



**Daffodil**  
*International*  
**University**

**INTERNSHIP REPORT**

**ON**

**PROCESSING OF DIFFERENT TYPES OF BEVERAGE AND COOKIES IN SS  
FOOD LTD**

**SUPERVISED BY**

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**DATE OF SUBMISSION: 24-06-2019**

## LETTER OF TRANSMITTAL

Date 23 June 2019

Prof. Dr. Md. Bellal Hossain

Department of Nutrition & Food Engineering

Daffodil International University

Subject: Submission of internship report.

Dear Sir,

I am here by submitting my internship report, which is a part of NFE program curriculum. It is a great achievement to work my active supervision. This report is based on different types of product making and analysis. This internship give me both academic & practical exposures. First of all learned how to increase product quality. This internship give me the opportunity to develop a network with the processing field in Bangladesh.

Your sincerely

Md. Jahangir Alam Jewel

D: 162-34-544

Department of Nutrition & Food Engineering

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Daffodil International University

## LETTER OF APPROVAL

We are certified the internship report on “Processing of different types of beverage and cookies in ss food ltd” conducted by Md. Jahangir Alam Jewel, ID No: 162-34-544 of the department of Nutrition and Food Engineering has been approved for presentation and defense/viva-voice. I am pleased to hereby certify that the data and findings presented in the report are the authentic work of Md. Jahangir Alam Jewel. I am strongly recommended the report presented by Md. Jahangir Alam Jewel for further academic recommendations and defense/viva-voice. Md. Jahangir Alam Jewel bears a strong moral character and a very pleasant personality. It has indeed a great pleasure working with him. I wish him all success in life.



.....  
**Professor Dr. Md. Bellal Hossain**  
Head,  
Department of Nutrition & Food Engineering  
Faculty of Allied Health Science  
Daffodil International University (DIU)



.....  
**Effat Ara Jahan**  
Lecturer  
Department of Nutrition & Food Engineering  
Faculty of Allied Health Science  
Daffodil International University (DIU)

## ACKNOWLEDGEMENT

First of all I would like to express my gratitude to almighty Allah for giving me the strength and opportunity to complete the report in the schedule time successfully. In the preparation of this report, I would like to acknowledge the encouragement and assistance given to me by a number of people. I am taking the privilege to deliver my gratefulness to each and every person who is involved with me in every phase of my life. I am grateful to my parents without whom I could not be here. Without the support of my parents I could not be able to achieve my objectives and goals.

My deep gratitude and sincere thanks to the honorable Head, Department of Nutrition and Food Engineering, Professor Dr. Bellal Hossain, for this kind cooperation and encouragement to accept this degree.

My deep gratitude and sincere thanks to my supervisor Syeeda Shiraj-Um-Monira, Lecturer of Department Nutrition and Food Engineering, for his whole-hearted supervision during the research time. I am very glad to deliver my gratefulness to each and every person who is involved with me in every phase of my life.

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I would like to express my warmest thanks MD Emran Hossain, Co-ordination Officer and lab technician Emdad Hossain. I express my deep gratitude to the office/labs staff of the Department of Nutrition & Food Engineering under faculty of Allied Health Sciences, Daffodil International University.

## **EXECUTIVE SUMMARY**

This report is prepared on the basis of my One-month practical experience at the SS food limited which is a group of Silvee Food & Consumer products limited in Narayanganj, Dhaka.

This internship program helps me to learn about the practical knowledge of different types of product in Institute of SS Food limited and it is one of the largest Organization which manufacture and marketing in our country in a largest amount. This Institute plays an active role in transferring technologies developed by your Scientist to the commercial entrepreneurs of our country.

SS food limited is one of the leading private organization countrywide. This report has been presented based on my observation and experience gathered from this industry. The organization has many divisions and departments but I only got the opportunity to gain experienced. I have done some experiments on microbial activity of water and food source to identify possible hazards and acceptance of consumption.

