Date: 27/02/2019

To,
The Principal
K. K. Wagh College of Agriculture,
Nashik

Subject Regarding permission for Certificate Course.....

Respected Sir,

On behalf of the Department of AHDS, we humbly request permission to initiate a Certificate course titled **Manufacturing of Indigenous Milk Products Technology** '. This course is scheduled from 11/03/2019 to 16/03/2019 and will involve approximately 19 final-year students. It is anticipated that this course will greatly benefit our students in enhancing their knowledge about advance technique and manufacturing of Milk and Milk Products. We kindly ask for your approval for the implementation of this course.

Thanking You,

Yours faithfully,

Course Coordinator



K. K. Wagh Education Society's

K. K. Wagh College of Agriculture,
(Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra
College Code; 11135

AISHE Code: C-50690

🕿.:(0253)2555221, 255522 🖲 - principal-bscagri@kkwagh.edu.in thtps://agri-bsc.kkwagh.edu.in

Certificate course in

"Manufacturing of Indigenous Milk Products Technology"

Academic Year 2019-20

Syllabus Committee

Sr	Name of Teacher	Designation	Department	Role in course
no			- spartment	Role in course
1	Dr.K.D.More	Assistant Professor	AHDS	Course coordinator
2	Prof. N.G.Devshete	Assistant Professor	AHDS	Committee member
3	Prof. J.Y.Mote	Assistant Professor	AHDS	Committee member
4	Prof. S.D.Kale	Assistant Professor	Agril Economics	Committee member
5	Prof. P.V.Shinde	Assistant Professor	SSAC	Committee member

Course Coordinator

NASHIK-3) OF WASHIK-3



K. K. Wagh College of Agriculture,

(Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code;11135

AISHE Code: C-50690

🛣.:(0253)2555221, 255522 🚇 - principal-bscagri@kkwagh.edu.in (##)https://agri-bsc.kkwagh.edu.in

Date: 08/03/2019

Academic Year 2019-20 Department of Animal Husbandry and Dairy Science Minutes of the Board of Studies Meeting for the Short-Term Certificate

Course

A meeting of the Board of Studies for the Short-term Certificate Course in "Manufacturing of Indigenous Milk Products Technology" was convened on 8 March 2019, at 12:00 PM in the Department of AHDS. The meeting was attended by the following Syllabus Design Committee members:

Sr no	Name of the expert	Designation	Sign
1	Dr. S. M. Hadole	Principal	M
2	Dr.K.D.More	Course Coordinator	golding:
3	Prof. N.G.Devshete	Member	Qu'
4	Prof. J.Y.Mote	Member	Mis
5	Prof. S.D.Kale	Member	(Society.
6	Prof. P.V.Shinde	Member	The film

Minutes of Meeting

The Board of Studies convened a meeting on 8 March 2019, at 12:00 PM in the Department of AHDS to address various aspects concerning the Short-Term Certificate Course in "Manufacturing of Indigenous Milk Products Technology". The meeting focused on the following key points:

- 1. Syllabus Formation: Members deliberated on developing a syllabus that emphasizes on relevant knowledge and skills in Processing of milk products.
- 2. Dissemination of Work: Strategies for effectively teaching Processing of milk products were discussed to aid students in the course.
- 3. Encouragement of Students: The meeting stressed the importance of offering guidance and motivation to students. Discussing advancements or strategies related to manufacturing indigenous milk products technology. This could involve various aspects such as production techniques, equipment, quality control, market strategies, or innovations in the dairy industry.
- 4. Examination of Short-Term Course: The examination structure and assessment methods for the short-term course were reviewed. The board explored ways to ensure fair and comprehensive evaluations that accurately assess students'

The meeting concluded with a commitment to refine the course and its delivery methods to better meet the needs of students enrolled in the Certificate Course in "Manufacturing of Indigenous Milk Products Technology".



