

A Report on Visit of

AMUL DAIRY, RAJKOT

DUDHSAGAR RD, NEAR NEW POWER HOUSE GEB PGVCL,
RAJKOT GUJARAT, 360003

On 3rd April, 2024
ORGANISED BY,

DEPARTMENT OF COMMUNITY MEDICINE

GUIDED BY :

DR. ANUP KUMAR DAS (HOD,
DEPARTMENT OF COMMUNITY
MEDICINE)

DR. HUMANI SHARMA (ASSISTANT
PROFESSOR OF COMMUNITY
MEDICINE)

3/4/24
PRINCIPAL
RAJKOT HOMOEOPATHIC MEDICAL COLLEGE
RAJKOT.



3/4/24
HOD

Department of
Community Medicine
PREPARED BY

NISHIT MAKWANA

ROLL NO. 54

4th BHMS (2024 - 2026)

Place of Visit :

AMUL DAIRY, RAJKOT

DUDHSAGAR RD, NEAR NEW POWER HOUSE GEB PGVCL,
RAJKOT GUJARAT, 360003

Date of visit :

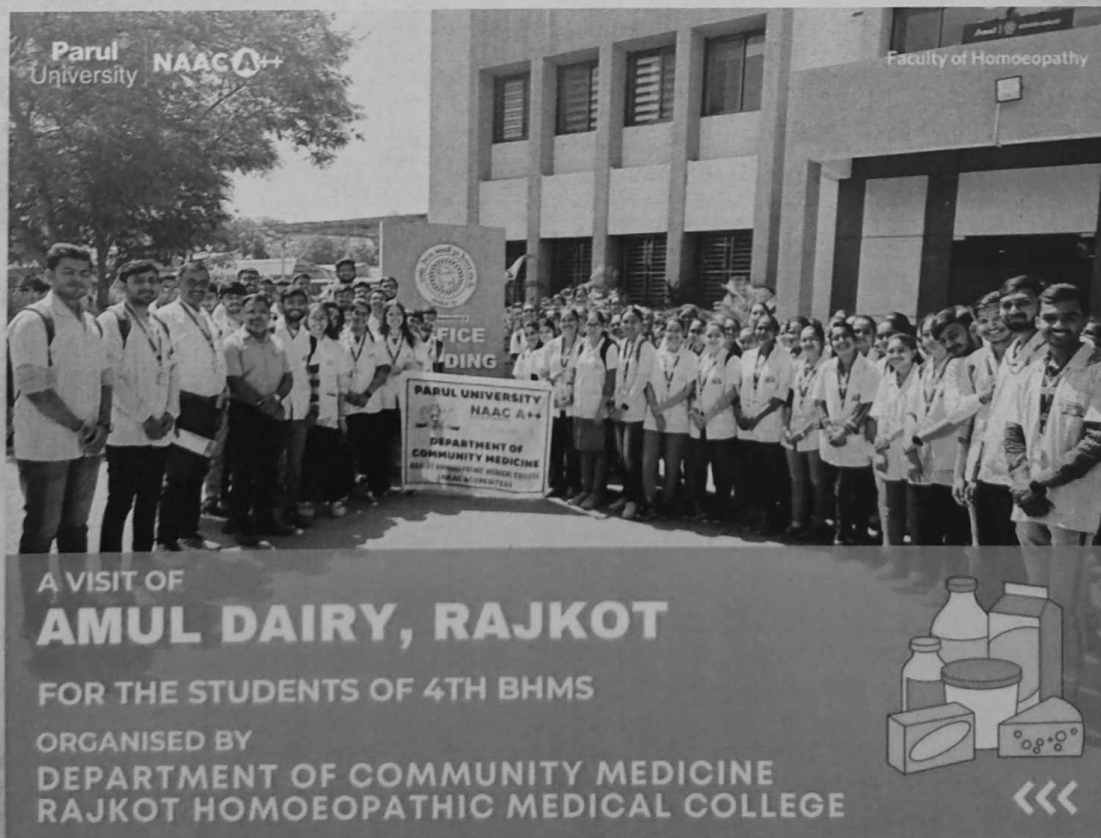
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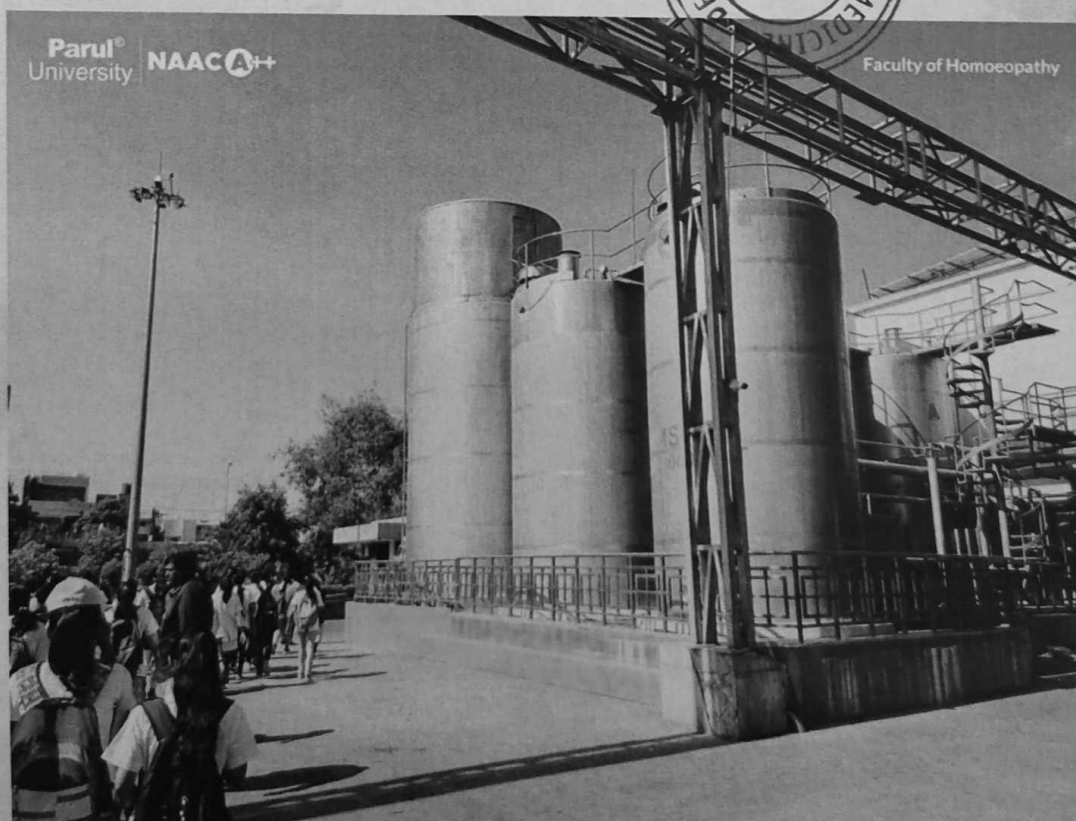
To understand the collection, processing and distribution of the milk and milk hygiene.

