

◆A Report on Industrial Exposure◆

◆KATRAJ DAIRY◆



Pune Zilla Sahakari Dudh Utpadak Sangh Maryadit, popularly known as Katraj Dairy.

Organized by: Pharmaceutical Science Department
Dr. D. Y. Patil College of Pharmacy Akurdi Pune.

Venue: Katraj dairy, Katraj, Pune, Maharashtra.

Managed by: Ms. Pallavi Gholap.

Date: 29/02/2024.

Time: 11 pm to 4 pm

CLASS: - Second Year Pharm D 2023-24

Department of Pharmaceutical science of Dr. D. Y. Patil College of Pharmacy, Akurdi, Pune had organized Industrial Visit for 33 students of Second Year Pharm D at Katraj Milk Dairy to Understand Actual Industrial application and mechanism of pasteurization etc. on 29th February 2024.

HISTORY OF KATRAJ DAIRY

Katraj Dairy was incorporated in 1960 by Nilesh Hulge with an Intention of providing an organized facility of milk collection for the village-level farmers situated in Pune district. Katraj Dairy started with milk collection of about 0.30 lakh (30.000) litres per day in the first year of operation and today has steadily grown to over 2.00 lakh (0.20 million) litres per day and has a financial turnover of over Rs.250 crores.



Katraj Dairy with its nine chilling plants and 131 BMC spread almost all over the district has an installed milk handling capacity of over 5 lakh liters per day. The main plant of Katraj is equipped with a modern Pasteurizer, homogenizer, Cream separator, Ghee processing, Milk Clarifier, Condense Milk Plant, Automatic packing of milk and milk products and other quality testing devices and well-equipped labs. Katraj Dairy has an installed processing capacity of 2 lakhs (0.2 million) liters per day.

Katraj dairy manufactures / Distributes milk and milk products like Pasteurized / Homogenized- Cow milk, toned milk, Double toned milk, Standardized Milk, Full cream milk, Cow & Buffalo Cream and Ghee, Shrikhand, Amrakhand, Malai Paneer, Dahi, Flavoured Milk, Lassi, Jeera Tak, Table Butter, Milk Powder, Softy Ice cream, Pedha, Khoa, sterilized milk in 200 ml bottle and hard Ice-cream with different flavours in different pack sizes and Mango, Anjeer & Malai Burfi, Kalakand & KajuKatali.

All these products are available at Katraj-owned parlors at various locations in Pune City and through appointed distributors and retailing circuits. Very soon, Katraj plans to introduce an online ordering system for its distributors/ retailers and consumers.

Katraj products have been in use in thousands of homes in Pune since 1961. Katraj Milk, Katraj Ghee, Katraj Shrikhand, Katraj Amrakhand, Katraj Lassi, Katraj Jeera tak (buttermilk), Katraj cream have made Katraj a leading food brand in Western Maharashtra. Today Katraj is a symbol of high-quality milk products sold at reasonable prices, the genesis of a vast co-operative network triumph of indigenous technology, the marketing of a farmers' organization.



SUMMARY OF VISIT

Dr.D.Y. Patil College of Pharmacy Akurdi Pune had organized a dairy visit for Pharm D Second Year students as a part of curriculum via all the permission of Head of Institute and Officials of Katraj milk dairy. Students along with faculty members arrived at Katraj by 10:30 m at the front gate. Initiation of the visit was done via visualizing animation clip for the purpose of getting an idea regarding functioning and process of working in various sectors of Katraj dairy. The Technical team has explained automation of dairy through presentation containing many functional Block diagram. Students Round was carried out successfully by visiting all the departments and sections of the dairy. Dairy staff explained all the key points regarding manufacturing of various products, storage, temperature maintenance, distribution criteria etc. Students were provided with sweets and ice creams as a refreshment during the visit. Thanking letter and other documentation was done by the faculty after the end of visit. Students were asked to gather in the college and their reporting was recorded by faculty before leaving the campus. All left the campus around 5:30 pm in the evening. In this way, the entire visit was completed under the guidance of Ms. Pallavi Gholap, Ms. Priyatama Powar, Dr. Ramdas Shinde and Ms. Pranita Shankaratti on 29th February 2024 for Pharm D 2nd year students of academic year 2023-24.

DETAIL REPORT: The aim of the industrial visit was to acquaint the students with the process of the Dairy Industry. Along with 4 teachers, 33 SY pharm D students toured the site around 11:00 am, the visit was started under the supervision of a Katraj Dairy employee. A Clip of Katraj Dairy was viewed by all the students before entering in particular departments of dairy.



