

"Social Transformation Through Dynamic Education"



Bharati Vidyapeeth's

Matoshri Bayabai Shripatrao Kadam Kanya Mahavidyalaya,

Kadegaon. Dist. Sangli

Department of Microbiology

Certificate Course in

"Milk Microbiology"

2022-2023



Bharati Vidyapeeth's
Matoshri Bayabai Shripatrao Kadam Kanya Mahavidyalaya, Kadegaon. Dist. Sangli

Department of Microbiology
Brief Report: Certificate Course – Milk Microbiology

Academic Year – 2022-23

Program Details:

- Title of the Activity: Certificate Course – Milk Microbiology
- Programme Coordinator: Mr. S. S. Shinde
- Organizing Department: Department of Microbiology
- Number of Participants: 16
- Duration of the Course: 6 months
- Academic Year: 2022-23

Introduction:

The Certificate Course – Milk Microbiology, organized by the Department of Microbiology and coordinated by Mr. S. S. Shinde, was conducted during the academic year 2022-23. The program aimed to provide participants with a comprehensive understanding of milk microbiology, emphasizing its crucial role in ensuring the safety, quality, and hygiene of dairy products.

Program Objectives:

The Certificate Course – Milk Microbiology for the academic year 2022-23 was designed to achieve the following key objectives:

1. **Holistic Knowledge:** To equip participants with a deep understanding of the microbial dynamics within milk and dairy products.
2. **Quality Assurance:** To provide participants with the knowledge and skills needed to uphold the standards of safety, quality, and hygiene during milk production and processing.
3. **Microbial Management:** To educate participants about the diverse microbial communities present in milk, their impact on product quality, and the strategies required for effective control and management.

Program Highlights:

The program featured a comprehensive curriculum that combined theoretical learning with practical training. Participants engaged in lectures, interactive discussions, hands-on laboratory sessions, and workshops. The curriculum encompassed a wide range of topics, including:

- Microbial diversity in milk and dairy products
- Microbial identification and quantification techniques
- Microbial spoilage prevention and safety measures
- Quality control procedures and hygiene practices in milk processing
- Adherence to regulatory guidelines and industry standards

The practical sessions enabled participants to gain valuable hands-on experience in conducting microbial analyses, utilizing culturing techniques, and interpreting data.



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Participant Engagement:

Throughout the course, participants demonstrated a high level of engagement and enthusiasm. Interactive discussions promoted the exchange of ideas and facilitated a collaborative learning environment. The hands-on laboratory sessions were particularly well-received, enabling participants to apply theoretical concepts in practical settings and enhance their practical skills.

Conclusion:

The Certificate Course – Milk Microbiology conducted during the academic year 2022-23, under the coordination of Mr. S. S. Shinde and organized by the Department of Microbiology, successfully achieved its objectives. By imparting comprehensive knowledge and practical skills related to milk microbiology, the program equipped participants with the tools required to contribute effectively to the dairy industry and related fields. The course, spanning six months, provided participants with a platform to bridge the gap between theoretical understanding and hands-on application in the realm of milk microbiology, preparing them for roles that demand expertise in ensuring the safety and quality of dairy products.


Head,
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Kadegaon, Dist. Sangli




Principal
B.V.M.B.S.K. Kanya Mahavidyalaya
Kadegaon, Dist. Sangli



Estd. 1962
"A++" Accredited by
NAAC (2021)
With CGPA 3.52

**SHIVAJI UNIVERSITY, KOLHAPUR - 416 004,
MAHARASHTRA**
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आजीवन अध्ययन व विस्तार विभाग, शिवाजी विद्यापीठ, कोल्हापूर
DEPARTMENT OF LIFELONG LEARNING AND EXTENSION

Prof. (Dr.) R. G. Pawar, MCA, Ph.D.

Director

प्रा. (डॉ.) आर. जी. पवार एम सी. ए., पी.एच.डी.

संचालक



एसयु/डीएलएलई/२०२२/३८

दि. १३/११/२०२२

प्रति,

मा.प्राचार्य/संचालक,

- | |
|---|
| १. श्रीपतराव चौगुले कला व विज्ञान महाविद्यालय, माळवाडी - कोतली, |
| २. मातोश्री बयाबाई श्रीपतराव कदम कन्या महाविद्यालय, कडेगाव |

विषय :- मिल्क मायकोबायोलॉजी अभ्यासक्रम (३ महिने कालावधी) सुरु करण्याबाबत...