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## List of ABBREVIATION

% = Percentage

: = Ratio

<= less than

> = greater than

/ = per

0C = degree celcius

Fig = Figure

ml = milliliter

gm = gram

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# CHAPTER ONE

## INTRODUCTION

SS food limited (Silvee food & consumer products limited) is a big industry in our Bangladesh. There is a lot of product manufacture and marketing in different side in our country. In beverage sector there is a lots of product like lichi drinks, mango juice, mango lolly, etc. In drying section they have potato cheeps, chanachur, fried peas, masoor dal, puffed rice, egg noodles etc.

Water is an essential part of our life. From dining to bathroom everywhere there is need of water. For drinking water needs to maintain its quality that meets with the requirements, mostly use of water in washing purpose in kitchen and other places. Before using water make sure it does not contain any harmful pathogen like e-coli that can make you ill. I have worked on microbiology based experiments which is related to water and food. The main focus of experiments is to obtain physical, chemical and microbiological status of different samples of water and foods. Another aspect of this tests to certify the water or food as safe to consume. As sample i used pond water and tap water. The experiment consist of checking physical parameters, chemical parameters and microbiological parameters of samples.

### 1.1 Origin of the report

Internship Program of daffodil International University is a requirement for completion of degree for the NFE students. The main purpose of the internship is to meet the students with the job world. As an intern the main target was to match up the theoretical concepts into real life experience.

The internship program has following purposes:

- To have an idea of activities of the production.
- To obtain practical knowledge.
- To match up the practical field with the lessons learned in DIU
- To fulfill the requirement of NFE Program.

This report is the result of two months long internship program conducted in Institute of Food and Radiation biology and is prepared as a requirement for the completion of the NFE program of Daffodil International University.

## 1.2 Objectives of the report

The objective of the report can be viewed in two types:

- General Objective
- Specific Objective

General Objective:

This internship report is done primarily to complete the Bachelor of Nutrition and Food Engineering (NFE) degree requirement under the Faculty of Allied Health Science in daffodil International University.

Specific Objective:

More specifically:

- To give an overview of Institute of SS food limited.
- To focus on the microbiological activity of water sources
- To obtain real-time practical work experiences

## **CHAPTER TWO**

### **OVERVIEW OF THE INSTITUTE**

#### 2.1 Short description of the study & Brief history

SS food limited is an industry which has different types of product and set-up a good marketing sector in Bangladesh. AERE planned in 2010 and came into existence in 2012 by the acquisition of 20 acres of land at Rupganj, Narayanganj which is about 40 km away from Dhaka City and about 15km north of kuril road. The area started its journey as a development project and the development process is going on.

The AERE is administered by Director General (DG) while the Directors function as controlling authorities of the Institute/Unit. The DG office has Central Administration & Establishment Division and Central Finance and Account Division to facilitate smooth functioning of the establishment.

At present, they started a good business in south districts in our Bangladesh.

#### 2.2 Objectives of the institute

- Develop effective and environment friendly control measures of insect pests for protection and preservation of stored and field crops
- Monitor pesticide residues in food and environment for safeguarding human health
- Sterilize medical products, pharmaceuticals and food products by gamma radiation
- Process and product development for food preservation by radiation & combination treatment
- Conserve agro-wastes into food, feed and chemicals through the combination of nuclear and microbial biotechnology
- Apply plant tissue culture and biotechnology for clone propagation and improvement of plants of interest.

## **CHAPTER THREE**

### **Design of the Study**

#### **3.1 Short description on the study**

The experiment was done in SS Food Limited (A sister concern of silvee group). The study was to measure different types of product manufacture in the production. In the below discuss about different types of product in different section.

#### **Beverage sector:**

#### **3.2 Mango Juice**

CIP: CIP is the very important part of juice production because the microorganism effect of juice .