Figure 1: Students watching short video of Katraj Milk Dairy

The introduction to Katraj Dairy, purchasing, transporting, testing, processing, and pasteurization of milk and other topics were covered in the film. Students were explained by one of the employees how the boilers, chillers, and other milk processing equipment are being operated. Additionally, he showed the students every production area, including that for flavouring milk, ice creams, ghee etc.



For the purpose of temperature maintenance, large boilers are used in order to produce steam and that steam via outlets is transferred inside the dairy for the process of pasteurization and other necessary production of various products.





Figure 2: Boiler (makes steam from water with the help of fire by using bagasse)

◆ Manufacturing Process

Initially, the milk is collected at the collection centers in the various villages and is transported to the Katraj plant situated in Katraj Pune. The milk is transported via special vehicles designed for the sole purpose of milk transportation.

The quality of the milk is first assessed once it arrives at the venue. Then it is filtered and added to holding tanks. Pipelines are used to transport the milk to the boiler unit. This is the pasteurization process, which involves boiling milk to sterilize it and extend its shelf life.

After the milk has been pasteurized, it is progressively cooled to 5°C or lower using equipment that has been certified and is being used appropriately. Pasteurization is the process of heating every particle of milk to at least 63°C for 30 minutes or 15 seconds.

The milk is ready for further processing and packaging following this process, at which point it is stored in its specially constructed storage containers. From there, it can be used to make other goods like flavor-infused milk, ice cream, butter, ghee, etc.

◆ **Quality control: -**

When it comes to the quality of the milk and the goods it produces, Katraj Dairy is extremely stringent. It closely adheres to the requirements of ISO9001:2000. As soon as the milk enters the factory gates, this department's work starts. When the milk is still in the milk tanker or other milk transportation vehicle, they first inspect its quality. They do this to make sure the milk is not spoiled and does not fall short of Katraj Dairy's requirements. To prevent tainted milk from being mixed in with the other milk in the storage units, this technique is used. For the numerous products produced at the factory, this division employs a range of testing techniques. They frequently examine things like pH, fat, acidity, water content, saturation levels, lactic acid, and so on. Here are a few of the compounds they employ for testing:

- Iodine Solution.
- Sodium Bicarbonate.
- Lactic Acid.
- Diastix.
- Silver Hydroxide.

◆ **PACKING: -**

Katraj Dairy uses a fairly straightforward method of packaging. Even if the customer is from a large metropolis or a small town in Maharashtra, it appeals to their eyes. All of their packaging is printed with both the global language, "English," and the regional dialect, "Marathi". The packaging is carried out in very sanitary settings. All employees who handle the merchandise are covered with hair and wearing gloves on their hands. They must wear a particular uniform as well. Except for flavoured milk, all milk is packaged in plastic bags. The bags are produced in various regions of Maharashtra and placed inside the packing equipment. The flavoured milk comes in 200 ml containers.

CONCLUSION: -

We can infer from this report that the setup is not only adequate but also meets international standards. The plant is exceedingly clean and well-kept. The concept and execution of bringing the farmers together and assisting them with their issues are both admirable. The enormous quality and level of every product created is the reason why consumer demand for them is increasing daily.