महोदय/महोदया,

आपण मागणी केल्याप्रमाणे आजीवन अध्ययन व विस्तार विभागामार्फत आपणास **मिल्क मायकोबायोलॉजी अभ्यासक्रम (३ महिने कालावधी) अभ्यासक्रम** सुरु करण्यास मान्यता देण्यात आली आहे. तरी खालील बाबींची व सोबत जोडलेल्या सूचनांनुसार पूर्तता करून हा वर्ग सुरु करण्याबाबत कार्यवाही सुरु करावी.

- ही मान्यत फक्त शैक्षणिक वर्ष सन २०२२-२३ करीता आहे.
- हा वर्ग नोव्हेंबर, २०२२ मध्ये सुरु होणे आवश्यक आहे.
- अभ्यासक्रमाचा कालावधी हा नोव्हेंबर, २०२२ ते फेब्रुवारी, २०२३ या कालावधीमध्येच आयोजित करण्यात यावा. तसेच या अभ्यासक्रमाची परीक्षा फेब्रुवारी, २०२३ मध्ये घेण्यात येईल.
- या अभ्यासक्रमाचे शैक्षणिक शुल्क व इतर शुल्क खालीलप्रमाणे जमा करून घेण्यात यावे.

शैक्षणिक शुल्क	२०% प्रमाणे विभागामध्ये भरावयाचे शुल्क	प्रवेश शुल्क	माजी विद्यार्थी शुल्क
रु. ५००/-	रु. १००/-	रु. २५/-	रु. २५/-

- उपरोक्त शुल्क मा. वित्त व लेखाधिकारी, शिवाजी विद्यापीठ, कोल्हापूर यांच्या नावे डी. डी. काढून अथवा शिवाजी विद्यापीठाच्या बँक खात्यावर दि. ३० नोव्हेंबर, २०२२ पर्यंत भरून विभागात त्याचे चलन जमा करावे.

निरंतर शिक्षण अभ्यासक्रमाकरीता विद्यार्थ्यांना प्रवेशाकरीता कोणतीही सक्ती न करता ऐच्छिक स्वरूपात प्रवेश दयावा. आपण दिलेल्या सहकार्याबद्दल आभारी आहे आणि यापुढेही आपला सततचा सहभाग मिळावा. ही अपेक्षा.

कळावे,

आपला विश्वासू,

(प्रा. डॉ. आर. जी. पवार)

संचालक

- सोबत :- १ अभ्यासक्रम सुरु करण्याबाबतच्या महत्वाच्या सूचना
२ अभ्यासक्रम सुरु करावयाच्या पत्राचा नमुना
३ प्रवर्ग नमुना तक्ता
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SHIVAJI UNIVERSITY KOLHAPUR
DEPARTMENT OF LIFELONG LEARNING & EXTENTION
STUDENT DATA

Academic Year: 2022-23


Name of Course: Milk Microbiology **Period: From February 2023 to April 2023**


Name of the College: Bharati Vidyapeeth's, Matoshri Bayabai Shripatrao Kadam Kanya Mahavidyalaya Kadgaon. Dist. Sangli.

Apln No.	Name & Address	Qualification	Caste Religion	Admit. Fee	Alumni Fee	Tuition Fee	Total
1.	Gharge Komal Tanaji At Post. Upale Mayani	B.Sc. III Microbiology (Appear)	Open Hindu Maratha	25	25	100	150
2.	Gharge Tanuja Rajendra At Post. Upale Mayani	"	Open Hindu Maratha	25	25	100	150
3.	Jagtap Kajal Sambhaji At Post. Hungangaon Bk.	"	Open Hindu Maratha	25	25	100	150
4.	Kadam Prajakta Dilip At Post. Hungangaon Bk.	"	Open Hindu Maratha	25	25	100	150
5.	Kadam Sanika Dattatray At Post. Hungangaon Bk.	"	Open Hindu Maratha	25	25	100	150
6.	Kokare Tejaswi Vasant At Post. Hanmantvadiye	"	NT C Hindu Dhangar	25	25	100	150
7.	Mane Nikita Aananda At Post. Ambegaon	"	Open Hindu Maratha	25	25	100	150
8.	More Laxmi Dhanaji At Post. Aamrapur	"	Open Hindu Maratha	25	25	100	150
9.	More Shruti Sayajirao At Post. Aamrapur	"	Open Hindu Maratha	25	25	100	150
10.	Mulani Lubna Harun At Post. Kadepur	"	OBC Muslim	25	25	100	150
11.	Patil Durga Arvind At Post. Shivajinagar	"	Open Hindu Maratha	25	25	100	150
12.	Patole Ashwini Babaso At Post. Chnchani	"	VJ A Hindu Ramoshi	25	25	100	150
13.	Pawar Nisha Shivaji At Post. Shivani	"	OBC Hindu Lohar	25	25	100	150
14.	Pawar Sanyogita Prakash At Post. Shivani	"	Open Hindu Maratha	25	25	100	150
15.	Pisal Pratiksha Ambadas At Post. Chorade, Khatav	"	Open Hindu Maratha	25	25	100	150
16.	Salunkhe Samruddhi Dipak At Post. Upale Wangi	"	Open Hindu Maratha	25	25	100	150
			Total	400	400	1600	2400