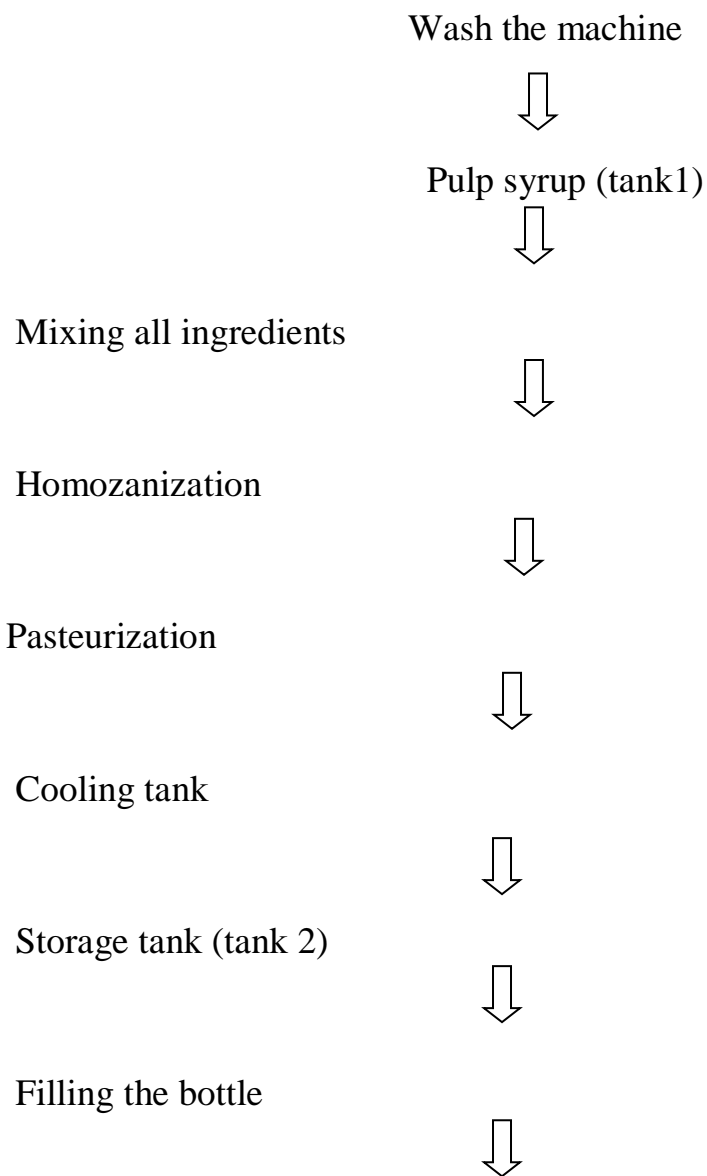
At first 100 liter water for 1 kg citric acid and 1.5 kg caustic soda do the cip.

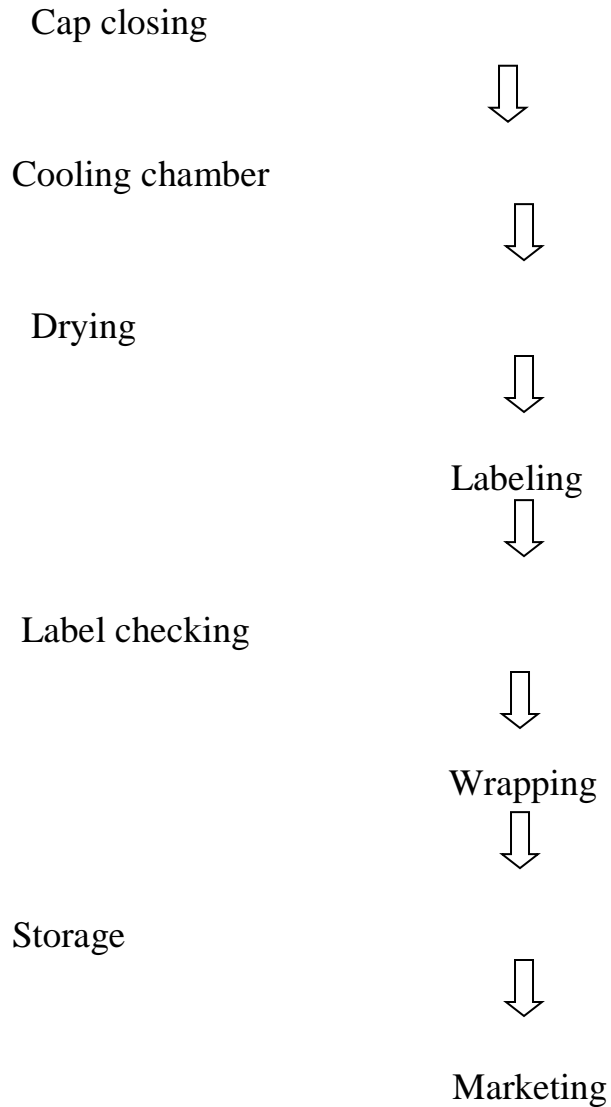
Ingredients of mango juice:

