



**SHIVNERI MAHAVIDYALAYA SHIRUR ANANTPAL DIST  
LATUR**

**CERTIFICATE COURSE IN DAIRY TECHNOLOGY**

**ORGANISED BY**

**DEPARTMENT OF DAIRY SCIENCE**

**ACADEMIC YEAR -: 2022-2023**

*Disclaimer*

*The syllabus for the B.Sc. DairyScience Certificate Course in Dairy Technolog follows guidelines from the college development committee at Shivneri mahavidyalaya Shirur anantpal Dist-Latur 413544. It has been meticulously crafted by the department of DairyScience and approved by Principal, Shivneri Mahavidyalaya. Participants are urged to use this syllabus as a comprehensive guide for Dairy Technology studies.*

SHIVNERI MAHAVIDYALAYA SHIRUR ANANTPAL DIST LATUR

DEPARTMENT OF DAIRY SCIENCE

CERTIFICATE COURSE IN DAIRY TECHNOLOGY

SYLLABUS

Period – 30

Mark – 40

**Objectives:-**

The objectives of the programme are to:

- develop technician level human resource for dairy industry;
- upgrade the technical proficiency of existing workers and lower level / technicians working in the dairy and allied sectors;
- develop skilled young entrepreneurs for self employment in milk processing and associated activities; and
- impart knowledge and technical proficiency in:
  - Clean milk production and handling
  - Processing of milk
  - Manufacture of western and indigenous dairy products
  - Testing and quality control of milk and milk products
  - Marketing and economical aspects -Managing small and medium enterprises

**Outcome:-**

- Various preservation techniques relevant in the dairy industry.
- Food additives and their significance in maintaining the nutritional quality of milk and other dairy products.
- New processing and preservation technologies in the dairy industry and the challenges faced.

**UNIT – I**

**Period-10**

1)Reception of milk: Unloading, Grading, Sampling, Testing, Weighing and Recording.

2)Storage of milk. Straining, filtration and clarification of milk.

3)Definition and objectives of Pasteurization of milk, Objections to Pasteurization and Principles of heat exchange.

**UNIT – II**

**Period-10**

1)Market milk: Toned milk, Double toned milk, Reconstituted milk, Standardized milk and Full cream milk –

2)Standards and methods of manufacture.

3)Cream: Types of cream, composition, methods of cream separation, gravity and centrifugal methods, types of cream separators; factors affecting fat losses in skim milk and fat percentage in cream.


**UNIT – III**

**Period-10**

- 1) Methods of Pasteurization: LTLT, HTST and Uperization.
- 2) Sterilization of milk. Factors influencing homogenization, effect of homogenization on milk.
- 3) Standardization of milk.

**REFERENCE BOOKS**

- 1) Dairy processing handbook – Gosta Bylund.
- 2) Outlines of Dairy Technology – Sukumar De.
- 3) Milk products preparation and quality control – C.P. Ananthakrishnan.
- 4) The technology of milk processing – C.P. Ananthakrishnan.
- 5) Modern Dairy products – Lincoln M. Lampert.

  
**Varsha B. Kharobe**  
Assist. Professor & Head,  
Dept. Of Dairy Science,  
Shivneri Mahavidhyalaya,  
Shirur Anantpal Dist. Latur

  
**PRINCIPAL**  
Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur (M. S.)

SHIVNERI MAHAVIDYALAYA SHIRUR ANANTPAL DIST LATUR

DEPARTMENT OF DAIRY SCIENCE

CERTIFICATE COURSE IN DAIRY TECHNOLOGY

**Student Enrollment List**

**Academic Year 2022-2023**

Sr. No.	Name Of Student	Class
1	Jadhav Krishna Laxman	B Sc T Y
2	Khandekar Ankita Laxman	B Sc T Y
3	Lohar Aishwarya Gorakh	B Sc T Y
4	Shinde Mahesh Vinod	B Sc T Y
5	Sarkale Divya Dhananjay	B Sc T Y
6	Tamboli Sana Alim	B Sc T Y
7	Gaikwad Anjali Sudhakar	B Sc T Y
8	Kamble Sanjivani Dattatray	B Sc T Y
9	Shaikh Yasmin Rajjab	B Sc T Y
10	Suryawanshi Nikita Tanaji	B Sc T Y



**Varsha B. Kharobe**  
Assist. Professor & Head,  
Dept. Of Dairy Science,  
Shivneri Mahavidhyalaya,  
Shirur Anantpal Dist.Latur




**PRINCIPAL**  
Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur (M)

SHIVNERI MAHAVIDYALAYA SHIRUR ANANTPAL DIST LATUR

DEPARTMENT OF DAIRY SCIENCE

CERTIFICATE COURSE IN DAIRY TECHNOLOGY

Time Table	
Academic Year 2022-2023	
Day/Time	03:50 To 04:40 PM
Tuesday	Certificate course In Dairy Technology

