



## **An Internship Report**

**On**

**Quality Control Assurance & Production of Dairy Products**

**At**

**Dhaka Dairy Plant (Milk-vita)**

**Milk-vita road, Mirpur section-7, Dhaka**

**Submitted To:**

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**Submitted by:**

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**Date of Submission: 23 December 2018**

## LETTER OF TRANSMITTAL

**Date: 23 December 2018**

Professor Dr. Md. Bellal Hossain  
Head  
Department of Nutrition & Food Engineering  
Daffodil International University.

**Subject:** Submission of an internship report on Quality Control Assurance & Production of Dairy Products.

Dear Sir,

It is a great pleasure and honor for me to have the opportunity to submit Internship report on **Quality Control Assurance & Production of Dairy Products** as a part of the Nutrition & Food Engineering (NFE) program curriculum.

I have prepared this report based on the acquired taste knowledge during my internship period in Dhaka Dairy Plant (Milk-vita). It is great achievement to work under your active supervision. This report is based on Quality control & Production of Dairy Products. I have got the opportunity to work in Dhaka Dairy Plant (Milk-vita) in “Quality Control and Production Department” for sixty days, under the supervision of Dr. Khondokar Aminul Islam, Additional General Manager of Dhaka Dairy Plant.

This is the first times this project gave me both academic and practical exposures. First of all I have gained knowledge about the organizational culture of a prominent consumer product producing organization of the country. Secondly, the project gave me the opportunity to develop a network with the corporate environment.

I therefore, would like to place this report to your judgment and suggestion. Your kind advice will encourage me to perform better planning in future.

Sincerely Yours

Rashel  
ID: 161-34-494  
Department of Nutrition & Food Engineering  
Daffodil International University

## CERTIFICATE OF APPROVAL

I am pleased to certify that the internship report on production & quality control of dairy products conducted by Rashel, bearing respectively ID No:161-34-494 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 finding presented in the report are the authentic work of Rashel. I strongly recommended the report presented by Rashel for further academic recommendations and defense/viva-voice. Rashel 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

## ACKNOWLEDGEMENT

In the planning of this report, I might want to recognize the support and help provide for me by various individuals. At first, I might want to offer my thanks to all-powerful Allah for empowering me the quality and chance to finish the report in the calendar times effectively. I am taking this benefit to convey my appreciation to every single individuals who are included with me in each period of my lives. I am thankful to my folks without whom I can't be here. Without the help of my folks, I couldn't have the capacity to accomplish my targets and objectives.

My Deep appreciation and genuine on account of the decent Dean, Faculty of Allied Health Science, Professor Dr. Ahmad Ismail Mustafa for this caring participation and to acknowledge this Degree. I am support taking this benefit to convey my appreciation to every single individuals who are included with me in each period of my lives.

I am profoundly obliged to my Supervisor Najia Kamrul, Sr. Speaker, Department of Nutrition and Food Engineering, Daffodil International University for his entire hearted supervision amid my authoritative connection period. I am likewise thankful to Dr. BellalHossain my departmental Head. It would have been extremely hard to set up this report up to this check without their direction. I might want to express my hottest because of NFE Faculty individuals for their endless motivation and consolation amid the understudy life. At last I wish to offer colossal thanks and modestly pass on my heart-felt regard to Najia Kamrul.

## Abstract

Dairy items are rich wellsprings of calcium. Epidemiologic proof from Western populaces proposes that admission of dairy items and calcium may lessen danger of hypertension. Be that as it may, there are few reports from Asian populaces which for the most part have bring down utilization of dairy items and calcium than their Western partners.

## EXECUTIVE SUMMARY

Bangladesh Milk Producers Co-agent Union Limited (BMPCUL) which is known as Milk-vita is a main government association for drain and drain items supplier in Bangladesh. This report is set up on my two-month down to earth involvement with BMPCUL. This Internship program gives me part of learning about drain and drain items basically.

This report has been exhibited dependent on my perception and experience accumulated from the organization. The association has numerous divisions and office yet I inspired the chance to work underway office and quality control office. This report makes reference to about both crude and prepared drain and drain items characteristics and handling information.

Bangladesh Government and Bangladesh Milk Producers Co-agent Union Limited cooperates for this organization. It guarantee quality items for shoppers. It guarantee to serve unadulterated and quality items to the shoppers.

Bangladesh Milk Producers Co-agent Union Limited (BMPCUL) give offices to entry level position open door for understudies there. Real target of this report is to distinguish quality drain and drain items.

It additionally worry for building up the generation and nature of dairy items. Client's decision are critical to Bangladesh Milk Producers Co-agent Union Limited (BMPCUL).