Student Data

S.C.	S.T.	VJ NT	NT B	NT C	NT D	OBC	Open	Total
-	-	01	-	01	-	02	12	16


Mr. S. S. Shinde
 Co-ordinator
 Milk Microbiology


 (Dr. V. Y. Kadam)
 i/c. Principal
 B.V.M.B.S.K. Kanya Mahavidyalaya,
 Kadgaon, Dist. Sangli

Shivaji University, Kolhapur
Department of Lifelong Learning & Extension
Milk Microbiology
Theory Examination – April 2023

Date:

Time:

Marks: 50

Instructions: i) All Questions are compulsory. ii) Figures to the right indicate full marks.

1 Rewrite the following sentences by selecting the correct answer from the given alternatives.

(10)

- a) Pure milk has density of
- i) 2.0 to 3.0 ii) 0.5 to 1.0 iii) 1.026 to 1.032 iv) 1.5 to 2.0
- b) Milk sample can be preserved with chemical like.....
- i) starch ii) ammonia iii) soap iv) potassium dichromate
- c) Dilution of methylene blue used in MBRT test is.....
- i) 1: 25 ii) 1: 250 iii) 1: 2500 iv) 1: 250000
- d) Average percentage of casein in milk is.....
- i) 2.5 ii) 0.0 iii) 5.0 iv) 0.5
- e)acid is produced during curd formation.
- i) lactic ii) pyruvic iii) citric iv) acetic
- f) Gerber's method is used to determine..... content of milk.
- i) sugar ii) fat iii) protein iv) water
- g) The most heat resistant pathogen likely to be found in milk is.....
- i) *E. coli* ii) *Coxiella burnetii* iii) *S. aureus* iv) *B. subtilis*
- h) The process of pasteurization was discovered by.....
- i) Robert Hook ii) Louis Pasteur iii) Robert Koch iv) H.G Khurana
- i) The yellow colour of milk is due to.....
- i) carotene ii) fat iii) chlorophyll iv) lactose
- j) The common sugar present in milk is.....
- i) sucrose ii) lactose iii) fructose iv) glucose

2. Attempt any TWO.

(20)

- a) Explain in brief sources of contamination of milk.
- b) What is a milk quality control? Explain in details, any two tests used to determine bacteriological quality of milk .
- c) What is pasteurization? Explain in details the process of pasteurization of milk.

3. Write short notes on any FOUR.

(20)

- a) Preservation of milk samples for different tests. b) Ripeness of milk
- c) Alcohol test d) Efficiency of Pasteurization
- e) Curdling of milk f) Organoleptic test.

Shivaji University, Kolhapur
Department of Lifelong Learning & Extension
Milk Microbiology
Theory Examination – April 2023

Date:

Time:

Marks: 50

Instructions: i) All Questions are compulsory. ii) Figures to the right indicate full marks.