  
**Varsha B. Kharobe**  
Assist. Professor & Head,  
Dept. Of Dairy Science,  
Shivneri Mahavidyalaya,  
Shirur Anantpal Dist. Latur

  
PRINCIPAL  
Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur/M

SHIVNERI MAHAVIDYALAYA SHIRUR ANANTPAL DIST LATUR

DEPARTMENT OF DAIRY SCIENCE

CERTIFICATE COURSE IN DAIRY TECHNOLOGY

Student Attendance

Academic Year 2022-2023

Month – August 2022

September 2022 October 2022

Sr No	Name Of Student	2	23	30	Sept.	6	13	20	27	Oct.	4	11	18
1	Jadhav Krishna Laxman	P	P	A		P	P	P	A		P	P	P
2	Khandekar Ankita Laxman	P	P	P		A	P	P	P		P	P	P
3	Lohar Aishwarya Gorakh	P	P	P		P	P	P	P		P	P	P
4	Shinde Mahesh Vinod	A	P	P		P	P	P	P		P	A	P
5	Sarkale Divya Dhananjay	P	P	P		P	P	P	P		P	P	P
6	Tamboli Sana Alim	P	A	P		P	P	P	P		P	P	P
7	Gaikwad Anjali Sudhakar	P	P	P		P	P	P	P		P	P	P
8	Kamble Sanjivani Dattatray	P	P	P		P	P	P	P		P	P	A
9	Shaikh Yasmin Rajjab	P	P	P		P	P	P	P		P	P	P
10	Suryawanshi Nikita Tanaji	P	P	P		P	P	P	P		P	P	P

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DEPARTMENT OF DAIRY SCIENCE

CERTIFICATE COURSE IN DAIRY TECHNOLOGY

QUESTION PAPER

Academic Year 2022-2023

Marks-40

Time-01 Hrs

Name Of Candidates:-

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1. Food value of ice cream depends to a large extent on its?

Flavor  Volume  Composition  None of the above

2. Sponification number of butter fat is:-

190  195  210  231

3. Energy value of milk having 3.5% fat according to Sharp's Formula will be?

60  60.5  62.5  65.5

4. Lactose reduces copper salt to?

Cupric Oxide  Cuprous Oxide  Copper Oxide  None of the above

5. Yellow color of milk fat is due to presence of?  Vitamin D  Carotinoids  Calcium  Folic Acid

6. Tests for proper pasteurization are based on the activity of which enzyme?

Lactase  Diastase  Phosphatase  Catalase

7. Starch is split by which enzyme?

Lactase  Diastase  Phosphatase  Catalase

8. What is freezing point of milk?

0 °C  -0.55 °C  -1 °C  -1.55 °C

9. What is the average boiling point of milk?

100-101 °C  105-110 °C  115-117 °C  102-105 °C

10. What is the average specific gravity of normal whole milk at 16 °C?

- 0.903  1.032  1.582  2.032

11. Which is the pre-dominating organism in dirty utensils of milk?

- Lactobacillus bulgaricus  Propionibacterium  Streptococcus lactis  All of the above

12. Energy value of a food is measured in terms of?

- Carbohydrates  Fats  Proteins  Calories

13. Legal butter must contain at least what percentage of fat?

- 70%  80%  90%  95%

14. The high nutritive value of cheese is due to:-

- High mineral contents  High protein contents  Taste & flavor  All of the above

15. Milk fat differs from other common fats in having a larger percentage of:-

- Free Fatty Acids  Saturated Fatty Acids  Volatile Fatty Acids  None of the above

16. Chlorine compounds have widespread acceptance in the dairy industry due to?

- Non-toxicity  High sanitizing efficiency  High corrosiveness  All of the above

17. At what concentration chlorine sanitizing solutions are usually used in the dairy industry?

- 50-100 ppm  100-200 ppm  200-500 ppm  500-800 ppm

18. The process of raising or lowering the percent of fat in milk or cream to a desired standard is called?

- Enrichment  Fortification  Standardization  None of the above

19. A product consisting of a mixture of milk and cream which contains not less than 10.5% milk fat is called?

- Concentrated Milk  Low Fat Milk  Half-and-Half  Eggnog

20. Butter milk is a fluid product resulting from the manufacture of?

- Cheese  Yogurt  Ice cream  Butter

21. What is the application of any effective method or substance to a clean surface for destruction of pathogen is called?