My report depends on quality control and generation of dairy results of BMPCUL. The initial segment of the report contains data of the association itself. The second piece of the report contains the crude drain test and quality parameters. The third piece of the report contains generation of dairy products. The last part contains the finishing up part. This present research's outcome that found is much impressive.

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# CHAPTER-ONE

## INTRODUCTION

Milk is an ideal food. Milk comes from mammary glands of mammals. Raw milk of cow & goat found in local market but processed milk are found in grocery shop .

A number of milk producer companies are available in Bangladesh. Milk-vita is one of them. Their purpose is to serve good products to consumer.

Milk-vita collect milk from village or market. Before collecting them milk-vita test the quality of milk by their local experts. Then they transport collected milk to their all milk processed plant. They chilled before sending for ensuring quality.

Milk-vita maintain purity than any other milk-producer company. They want consumer satisfaction.

### 1.1 Definition of Milk

"Milk - A white liquid discharged by the mammary organs of female warm blooded creatures for the sustenance of their young, comprising of moment globules of fat suspended in an answer of casein, egg whites, sugar, and inorganic salts."  
(milk.procon.org).



**Figure: 1-Milk**



## 1.2 Origin of the Report

Internship program is a graduation prerequisite for NFE understudies. Daffodil International University and Department of NFE give Internship chance to understudies in various organization and diverse parts. Its fundamental reason for existing is to give the understudy learning about down to earth involvement and genuine work put. It offers a chance to understudy to draw nearer to work searchers. Fundamental test for an assistant understudy is to utilize hypothetical ideas, in actuality, encounter.

**The study and internship program have following purposes:**

- To learn about real world
- To know about real work environment
- To help students to express dependability, initiative, and professionalism and tasks they are assigned
- To get closer contact with job seekers
- To fulfill the requirement of NFE Program
- To know about Milk-vita
- To learn about production procedure
- To learn Different types of dairy products

## 1.3 Objective of the Study

Objective of this study is divided into two types.

- General Objective.
- Specific Objective.

**General Objective:**

- To learn production procedure and quality control
- To fulfill the Bachelor of Nutrition & Food Engineering degree .

**Specific Objective:**

- To focus on the quality control of Dhaka Dairy Plant.
- To learn the activities of Bangladesh Milk Producers Co-operative Union Limited (BMPCUL)
- To know different activities of this organization.
- To give an outline of Bangladesh Milk Producers Co-agent Union Limited (BMPCUL).

**1.4 Scope of the study**

The scope of the study is the production and quality control of milk and dairy products and processing of the dairy product. The report contains details about the Production and Quality Control of Dairy Products.

**1.5 Methodology**

Methodology includes selection of topic, data source, interpreted results in a systematic manner and key points are to be found out. The overall process of methodology are as follows:

**Selection of the topic:**

The selection of the topic for any research is most important. Selection of the topic depends on practical experience from the assigned organization.

**Source of data:**

There are two types of data source: primary and secondary source.

**Primary Source of data:**

- Primary data collected from the practical work and employ.



### **Secondary Source of data:**

- Can collect from official and officers of the organization
- From different media such as newspaper, journal, articles etc.
- From dairy science related websites.
- From files of the organization.

### **Tools Used:**

Some arithmetic, graphical tools are used in this report for analyzing the data and to classify different types of data.

### **1.6 Limitation of the report:**

The limitation are given below:

- Because of some impediment some data, particularly from extreme representatives couldn't be gathered
- Because of a few standards and direction they didn't give me some data since that is against their strategy
- Every one of them was not topped off the criticism appropriately which cause deficient of information
- Because of lacking time they was not able give me numerous data.

## CHAPTER-TWO

### OVERVIEW OF THE ORGANIZATION

#### 2.1 Historical Background of the Company

Bangladesh Milk Producers Co-agent Union Limited (BMPCUL) known by its image name Milk-vitawas first present when Bangladesh wasn't conceived. It begins its voyage in 1946 at Lahirimohonpur, Pabna (Presently Sirajgong). It was built up to send drain items to Calcutta advertise.

After parcel a privately owned business named Eastern drain items Limited buy this dairy organization in 1952 from unique proprietor. In 1965 the primary drain maker's co-agent association was shaped as named Eastern Milk Producers Co-agent Union Limited (EMPCUL). After that dairy plants were controlled by Eastern Milk Producers Co-agent Union Limited (EMPCUL).

In 1973 Bangladesh government has taken it under their watch. The name of the association was changed when Bangladesh Government turned into the proprietor of the organization. In 1977 a brand name of the organization was settled as Milk-vita.

