
EXPERIMENT 1 RECEPTION OF MILK

Structure

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1.1 INTRODUCTION

Raw and fresh milk after production is received at organized collection centre, chilling centre and /or reception dock of a dairy plant. The process of reception includes taking quick decision on acceptability of milk and performing sequence of operations for receiving and further processing of milk. The procedure of receiving raw milk depends upon a number of factors such as, number of suppliers; quantity of milk supply; type of containers; milk collecting organizational structure; collection, storage, chilling and transportation system; facilities available at receiving points etc. The arrangements at reception point are made accordingly. The reception of milk must be completed in the shortest possible time.

1.2 OBJECTIVES

- accept supplies of milk.
- weigh the supplies.
- receive and pool the supplies of milk.
- check the quality of milk supplies.
- facilitate transportation of milk.
- improve storage/keeping quality of milk.
- provide raw material for running a dairy plant.
- study methods of reception-in can and in tankers.

1.3 EXPERIMENT

i. Principle

As soon as milk is brought to a reception point, it is checked for its acceptable quality through preliminary rapid and reliable testes depending upon the situation whether milk is received from individual producers, middlemen, cooperative societies, agents etc. Reception point may be village level collection centre, on vehicle in milk route, chilling centre and main dairy. Stringency of tests may be dependent on the purpose for which milk is being collected and the reception point. Acceptable quality milk is sampled, weighed and pooled. Samples may be further analysed for assessing chemical and microbiological quality for making payment and keeping record.

ii. Requirements

Milk weighing /measuring equipment, plunger, pooling equipment, strainer, dumping /collecting equipment, milk pump, storage tank, conveying equipment, milk testing apparatus, ethyl alcohol, amyl alcohol, sulfuric acid etc.

iii. Procedure

- i) Open the lid of the can and smell.
- ii) Observe the presence of dirt, leaves, straw etc. floating /submerged in milk.
- iii) Note down the temperature of milk and lactometer reading.
- iv) Taste and note down the flavour by taking and rotating a small bit of milk in the mouth.
- v) Draw and transfer 5 ml of milk into two test tubes- one for C.O.B. test and another for alcohol test. Note down the results.
- vi) Take an adequate samples from each can and also collect composite sample from each producer /supplier for subsequent detailed examination of milk (both chemical and microbiological tests for making payment and keeping record).
- vii) Remove the substandard and doubtful cans /containers from each supplier.
- viii) Weigh the milk received from individual supplier.
- ix) Dump the milk into the tipping tank.
- x) Pump the milk into the storage tank
- xi) Record all the observations and weight of milk received in the milk receipt sheet /book supplied.

iv. Observations

Record your observations in chart for quality and quantity of milk received from individual supplier.

- i) Name of the supplier Date
- ii) Nos. of cans /containers of milk received
Type of cans /containers
- iii) Quality of milk :
Smell :
Physical appearance :
Taste :
Temperature :
Lactometer reading :
Specific gravity :
C.O.B. :
Acidity :
Alcohol Test :
Fat % :
SNF % :
- iv) Weight of milk received :
- v) Total weight of milk received :
- vi) Remarks :

v. Results

- i) Quantity of milk received Kg / Lit
- ii) Total quantity of fat received Kg
- iii) Total Quantity of SNF received Kg

1.4 PRECAUTIONS

- i) Strict measures to receive good quality milk should be employed.
- ii) Weight of milk received should be recorded carefully.
- iii) Standard procedures should be followed in evaluating the quality of milk.
- iv) Sampling of milk should be done by an expert person to obtain representative sample.
- v) All the measuring and testing appliances must be checked at an interval for their accuracy.
- vi) Reception must be completed without delay on arrival of milk at the reception point.
- vii) Provision for additional reception line(s) must be made to complete the reception work within stipulated time, where large number of suppliers are expected.