To understand the methods and process of milk pasteurization at industrial level.



WHAT IS PASTEURIZATION OF MILK?

Pasteurization of milk is a process of heating the milk to such temperatures and for such periods of time as are required to destroy any pathogen that may be present while causing minimal changes in the composition, flavour and nutritive value.



METHODS OF PASTEURIZATION OF MILK

- **High Temperature Short Time (HTST):**

This method involves using metal plates and hot water to raise the temperature of the milk to at least 161°F (71 °C) for no less than 15 seconds, or 145°F (62 °C) for 30 minutes, followed by rapid cooling.



- **Holder method:**

In this process, milk is kept at 63-66°C for at least 30 min and then quickly cooled to 5°C, recommended for small and rural community.

- **Ultra High Temperature (UHT):**

This process involves heating the milk using commercially sterile equipment and filling it under aseptic conditions into hermetically sealed packaging.

The milk must be heated to 280 °F (138 °C) for at least two seconds, then rapidly cooling it down. UHT kills more bacteria (good and bad) and gives it a much longer shelf life.

- UHT milk does not need refrigeration, until opened, and is shelf stable for at least six months.

- **Ultra Pasteurized (UP):**

Not to be confused with UHT,



Ultra Pasteurized (UP)

Milk is heated using commercially sterile equipment, but it is not considered sterile because it is not hermetically sealed. Milk is heated to 280 °F (138 °C) for at least two seconds, then rapidly cooling it down.

Since the milk is not hermetically sealed, it must be refrigerated with an average shelf life of 30 – 90 days.



MILK BORNE DISEASES

- Joint FAO/WHO Expert Committee (1970) on Milk Hygiene classified milk borne diseases as under:

A. Infections of animals that can be transmitted to man.

-Primary importance

- Tuberculosis
- Brucellosis
- Streptococcal Infections
- Staphylococcal enterotoxin poisoning
- Salmonellosis
- Q fever

-Lesser importance

- Cow-pox
- Foot and mouth disease
- Anthrax
- Leptospirosis Tick-borne encephalitis.



B. Infections primary to
man that can be
transmitted through milk:

- Typhoid and Paratyphoid fever
- Shigellosis
- Non-diarrheal diseases
- Streptococcal infection-
Staphylococcal
- Diphtheria
- Tuberculosis
- Enterovirus
- Viral hepatitis



SOURCE OF INFECTION

Milk is an efficient vehicle for great variety of disease agent. The sources of infection or contamination of milk may be:

- (1) the dairy animal
- (2) human handler
- (3) the environment



e.g., contaminated vessels,
polluted water, flies, dust etc.

Test for Pasteurized Milk

Alkaline Phosphatase Test for Pasteurized Milk

This test widely used check the efficiency of pasteurization. The test is based on fact that raw milk contents an enzymes called phosphate which is destroyed on heating at a temp. Which corresponds closely with standard time and temp. Required for pasteurization at 60°C for 30 min phosphate completely destroyed.



STANDARD PLATECOUNT

The bacteriological quality of pasteurized milk is determined by the standard plate count, most counties in the west enforce a limit to 30,000 bacteria count per ml of pasteurized milk.