Pasteurization  High Temperature Treatment  Sanitization  Cleaning

22. In what form Formaldehyde- preservatives used in milk exists?

Gas  Liquid  Solid  All of the above

23. Mammary gland's complete unit of milk synthesis is called

lumen  micelles  alveolus  secretory cells

24. Fatty acids synthesized in mammary gland are

Higher chain fatty acids  Unsaturated fatty acids  Lower chain fatty acids  Medium and lower chain fatty acids

25. Most variable constituent of milk is

Proteins  Fat  Lactose  Minerals

26. Which of the following has largest particle size in milk?

Lactose  Casein  Fat globule  Micelles

27. Lactose has water solubility of

100%  50%  18%  25%

28. Which enzyme is tested for cream pasteurization?

Plasmin  Phosphatase  Catalase  Peroxidase

29. Which one is used as an emulsifying agent in process cheese blend?

Paprika  Pectin  Glycerides  Whey Powder

30. Percentage of water in buffalo milk is:-

65-67 %  70-75 %  80-85 %  87-90 %

31. Soft fats in milk fat are:-

Lauric & Stearic  Capric & Lauric  Oleic & Butyric  Oleic & Lauric

32. Principal protein in milk is:-

Albumin  Lactalbumin  Casein  Lactoglobulin

33. Percentage of mineral matter in milk is about :-

- 1%  0.7%  1.5%  0.05%

34. Whey is the by-product in the manufacture of:-

- Skimmed milk  Butter  Cheese  Yogurt

35. Example of soft cheese is:-

- Cheddar  Swiss  Brick  Cottage

36. Which one of the following is not fermented beverages?

- Kefir  Leban  Buttermilk  Kaumiss

37. How many indigenous enzymes have been reported in bovine milk?

- 30  60  50  40

38. Destruction of which enzyme is used as an index of super-HTST pasteurization?

- Catalase  Lipase  Lactoperoxidase  All of the above

39. Rennet belongs to:-

- Lipases  Catalase  Proteinases  Phosphatases

40. Temperature used in UHT treatment is:-

- 90-100 °C  100-120 °C  120-125 °C  130-140 °C

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Result

Academic Year 2022-2023

Sr. No.	Name Of Student	Marks
1	Jadhav Krishna Laxman	36
2	Khandekar Ankita Laxman	35
3	Lohar Aishwarya Gorakh	37
4	Shinde Mahesh Vinod	38
5	Sarkale Divya Dhananjay	36
6	Tamboli Sana Alim	37
7	Gaikwad Anjali Sudhakar	35
8	Kamble Sanjivani Dattatray	36
9	Shaikh Yasmin Rajjab	38
10	Suryawanshi Nikita Tanaji	37



**Varsha B. Kharobe**  
Assist. Professor & Head,  
Dept. Of Dairy Science,  
Shivneri Mahavidhyalaya,  
Shirur Anantpal Dist. Latur



**PRINCIPAL**  
Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur (M.S.)



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**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

**CERTIFICATE**

This is to certify that, Mr./Miss. JADHAV KRISHNA LAXMAN having successfully completed the Certificate Course in DAIRY TECHNOLOGY conducted by Department of DAIRY SCIENCE during the academic year 2022-23

Hence Certified

.Date: 21 Oct. 2022

Mrs. Kharobe V. B.

**Varsha B. Kharobe**  
Assistant Professor & Head,  
Dept. Of Dairy Science,  
Shivneri Mahavidyalaya,  
Shirur Anantpal Dist. Latur

Dr. Suryawanshi N.B.

Principal  
**PRINCIPAL**  
Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur, M.S.



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This is to certify that, Mr./Miss. KHANDEKAR ANKITA LAXMAN having successfully completed the Certificate Course in DAIRY TECHNOLOGY conducted by Department of DAIRY SCIENCE during the academic year-2022-2023-----

Hence Certified

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Dept. Of Dairy Science,  
Shivneri Mahavidhyalaya,  
Shirur Anantpal Dist. Latur

Dr. Suryawanshi N.B.

Principal  
PRINCIPAL

Shivneri Mahavidyalayā  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur



GuruvishambharkrupabahuuddeshiyaShikshanPrasarakMandallakadJawalga's

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This is to certify that, Mr./Miss. LOHAR AISHWARYA GORAKH having successfully completed the Certificate Course in DAIRY TECHNOLOGY conducted by Department of DAIRY SCIENCE during the academic year-2022-2023 -----

Hence Certified

.Date: 21 Oct. 2022

Mrs. Kharobe V. B.

**Varsha B. Kharobe**  
Assistant Professor & Head,  
H.O.D. Dept. Of Dairy Science,  
Shivneri Mahavidhyalaya,  
Shirur Anantpal Dist.Latur

Dr. Suryawanshi N.B.