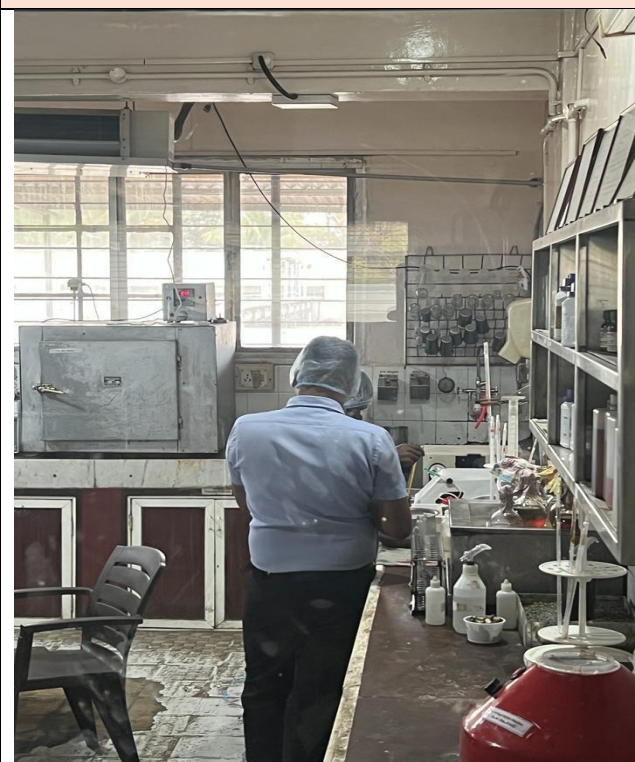
PHOTO GALLERY FOR VARIOUS DEPARTMENT AT KATRAJ DAIRY
UNIT



I B T Tank



Evaporator



Quality Control Department



Pasteurization Unit For Milk

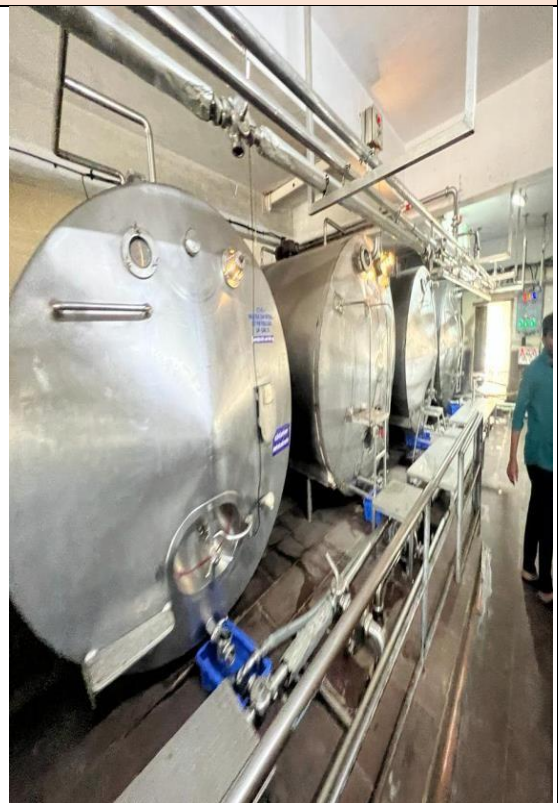


Processing Unit For Ghee



Milk Separator for Full Cream Milk

Ammonia Compressor



Milk Separator for full Cream Milk



Ice Cream Section



Glycol Plant





Chilling Unit







Packaging Department





Processing Unit For Ghee



PROGRAM OUTCOMES MAPPED



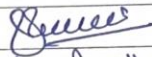
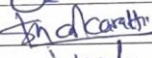
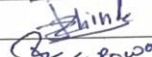
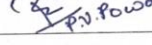
Prepared and edited by Ms. Pallavi B. Gholap and Ms. Priyatama V. Powar

Dr. D. Y. Patil Pratishthan's
Dr. D. Y. Patil College of Pharmacy,
Akurdi, Pune – 411044.

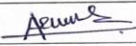
Date: 23rd February 2024

Visit to Milk Dairy Katraj

List of Faculty associated for the Visit

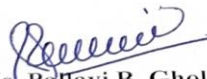
Sr. No.	Faculty Name	Signature of Faculty
1.	Ms. Pallavi B. Gholap	
2.	Ms. Pranita S. Shankaratti	
3.	Dr. Ramdas D. Shinde	
4.	Ms. Priyatama V. Powar	

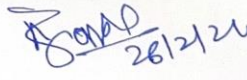
Non-Teaching faculty associated for the Visit

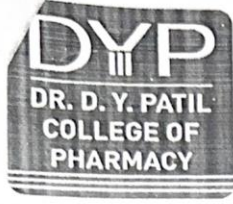
Sr.No	Faculty Name	Signature of Faculty
1.	Mr. Anil Pawar	

Address:

Pune Zilha Sahakari Dudh Utpadak Sangh Ltd. Katraj Dairy, Pune – Satara Road, Opp. Rajiv Gandhi Udyan, Katraj, Pune – 411046.