1. Xanthan gum
2. Citric acid
3. Sodium benzoate
4. Potassium sorbet
5. Ascorbic acid
6. Aspartame
7. Sodium citric
8. Salt
9. Water
10. Mango pulp

11. Sugar (60kg in 1000L)
12. Lemon yellow
13. Orange red
14. Beta carotene
15. Emulsion
16. Mango flavor

### Flow chart of mango juice





**Procedure:**

1. First of all take the raw materials
2. Then mango pulp syrup making
3. Then all ingredients mixing in a tank
4. Then juice homogenization in 80c

5. Then pasteurization of juice
6. After pasteurization juice are cooling in tank
7. Then juice filling in bottle in 75 degree Celsius
8. Then cap closing of juice with bottle
9. Then cooling the juice in spray in water
10. After cooling the bottle with juice labeling the bottle
11. Then checking the labeling
12. Then wrapping the beverage in 24 pitch
13. Then the storage the beverage in freezing temperature
14. Then sell in local market.

Self-life: 3month

Net weight: 1L, 500ml.

Price: 65tk. 35tk

### 3.3 Mango pudding:

Ingredients of mango pudding:

1. Jelly powder
2. Citric acid
3. Sodium citrate
4. Sodium benzoate
5. Potassium sorbet
6. Cloudy
7. Lemon yellow color
8. Orange red
9. Aspartame
10. Sugar
11. Cloudy agent
12. water

### Flow chart of mango pudding:

Wash the machine



Water fining a tank 1 (200leter)



Water in hot (85°C)





Pudding mixing(all the ingredients)



Put in the mixer vessel



Pasteurization



Filing the pudding



Capping



Cooling in pudding (15°C in water)



Labeling



Casing (24 pitch)



Storage (room temperature)

Mango pudding is a very nutritional food product. This product self-life is a 2month and price is 5 taka