COLIFORM COUNT

Coliform organisms are usually completely destroyed by pasteurization and there for their presence in pasteurized milk is an indication either of improper pasteurization or post pasteurization contamination.





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RAJKOT HOMOEOPATHIC MEDICAL COLLEGE

PARUL UNIVERSITY

DEPARTMENT OF COMMUNITY MEDICINE

PERMISSION LETTER

To
The Managing Director,
Amul Dairy, Rajkot
Gujarat.

Date- 14-03-2024.

Sub: To arrange an academic Visit to Amul Dairy

Respected sir,

As per the curriculum by the National Commission for homoeopathy (Government of India), it is mandatory to arrange an academic visit for the students of 4th BHMS (Session – 2024 – 2026) at any Dairy Industry for their academic purposes. So, in this regard Department of Community medicine is seeking your permission to conduct an Academic visit to Amul Dairy, Rajkot, Gujarat, at any convenient date to you, preferably in the 3rd week of April 2024. Our students are eagerly waiting to visit your esteemed Dairy Plant at Rajkot.

Your kind co-operation is highly solicited.

Thanking you,
Yours faithfully,

Das 14/3/24
Prof (Dr) Anup Kumar Das.
H.O.D.

Department of Community Medicine.

HUD
Department of
Community Medicine

H.N. Mehta
Prof (Dr) H.N. Mehta.
Principal.

Rajkot Homoeopathic Medical College.

PRINCIPAL
RAJKOT HOMOEOPATHIC MEDICAL COLLEGE
RAJKOT.

Received
visiton-03/04/24. NMBG
Rajkot Homoeopathic Medical College
Faculty of Homoeopathy

0281 2361372

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Gondal Road, Rajkot - 360002, Gujarat, India

RAJKOT HOMOEOPATHIC MEDICAL COLLEGE

PARUL UNIVERSITY

DEPARTMENT OF COMMUNITY MEDICINE

PROPOSAL LETTER

To
The Principal
Rajkot Homoeopathic Medical College,
Parul University, Rajkot.
Gujarat.

Date- 14-03-2024.

Sub: To arrange an academic Visit to Dairy Industry

Respected sir,

As per the curriculum by the National Commission for homoeopathy (Government of India), it is mandatory to arrange an academic visit for the students of 4th BHMS (Session – 2024 – 2026) at any Dairy Industry for their academic purposes. So, in this regard Department of Community medicine is seeking your permission to conduct an Academic Visit to Amul Dairy, Rajkot, Gujarat, which will be convenient for our students, preferably in the 3rd week of April 2024.

Your kind co-operation is highly solicited.

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Yours faithfully,

(Signature) 14/3/24

Prof (Dr) Anup Kumar Das.

H.O.D.

Department of Community Medicine.

HOD

Department of
Community Medicine



Seen

(Signature)
14/3/24

PARUL UNIVERSITY
RAJKOT HOMOEOPATHIC MEDICAL COLLEGE
DEPARTMENT OF COMMUNITY MEDICINE

Date - 01-04-2024

CIRCULAR

All the students of 4th BHMS (2024-26) BHMS are hereby informed that Department of Community Medicine has organized an academic visit to Amul Dairy.....
..... On 03-04-2024.....

Your presence is mandatory. Absence without prior permission will attract a disciplinary action.



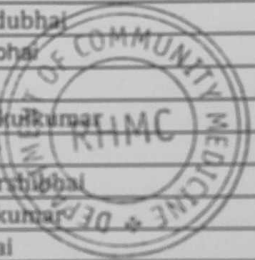
[Signature]
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Department of Community Medicine.

HOD
Department of
Community Medicine

Rajkot Homoeopathic Medical College
Parul University, Rajkot
 Academic Visit to Amul Dairy for 4th B.H.M.S.(2024-2026)
 Date 03-04-2024

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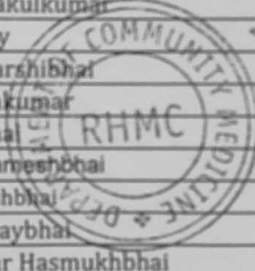


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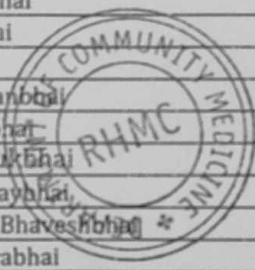
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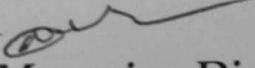
No/MD/Adm/Certi/107

Date: 16/04/2024

TO WHOM SO EVER IT MAY CONCERN

This is to certify that, total - 106 students of 4th year BHMS (2024-2026) of Rajkot Homeopathic College, Parul University, had visited Rajkot District Co-operative Milk Producers' Union Ltd. (Rajkot Dairy), Rajkot on dated 03-04-2024 under the guidance of Department of Community Medicine.

Prof (Dr) Anup Kumar Das, HOD Dept. of Community Medicine, Assistant Professor, Dr Humani Sharma, Department of Community Medicine, accompanied and guided the students during the visit.


I/c Managing Director