Ms. Pallavi B. Gholap
Faculty Co-ordinator


28/2/24
Dr. N. S. Vyawahare
Principal



Dr. D. Y. Patil Pratishthan's

Dr. D. Y. PATIL COLLEGE OF PHARMACY

Dr. D. Y. Patil Educational Complex, Sector - 29, Pradhikaran, Akurdi, Pune 411 044.
Tel. : 020-27656141, Tel. Fax : 020-27656141
E-mail : info@dyppharmaakurdi.ac.in Web : www.dyppharmaakurdi.ac.in
Approved by : All India Council for Technical Education, New Delhi
Pharmacy Council of India, New Delhi. Recognized by : Government of Maharashtra
Affiliated to Savitribai Phule Pune University, Pune

Dr. Sanjay D. Patil
President

Padmashree Dr. D. Y. Patil
Founder

Shri. Satej D. Patil
Vce-President & Chairman

Dr. N. S. Vyawahare
Principal

Ref. No. : DYPCOP/940 (b)
Date : 26/02/2024

To,
Ms. Archana Narute
Assistant Manager Training & Legal
Pune Zilha Sahakari Dudh Utpadak Sangh Ltd.
Katraj Dairy, Pune- 411046

Dear Madam,
On behalf of Dr. D. Y. Patil College of Pharmacy, Akurdi, Pune, I take the opportunity to express my sincere thanks and gratitude towards you for sparing your valuable time and giving us permission to visit our students and faculty at Pune Zilha Sahakari Dudh Utpadak Sangh Ltd. Katraj Dairy, Pune- 411046 on 29th February 2024.

We also appreciate your efforts and valuable feedback.

Looking forward to strengthen our liaison with you.

Thanking You,

F- *(Signature)*
INCHARGE
TRAINING CENTRE
Pune Zilha Saha. Dudh
Utpadak Sangh Mar.
Pune-Satara Road,
Katraj Dairy, Pune-411046.



Yours
(Signature)
26/2/24
Dr. N. S. Vyawahare
Principal

PRINCIPAL
Dr. D. Y. Patil Pratishthan's
Dr. D. Y. Patil College of Pharmacy
Akurdi, Pune-411 044

To,
Dr. N. S. Vyawahare
Principal
Dr. D. Y. Patil College of Pharmacy,
Akurdi, Pune- 411044

Dear Sir,
It was a pleasure having your ³³ Students, ⁵ faculties and 1 non-Teaching faculty for our Dairy visit on 29th February 2024. During the visit all faculties and students were interactive with our staff.

We hope the visit has provided an insight of functioning of dairy firm and information provided by us will be helpful to your students regarding the pasturization process.

Looking forward to strengthen our liaison with you.

Thanking You,
Yours,



Ms. Archana Narute
Assistant Manager Training & Legal
Pune Zilha Sahakari Dudh
Utpadak Sangh Ltd. Katraj
Dairy, Pune.

CA SUBMISSION RECORD

Roll no	Name of students	MODEL/POSTER	DAIRY VISIT	PATHOLOGY VISIT	ASSIG. 1	ASSIG. 2	PRESENTATION ON CA
✓ 1	Ajay Sanjay Gharpankar	Mitosis cycle	✓	✓	✓	✓	✓ Gharpankar
2	Amisha Ritesh Jaiswal	Corona virus	✓	✓	✓	✓	✓ Jaiswal
3	Aniket Anandrao Kadam	Bacteria	✓	✓	✓	✓	✓ Kadam
4	Anirudha Ashok Jadhav	Bacteria	✓	✓	✓	✓	✓ Jadhav
5	Aravind Mohan Nair	Microbial fuel	✓	✓	✓	✓	✓ Aravind
6	Aqita Anand Kambli	Corona virus	✓	✓	✓	✓	✓ Kambli
7	Bhavana Anil Magdum	Corona virus	✓	✓	✓	✓	✓ Magdum
8	Bhavesh Chhotelal Swamkar	Animal cell	✓	✓	✓	✓	✓ Swamkar
✓ 9	Devanshree Prakash Maneval	Mitosis cycle	✓	✓	✓	✓	✓ Maneval
10	Harshada Subhash Waghmode	HAO	✓	✓	✓	✓	✓ Waghmode
11	Isha Nilesh Chhajed	HAO	✓	✓	✓	✓	✓ Chhajed
✓ 12	Keshav Gulshan Ummat	Mitosis cycle	✓	✓	✓	✓	✓ Ummat
13	Namrata Amit Dev	Animal cell	✓	✓	✓	✓	✓ Dev
✓ 14	Nikita Nanabhau Awari	Hot air oven	✓	✓	✓	✓	✓ Awari
15	Om Sanjay Gunjal	weighing balance	✓	✓	✓	✓	✓ Gunjal
16	Piyush Abhay Demanna	Aseptic isolator	✓	✓	✓	✓	✓ Demanna
17	Prerana Santosh Mahajan	HAO	✓	✓	✓	✓	✓ Mahajan
18	Chennamadhavuni Ranga Sri	Aseptic isolator	✓	✓	✓	✓	✓ Ranga Sri
19	Rashi Jogindersingh Gill	Aseptic isolator	✓	✓	✓	✓	✓ Gill
✓ 20	Sakshi Hemant Salunke	Mitosis cycle	✓	✓	✓	✓	✓ Salunke
21	Sakshi Vishnu Mandlik	Corona virus	✓	✓	✓	✓	✓ Mandlik
22	Saloni Ashok Patil	Animal cell	✓	✓	✓	✓	✓ Patil
23	Shivprasad Bhanudas Chavan	W.B.	✓	✓	✓	✓	✓ Chavan
24	Shona Sojan	HAO	✓	✓	✓	✓	✓ Sojan
25	Shreyas Arjun Tarware	W.B.	✓	✓	✓	✓	✓ Tarware
26	Shruti Mahesh Makhamale	Animal cell	✓	✓	✓	✓	✓ Makhamale
27	Snehal Abhimanyu Thawal	Corona virus	✓	✓	✓	✓	✓ Thawal
28	Somnath Yeshwant Gawali	Microbial fuel	✓	✓	✓	✓	✓ Somnath
29	Supriya Pandurang Phugse	Aseptic isolator	✓	✓	✓	✓	✓ Phugse
30	Vaishnav S	M.F	✓	✓	✓	✓	✓ Vaishnav
31	Vighnesh Vivek Nair	Bacteria	✓	✓	✓	✓	✓ Nair