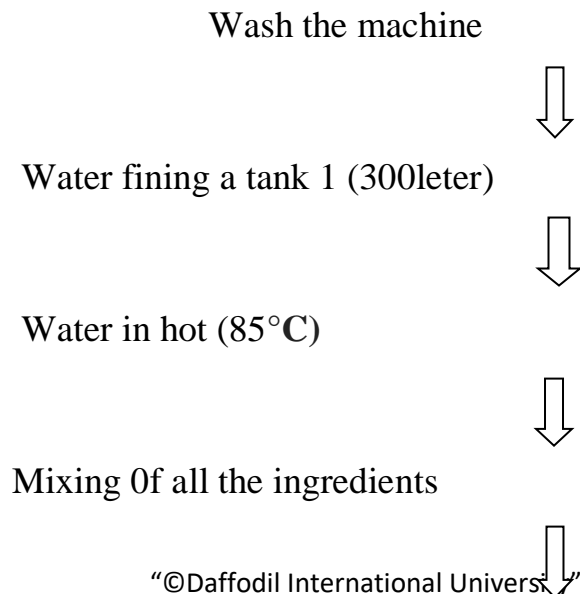
### 3.4 LICHI DRINKS

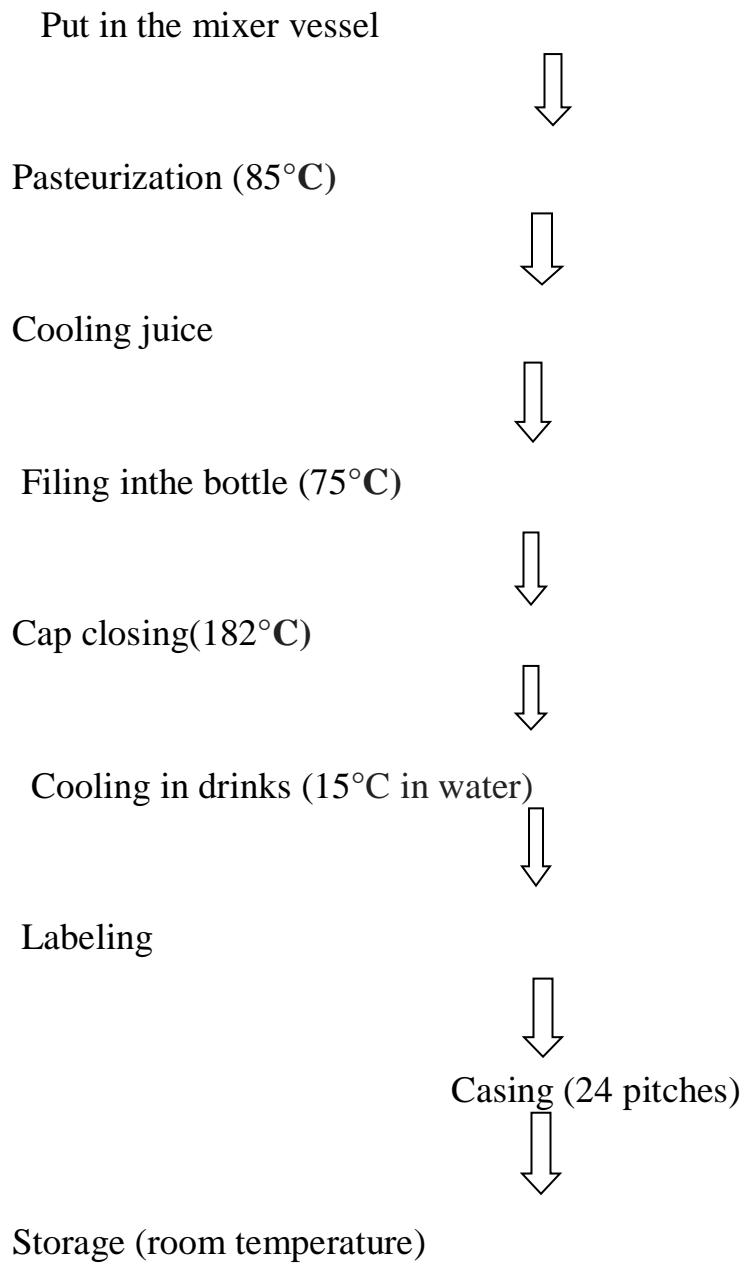
Litchi drinks is a types of beverage. This beverage is good for health. Good market in Bangladesh local market this types of drinks is summer vacation.

Ingredients:

1. Water
2. Sugar
3. Sodium benzoate
4. Potassium sorbet
5. Salt
6. Aspartame
7. Citric acid
8. Litchi flavor
9. Carboxymethyl cellulose (cmc)

**Flow chart of litchi drinks:**







**Fig 1: Litchi drinks**

**Procedure:**

1. At first the all machine washing in hot water.
2. Than the fill the water in tank 300L and hot in 80-85°C.
3. Than all ingredients add in tank and mixing in a vessel.
4. Then emulsifier the orange drink in 40-45 min.
5. Then drinks pasteurization in 85°C .
6. Then the drinks cooling in tank of 30 min
7. Then the drinks filling the bottle at 75°C.
8. After filling the bottle are cap closing in 182°C.
9. Then the orange drinks cooling in cool water spray.
10. After cooling the bottle are labeling
11. Then 36 drinks bottle in a casing.
12. Then storage of Litchi drinks at room temperature.
13. At last selling in market.

Litchi drinks is a types of beverage. This beverage is good for health . good market in Bangladesh local market this types of drinks is summer vacation.