**Principal**  
PRINCIPAL  
Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur (M.S.)



GuruvishambharkrupabudhuddeshiyaShikshanPrasarakMandalLakadjwalga's

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This is to certify that, Mr./Miss. **SHINDE MAHESH VINOD** having successfully completed  
the Certificate Course in **DAIRY TECHNOLOGY** conducted by Department of **DAIRY SCIENCE**  
during the academic year 2022-2023

Hence Certified

Date: 21 Oct. 2022

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**Varsha B. Kharobe**  
Asstt. Professor & Head,  
Dept. of Dairy Science,  
Shivneri Mahavidyalaya,  
Shirur Anantpal Dist. Latur

**Dr. Surya Kashi N.B.**

**Principal**  
**PRINCIPAL**

Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal Dist. Latur (M.S.)



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ANANTPAL, DIST. LATUR**

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This is to certify that, Mr./Miss. SARKALE DIVYA DHANANJAY having successfully completed the Certificate Course in DAIRY TECHNOLOGY conducted by Department of DAIRY SCIENCE during the academic year 2022-2023

Hence Certified -----

.Date: 21 Oct. 2022

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**Varsha B. Kharobe**  
Assistant Professor & Head,  
Dept. Of Dairy Science,  
Shivneri Mahavidhyalaya,  
Shirur Anantpal Dist. Latur

Dr. Suryakanshi N.B.

Principal  
PRINCIPAL

Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur





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**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

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This is to certify that, Mr./Miss. TAMBOLI SANA ALIM having successfully completed the Certificate Course in DAIRY TECHNOLOGY conducted by Department of DAIRY SCIENCE during the academic year 2022-2023

Hence Certified

Date: 21 Oct. 2022

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**Varsha B. Kharobe**  
Assistant Professor & Head,  
Dept. Of Dairy Science,  
Shivneri Mahavidhyalaya,  
Shirur Anantpal Dist. Latur

Dr. Suryapanshi N.B.

**Principal**  
**PRINCIPAL**  
Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur



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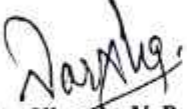
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ANANTPAL, DIST. LATUR**

**CERTIFICATE**

This is to certify that, Mr./Miss. GAIKWAD ANJALI SUDHAKAR having successfully completed the Certificate Course in DAIRY TECHNOLOGY conducted by Department of DAIRY SCIENCE during the academic year 2022-2023

Hence Certified

Date: 21 Oct. 2022

  
Mrs. Kharobe V. B.  
**Varsha B. Kharobe**  
Assistant Professor & Head,  
Dept. Of Dairy Science,  
Shivneri Mahavidhyalaya,  
Shirur Anantpal Dist. Latur

  
Dr. Suryavanshi N.B.  
Principal  
**PRINCIPAL**  
Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur



Guruvishambharkrupabahuuddeshiya Shikshan Prasarak Mandallakkadjawalga's


**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**



**CERTIFICATE**

This is to certify that, Mr./Miss. KAMBLE SANJIVANI DATTATRAY having successfully completed the Certificate Course in DAIRY TECHNOLOGY conducted by Department of DAIRY SCIENCE during the academic year 2022-2023

Hence Certified

.Date: 21 Oct. 2022

  
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**Varsha B. Kharobe**  
Assist. Professor & Head,  
H.O.D. Dept. of Dairy Science,  
Shivneri Mahavidhyalaya,  
Shirur Anantpal Dist. Latur

  
**Dr. Suryakanshi N.B.**  
  
**Principal**  
**PRINCIPAL**  
Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur (M.S.)



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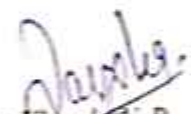
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ANANTPAL, DIST. LATUR**


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This is to certify that, Mr./Miss. SHAIKH YASMIN RAJJAB having successfully completed the Certificate Course in DAIRY TECHNOLOGY conducted by Department of DAIRY SCIENCE during the academic year 2022-2023

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Date: 21 Oct. 2022

  
Mrs. Kharobe V. B.  
Varsha B. Kharobe  
Asst. Professor & Head,  
H.O.D.,  
Dept. of Dairy Science,  
Shivneri Mahavidyalaya,  
Shirur Anantpal Dist. Latur

  
Dr. Suryawanshi N.B.  
Principal  
PRINCIPAL  
Shivneri Mahavidyalaya  
(Arts, Commerce & Science)  
Shirur Anantpal, Dist. Latur, M.



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**SHIVNERI MAHAVIDYALAYA, SHIRUR  
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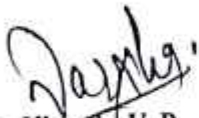
**CERTIFICATE**


This is to certify that, Mr./Miss. SURYAWANSHI NIKITA TANAJI having successfully completed the Certificate Course in DAIRY TECHNOLOGY conducted by Department of DAIRY SCIENCE during the academic year 2022-2023

Hence Certified

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Date: 21 Oct. 2022

  
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Dept. Of Dairy Science,  
Shivneri Mahavidyalaya,  
Shirur Anantpal Dist. Latur

  
Dr. Suryawanshi N.B.  
Principal  
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