1. Rewrite the following sentences by selecting the correct answer from the given alternatives. (10)

- a) Gerber's method is used to determine..... content of milk.
i) sugar ii) fat iii) protein iv) water
- b) Chemical used for the pasteurization of milk sample is.....
i) starch ii) ammonia iii) soap iv) potassium dichromate
- c) The most heat resistant pathogen likely to be found in milk is.....
i) *E. coli* ii) *Coxiella burnetii* iii) *S. aureus* iv) *B. subtilis*
- d) acid is produced during cured formation.
i) lactic ii) pyruvic iii) citric iv) acetic
- e) Dilution of methylene blue used in MBRT test is.....
i) 1: 25 ii) 1: 250 iii) 1: 2500 iv) 1: 250000
- f) temperature used for process of pasteurization.
i) 62.8°C ii) 50°C iii) 58.2°C iv) 75°C
- g) The common sugar present in milk is.....
i) sucrose ii) lactose iii) fructose iv) glucose
- h) The yellow colour of milk is due to.....
i) carotene ii) fat iii) chlorophyll iv) lactose
- i) test is used to check the efficiency of pasteurization of milk.
i) MBRT ii) Resazurin iii) Saffranin iv) phosphatase
- j) A rapid fermentation of lactose in milk is called fermentation.
i) Fast ii) Enhanced iii) Stormy iv) None of these

2. Attempt any TWO

(20)

- a. Define pasteurization. Explain in detail objectives and method of pasteurization.
- b. Describe in detail microbiological spoilage of milk.
- c. What is a milk quality control? Explain in details any two tests used to determine bacteriological quality of milk.

3. Write short notes on any four

(20)

- a. Phosphatase test b. Laminar air flow cabinet
- c. Milk ropiness d. SPC of milk
- e. Clot on boiling f. Milk products



SHIVAJI UNIVERSITY, KOLHAPUR
Department of Lifelong Learning and Extension
RESULT SHEET

Center Name :- Matoshri Bayabai Shripatrao Kadam Kanya Mahavidyalay, Kadegaon Name of the Course : Milk Microbiology
 Exam Month :- March, 2023 Period : November, 2022 to March, 2023

Seat No.	Name	Max.	Paper I	Paper II	Grand Total	Percentage	Grade	REMARKS	Statement of Marks	Certificate No.
			Theory	Practical						
		50	50	100						
		Min.	17	17	35					
1	Gharge Komal Tanaji ✓	40	45	85	85.00	A+	Pass	1		
2	Gharge Tanuja Rajendra ✓	44	47	91	91.00	A+	Pass	2		
3	Jagtap Kajal Sambhaji ✓	45	44	89	89.00	A+	Pass	3		
4	Kadam Prajakta Dilip ✓	37	40	77	77.00	A+	Pass	4		
5	Kadam Sanika Dattatray ✓	43	45	88	88.00	A+	Pass	5		
6	Kokare Tejasvi Vasant ✓	43	46	89	89.00	A+	Pass	6		
7	Mane Nikita Ananda ✓	44	47	91	91.00	A+	Pass	7		
8	More Laxmi Dhanaji ✓	42	45	87	87.00	A+	Pass	8		
9	More Shruti Sayajirao ✓	42	45	87	87.00	A+	Pass	9		
10	Mulani Lubna Harun ✓	41	47	88	88.00	A+	Pass	10		
11	Patil Durga Arvind ✓	42	45	87	87.00	A+	Pass	11		
12	Patole Ashwini Babasaheb ✓	40	42	82	82.00	A+	Pass	12		
13	Pawar Nisha Shivaji ✓	41	45	86	86.00	A+	Pass	13		
14	Pawar Sanyogita Prakash ✓	36	42	78	78.00	A+	Pass	14		
15	Pisal Pratiksha Ambadas ✓	41	44	85	85.00	A+	Pass	15		
16	Salunkhe Samruddhi Dipak ✓	39	42	81	81.00	A+	Pass	16		

In Grade A+	In Grade A	In Grade B	In Grade C
16	-	-	-

1) Result Checked by

a) Read by : 
 b) Seen by : 

1. Grade 'A+' Indicates 70% & above
2. Grade 'A' Indicates above 60% upto 69.99%
3. Grade 'B' Indicates above 45% upto 59.99%
4. Grade 'C' Indicates above 35% upto 44.99%

3) Result Declared On : 24/04/2023


 ASSISTANT PROFESSOR
 Department of Lifelong Learning and Extension
 SHIVAJI UNIVERSITY, KOLHAPUR

	Male	Female	Total
No. of Candidate Registered	-	16	16
No. of Candidate Appered	-	16	
No. of Candidate Absent	-	-	
No. of Candidate Passed	-	16	


 DIRECTOR
 Department of Lifelong Learning and Extension
 SHIVAJI UNIVERSITY, KOLHAPUR