Self-life: 2-3month

Price: 10taka

Net weight: 170ml

### 3.5 Orange Drinks

Ingredients:

1. Water
2. Sugar
3. Sodium benzoate
4. Potassium sorbet
5. Salt
6. Aspartame
7. Citric acid
8. Orange flavor
9. Carboxymethyl cellulose (cmc)

#### Flow chart of orange drinks:

Wash the machine



Water fining a tank 1 (300leter)



Water in hot (85°C)

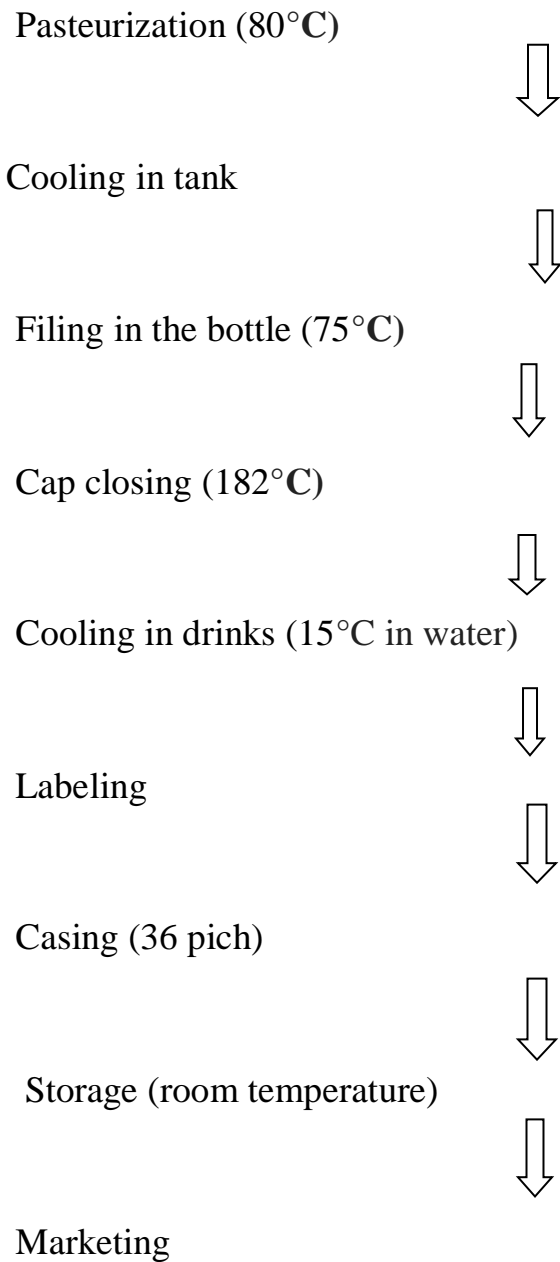


Mixing Of all the ingredients



Put in the mixer vessel





Procedure:

1. At first the all machine washing in hot water.
2. Then the fill the water in tank 300L and hot in 80-85°C.
3. Then all ingredients add in tank and mixing in a vessel.

4. Then emulsifier the orange drinks in 40-45 min.
5. Then drinks pasteurization in 85°C.
6. Then the juice cooling in tank.
6. Then the drinks filling the bottle at 75°C.
7. After filling the bottle are cap closing in 182°C.
8. Then the orange drinks cooling in cool water spray.
9. After cooling the bottle are labeling
14. Then 36 drinks bottle in a casing.
15. Then storage of orange drinks at room temperature.
16. At last selling in market.

### **3.6 Ice Lolly**

Ingredients of Ice Lolly:

1. Jelly powder
2. Jam sorghum
3. Citric acid
4. Sodium citric
5. Salt
6. Ascorbic acid
7. Aspartame
8. Lemon yellow
9. Orange red
10. NDC

