATION

Educational Level	**FREQUENCY**	**PERCENTAGE**
SSCE	12	40
OND/NCE	12	40
HND/BSC	4	10
MSC	2	10
TOTAL	30	100

Source: Field Survey 2025

From the table above 12 (40%) of the respondents are those who obtained SSCE certificates, 12 (40%) are with OND/NCE, whereas 4(10%) are those with HND/BSC, while 2 (10%) are with MSC.

TABLE 4.3: AGE OF RESPONDENTS

AGE	**FREQUENCY**	**PERCENTAGE**
Under 25	16	55
26-39	11	35
40-59	3	10
60 and above	-	-
Total	30	100

Source: Field Survey 2025

From the table 3 above, 55% of the respondents are between the ages of under 25years old, 35% are between 26-39 years old, 10% are between 40-59 years old while no respondents is 60years and above.

TABLE 4.3:RESPONDENTS MARTIAL STATUS

MARTIAL STATUS	FREQUENCY	PERCENTAGE
SINGLE	16	55
MARRIED	11	35
Total	30	100

Source: Field Survey 2025

From the table above 55% of the respondents are single while 45% of the respondents are married.

Sensory evaluation data analysis questions as structured in the administered questionnaire.

TABLE 4.5: APPEARANCE OF THE PRODUCED MAYONNAISE USING CUCUMBER

Variables	No respondents	Percentage
Excellent	-	-
Very good	16	55
Good	14	45
Fair	-	-
Total	30	100

Source: Field survey 2025

According to the result (Given in the table 5 above) 55% of the respondents agreed that the produced mayonnaise made from cucumber is very good in appearance, while 45% of the respondents agreed that the produced mayonnaise made from cucumber in appearance.

TABLE 4.6: TASTE/FLAVOUR OF THE PRODUCED MAYONNAISE USING CUCUMBER

Variables	**No respondents**	**Percentage**
Excellent	2	5
Very good	10	35
Good	16	55
Fair	2	5
Total	30	100

Source: Field survey 2025

According to the result (given in table 6 above) 5% of the respondents agreed that the produced mayonnaise made from cucumber is excellent in taste, 35% agreed that the produced mayonnaise made from cucumber is very good in taste, 55% agreed that the produced mayonnaise made from cucumber is good in taste, while 5% agreed that the produced mayonnaise made from cucumber is fair in taste.

TABLE 4.7: CONSISTENCY OF THE PRODUCED MAYONNAISE USING CUCUMBER

Variables	No respondents	Percentage
Excellent	1	5
Very good	16	50
Good	10	35
Fair	3	10

Source: Field survey 2025

According to the result (given in the table 7 above) 5% of the respondents agreed that the produced mayonnaise made from cucumber is excellent in consistency. However 50% of the respondents agreed produced mayonnaise made from cucumber is very good in consistency, while 35% of the respondents agreed that the produced mayonnaise made from cucumber is good in consistency, also 10% of the respondents agreed that the produced mayonnaise made form cucumber is fair in consistency.

TABLE 4.8: SMELL/AROMA OF THE PRODUCED MAYONNAISE USING CUCUMBER

Variables	No respondents	Percentage
Excellent	1	5
Very good	16	50

Good	10	35
Fair	3	10
Total	30	100

Source: Field survey 2022

According to the result (Given in the table 8) 5% of the respondents agreed that the produced mayonnaise made from cucumber is excellent in small/aroma. However 50% of the respondents agreed that the produced mayonnaise made from cucumber is very good in smell/aroma, while 35% of the respondents agreed that the produced mayonnaise made from cucumber is good in smell/aroma, also 10% of the respondents agreed that the produced mayonnaise made from cucumber is fair in smell/aroma.

TABLE 4.9: ACCEPTABILITY OF THE PRODUCED MAYONNAISE USING CUCUMBER

Variables	**No respondents**	**Percentage**
Excellent	2	5
Very good	8	30
Good	16	55
Fair	4	10
Total	30	100

Source: Field survey 2025

According to the result (Given in the table 9 above) 5% of the respondents rated the produced mayonnaise made from cucumber excellent in acceptability. However 30% of the respondents rated the produced mayonnaise made from cucumber is very good in acceptability, while 55% of the respondents rated the produced mayonnaise made from cucumber is good in acceptability, also 10% of the respondents rated the produced mayonnaise made from cucumber is fair in acceptability.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION, RECOMMENDDATIONS

5.1 SUMMARY

Cucumbers have a mild, refreshing taste and high water content. They can help relieve dehydration and are pleasant to eat in hot weather. People eat cucumber as a savory food, but it is a fruit. It also features in some beauty produces.

The cucumber is a member of the Cucurbitaceous family. Other members of the family include squad and different kinds of melon, including bitter melon, Cucumbers provides various nutrient but are low in calories, fat, cholesterol, and sodium.

People in India have grown cucumbers Trusted Source for food and medicine purpose since ancient time, and they have long been part of the Mediterranean diet.

Cucumbers may play a role in controlling and preventing diabetes. It contains substances that may help lower blood sugar or stop blood glucose from rising too high.

One theory is the cucurbitaceous in cucumber help regulate insulin release and the metabolism of hepatic glycogen, a key hormone in the processing of blood sugar.

One study trusted source found that cucumber peel helped manage the symptoms of diabetes in mice. This may be due to its antioxidant content.

Fiber, too, may help prevent Trust Source and manger type 2 diabetes, according to the AHA.

Cucumber mayonnaise contain a range of B vitamins, Vitamin A, and antioxidants, including a type known as lignans.

Antioxidants help remove substances from the body known as free radical. Some free radicals come from natural bodily processes, and some come from outside pressures, such as pollution. If too many collect in the body, they can lead to cell damage and various type of disease.

5.2 CONCLUSIONS

Cucumber (*cucumis satiuus)* is a widely-cultivated creeping vine pant in the cucurbitaceous gourd family that bears usually cylindrical fruits, which are used as vegetables. Considered an annual plant, there are three main varieties of cucumbers slicing, pickling, and burbles/seedless within which several cultivars shave been created.

Cucumbers have a mild, refreshing taste and high water content. They can help relieve dehydration and are pleasant to eat in hot weather. People eat cucumber as a savory food, but it is a fruit. It also features in some beauty products.

Cucumber mayonnaise contain 19.9 miligrams (mg) of calcium. Adult need 1,000 -1,200 mg of calcium a day, depending on sex and age.

Vitamin K helps improve calcium absorption. Together, these nutrients can contribute to good health.

Vitamin D is also important for bone health.

5.3 RECOMMENDATIONS

In the course of this research work, the following recommendation are being made.

- The importance of cucumber should be taken important in human nutrition
- More cucumber should be planted so that it will circulate to everyone that wanted to make use of it.
- Orientation should be given to the general public on the importance of cucumber in human nutrition.
- Awareness should be made on the preparation of mayonnaise with the use of cucumber.
- There should be sensitization of the importance of cucumber mayonnaise on human health and it uses.

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APPENDIX A

SENSORY EVALUATION FOR MAYONNAIZE FROM CUCUMBER

Demographic information

1. Sex: A. Male B. Female
2. Age: A. 18-25 B. 26-40 C. 40-70
3. Martial Status: A. Single B. Married C. Other
4. Educational level: A.SSCE B. OND/NCE C. HND/BSC

Kindly tick the appropriate answer to evaluate the product

VARIEBLES	EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
TASTE					
APPERANCE					
TEXTURE					
FLAVOUR					
COLOUR					