CA SUBMISSION RECORD

32	Yash Rajendra Totre	W.B	✓	✓	✓	✓	<i>ptotre</i>
33	Yash Ramdas Waghe	Aseptic isolator	✓	✓	✓	✓	<i>Gholap</i>

Ms.P.B. Gholap
Subject In-charge

1/18/25, 2:20 PM

Dr. D. Y. Patil College Mail - Regarding permission for visit dairy firm



Pallavi Gholap <pallavigholap@dyppharmaakurdi.ac.in>

Regarding permission for visit dairy firm

6 messages

Pallavi Gholap <pallavigholap@dyppharmaakurdi.ac.in>
To: katrajdairytraining@gmail.com

Thu, Feb 22, 2024 at 4:09 PM

Greetings.

I am Ms. Pallavi Gholap, Assistant Professor from Dr. D.Y Patil College of Pharmacy, Akurdi, Pune. As mentioned above, I want your permission for the visit for Pharm D Second Year students. As per syllabus and academic curriculum of Subject Pharmaceutical Microbiology, they have an assignment regarding visit to Milk dairy nearby and learn about certain things like pasteurization etc so as a subject Incharge I want to visit your dairy along with 33 students, 4 faculties (including me) and 1 non-teaching staff on 29th February 2024. Kindly let me know as soon as possible.

Thank You

Regards

Ms. Pallavi B.Gholap
Assistant Professor
Dr.D.Y.Patil College of Pharmacy Akurdi,Pune

Katraj dairy <katrajdairytraining@gmail.com>
To: Pallavi Gholap <pallavigholap@dyppharmaakurdi.ac.in>

Fri, Feb 23, 2024 at 9:39 AM

Respected Madam,

As per your email , we confirmed your visit on 29th Feb 2024 at 11.00am. For dairy visit , visit fee is Rs. 70/- per person.

Visitors should follow industry rules & regulations very strictly during the visit period.

Thanks & Regards

Mrs. Archana Narute
Asst. Manager, Training & Legal
Katraj Dairy, Pune.
[Quoted text hidden]

Pallavi Gholap <pallavigholap@dyppharmaakurdi.ac.in>
To: Devendra Shirode <devendrashirode@dyppharmaakurdi.ac.in>

Thu, Jan 9, 2025 at 3:10 PM

[Quoted text hidden]

Devendra Shirode <devendrashirode@dyppharmaakurdi.ac.in>
To: Pallavi Gholap <pallavigholap@dyppharmaakurdi.ac.in>

Sat, Jan 18, 2025 at 12:50 PM

please send report 2023-24
your earlier sent report is of 2022-23

Dr. Devendra S. Shirode
Associate Professor,
Department of Pharmacology,
Dr. D. Y. Patil College of Pharmacy,
Akurdi, Pune - 44
Mobile : 7276790017

[Quoted text hidden]

Pallavi Gholap <pallavigholap@dyppharmaakurdi.ac.in>
To: Devendra Shirode <devendrashirode@dyppharmaakurdi.ac.in>

Sat, Jan 18, 2025 at 1:03 PM

OK SIR, I have send Aishwarya U mam.