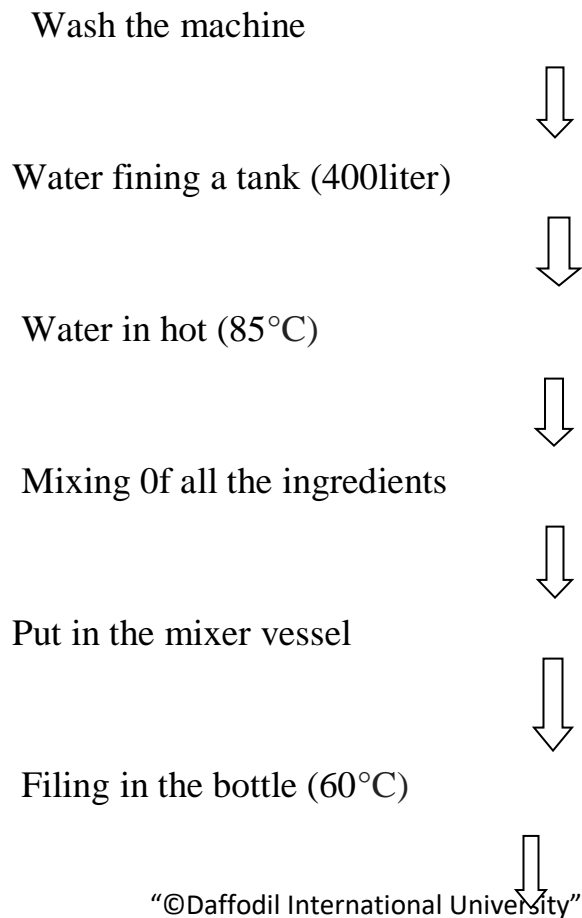
11. Sugar

12. Flavor (mango, Orange, strawberry)



**Fig4: Ice Lolly**

**Flow chart of Ice Lolly**





Capping (80°C)



Cooling in lolly (15°C in water)



Packaging (40 pitch)



Storage (room temperature)



Marketing

Procedure:

1. At first the all machine washing in hot water.
2. Than the fill the water in tank 400L and hot in 80-85°C.
3. Then all ingredients add in tank and mixing in a vessel.
4. Then the mixing drinks reserve in a tank in 30 minute
5. Then the drink filled in the ice port.
6. After fill cap closing in 80°C
7. Then the lolly cooling in cool water
8. After cooling the ice lowly dry in air
9. Then lolly was packaging in 40 pitches in 1 packet
10. Then storage in room temperature

## **BAKERY SECTION:**

### **3.7 SWEET TOAST:**

Sweet toast is the snacks food this snacks a good market in Bangladesh. Ss food limited making a good quality sweet toast. This product has a highly carbohydrate.

#### Ingredients:

1. Flour
2. Sugar
3. Batter
4. Yeast
5. Salt
6. Vegetable oil

#### Procedure:

1. At first all ingredients mix in mixer machine
2. Then the doo preparation and rolling the table
3. Then rolling doo in a oven at 85 degree Celsius of 30 min
4. Then cutting the doo of toast shape
5. Then again the toast in a oven at 140 degree Celsius
6. Then toast cooling in cool temperature
7. Then toast texture are crispy and mixing a melting sugar
8. Then packaging of toast in perfect weight.
9. At last sweet toast are storage.

Self-life: 3-4 month

Net weight: 400g

Price: 65 taka

### 3.8 COOKIES:

#### Ingredients:

1. Flour
2. Sugar
3. Batter
4. Yeast
5. Salt
6. Vegetable oil

#### Procedure:

1. At first all the ingredients mixing in mixer machine
2. Then the doo of radix machine in perfect size cookies
3. Then the tree of cookies in a oven of 130 degree Celsius at 30 minute
4. Then cookies cooling in normal temperature
5. Then packaging the cookies
6. Then storage
7. Then selling in local market.

Self-life: 1-2 month

## **FRY SECTION:**

### **3.9 Bombay Crackers:**

Ingredients:

1. Chickpea flour
2. Peanuts
3. Green bears
4. Lentils
5. Split chickpea
6. Rice
7. Flakes
8. Vegetable oil
9. Spices
10. Salt
11. Citric acid
12. Red chili Powder
13. Turmeric powder

Shelf- life: six month

Net weight: 45g, 20g, 150g, 300g

Sealing tem: 168°C.

Price: 10tk, 5tk, 30tk, 60tk

Cutting tem: 165°C.

## **CHAPTER FOUR**

### **CONCLUSION**

In this short period of study I learned a lot. I was a bit fifteen days in beverage and drying section. But after this study I know many things regarding production and quality. Though it was short period but I tried to acquire as much as possible. In this study I learned about water analysis regarding water purification. I studied to identify different types of machine and how to run. I can learn more of things like how can maintained worker, Production section, Time management, etc. End of the day it was enjoyable lesson.