Bangladesh Milk Producers Co-agent Union Limited (EMPCUL) set up various plants in Baghabarighat (Bogra), Tekerhat (Madaripur) Mirpur-7 (Dhaka).

Prior Bangladesh Milk Producers Co-agent Union Limited (EMPCUL) has begun its adventure to supply crude drain countrywide. At that point it began to supply diverse dairy items.

The Head office of this association named "Dugdha Bhaban" is at Dhaka. At present it is one of the best positioned dairy industry in Bangladesh dependent on quality.

## 2.2 Objective of the Company

Bangladesh Government started Bangladesh Milk Producers Co-operative Union Limited (EMPCUL) earlier to drive away the poverty among rural people. Other objectives are given below-

- To advance creation and enhance sustenance and quality.
- To ensure customers satisfaction.
- To increase purchasing power
- To increase popularity
- To create new employment opportunity.
- To keep business morality.
- To develop local farmers condition.
- To ensure adulteration free final product.
- To increase quantity and quality products for consumers.

## 2.3 Products and Services:

- Pasteurized milk
- Chocolate milk
- Butter
- Gee
- Laban
- Sweet Yoghurt
- Sour Yoghurt
- Rosh-malai
- Chocolate Ice-cream
- Vanilla Cup Ice-cream
- Powder milk

## CHAPTER-THREE

### DESIGN OF THE STUDY

#### 3.1 Study Area

Study area divided into 2 areas. Such as

1. Laboratory
2. Production

#### 3.2 Laboratory

A laboratory facility is fundamental for quality check of various fixings and last items. It likewise guarantee security of customers. It likewise works for advancement of any items. Diverse sorts of operational test happened in the research facility, some of them given underneath as model-

- Platform test/ Alcohol test
- CLR test
- Fat test
- Organoleptic test

#### 3.2 Production

Creation territory is that where crisp crude fixings (drain) are prepared for further handling. Generation zone additionally isolated into various gatherings, for example, -

- Mixing area
- Processing area
- Packaging area
- Storage area

Different Production plant is used for different types of products production. But sometimes same plant can be used for many products.

## CHAPTER-FOUR

### PROCESSING SECTION

#### 3.1 PASTEURIZED MILK

**Procedure:**

1. Raw milk is gathered from ranch and from co-agent association office
2. Gathered raw milk is breezed through stage test and others defilement test.
3. Then passed milk is chilled in a storage vat at 4<sup>0</sup>C
4. storage milk is recombined with skim drain or full cream milk for keeping up fat rate (3.5%) as indicated by BSTI standard.
5. If raw milk have higher fat percentage then skim milk is added to make balance
6. If raw milk have less fat percentage then full cream milk is added to make balance
7. Then these recombined milk is pasteurized at 80 to 85<sup>0</sup>C for 15 seconds



Figure: 3.1 Milk Pasteurizer

8. Pasteurized milk is homogenized by milk homogenizer



Figure: 3.2 Milk Homogenizer

9. Then cooling them at 4<sup>0</sup>C

10. Then cooled milk is stored in storage vat (4 vat)

11. Then cooled milk is taken in the packaging machine



Figure: 3.3 Milk Packaging Machine

12. In the packaging area milk is packaged in different amount such as 250ml, 500ml, 1Litretc.





Figure: 3.4 Packaged Milk (1Litre Packet)

13. Whenever found any blame in sanitized bundled drain then it is detracted from bundling zone and pursue the strategy once more

14. Well packaged pasteurized milk is stored in the freezing room at 0 to 4<sup>0</sup>C

3.2 Chocolate Milk

3.3 Ice-cream

### **3.4 LABAN A Yoghurt Drink**

It is a dairy item which is otherwise called yogurt drink. It discovered everywhere throughout the world yet exceptionally in South-Asian nation. Drain vita give 80% yogurt in their laban.

#### **Ingredients:**

1. Yoghurt
2. Salt
3. Stabilizer
4. Sugar

#### **Procedure:**

1. For making Laban at first yoghurt is poured into the mixer machine
2. Then salt and sugar are added into the yoghurt
3. Then stabilizer is used in the mixer
4. In the wake of including the stabilizer in the blender administrator began the blender machine and blended it appropriately for a hour with warmth

5. Well mixed mixer is ready to pour as Laban into the packaging bottle or jar.
6. Poured bottles are sealed and labeled them nicely
7. After Labelling bottles are stored in the freezing room for 24hours
8. Then bottles are taken outside and make them dry
9. Finally wrapping them in a cartoon or box
10. Then stored them in the storage room.

**Benefits of Laban:**

1. It is good for digestion
2. It increase palatability.