K. K. Wagh College of Agriculture,

(Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code;11135

AISHE Code: C-50690

盃.:(0253)2555221, 255522 ^個 - <u>principal-bscagri@kkwagh.edu.in</u> https://agri-bsc.kkwagh.edu.in

Department of Animal Husbandry and Dairy Science Certificate course in "Manufacturing of Indigenous Milk Products Technology" Academic Year 2019-20

Syllabus Outcomes:

- 1. Comprehensive Understanding of Dairy Processing.
- 2. Proficiency in Dairy Product Manufacturing.
- 3. Knowledge of Dairy Chemistry and Microbiology.
- 4. Quality Control and Assurance Skills.
- 5. Awareness of Dairy Packaging and Distribution.
- 6. Competence in Dairy Plant Management.
- 7. Understanding of Regulatory Compliance and Food Safety
- Application of Technological Innovations 8.
- Problem-Solving and Troubleshooting Skills

Sr	Topic	Description	No of
no		~ escription	No of
1	Introduction to Indigenous Milk Products Technology	Overview of traditional milk products, Importance of indigenous milk products in different cultures and Historical background and cultural significance.	Lectures 03 hours
2	Basic Principles of Milk Processing	Composition and properties of milk Unit operations in milk processing, Handling and storage of raw milk	03 hours
3	Yogurt and Fermented Milk Products	Production methods for yogurt Types of yogurt cultures and their characteristics Fermented milk products (e.g., kefir, buttermilk)	03 hours
4	Butter and Ghee Production	Butter production techniques (churning, continuous butter making) Clarification and production of ghee Quality parameters and storage considerations.	03 hours
5	Sweetened Milk Products	Production of traditional sweetened milk products (e.g., condensed milk, evaporated milk) Processing techniques and applications	03 hours
6	Indigenous Milk Desserts	Preparation methods for milk-based desserts (e.g., rice pudding, kheer, flan) Flavorings, spices, and variations in different cultures	03 hours



K. K. Wagh College of Agriculture, (Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code;11135

AISHE Code: C-50690

🛣.:(0253)2555221, 255522 🖲 - principal-bscagri@kkwagh.edu.in

7	Quality Control and Food	Quality parameters for indigenous milk products	06 hours
	Safety	Good manufacturing practices (GMP) and hygiene	33 1134113
		standards	
		Hazard Analysis and Critical Control Points	
0		(HACCP) principles	
8	Marketing and	Market trends and consumer preferences for	03 hours
	Commercialization	indigenous milk products	
		Packaging, branding, and distribution strategies	
		Entrepreneurial opportunities in the indigenous	
		milk products sector	
)	Practical Sessions and	Hands-on training in the production of indigenous	03 hours
	Demonstrations	milk products	os nours
		Laboratory exercises, demonstrations, and sensory	
		evaluations	
		Total	30 hours

(Dr. K.D. Money



K. K. Wagh Education Society's K. K. Wagh College of Agriculture,

(Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code;11135

AISHE Code: C-50690

爺.:(0253)2555221, 255522 ^⑤ - <u>principal-bscagri@kkwagh.edu.in</u> https://agri-bsc.kkwagh.edu.in

Certificate course in "Manufacturing of Indigenous Milk Products Technology" Academic Year 2019-20

Examination Methodology

Sr no	Nature of exam	Marks
1	Written	30
2	Practical	20
3	Total	50

(Dr. KDMore)



K. K. Wagh Education Society's

K. K. Wagh College of Agriculture,
(Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code; 11135

AISHE Code: C-50690

爺.:(0253)2555221, 255522 ^⑤ - <u>principal-bscagri@kkwagh.edu.in</u> https://agri-bsc.kkwagh.edu.in

Date:04/03/2019

Student Notice

All the students of B. Sc. (Hons.) Agriculture final year are informed that for the academic year 2019-20 the Certificate Course on "Manufacturing of Indigenous Milk Products Technology" is starting from 11/03/2019 to 16/03/2019. For this certificate course students should submit their names to the Certificate Course Coordinator Assistant Prof. J.Y. Mote up to 08/03/2019.

Duration: 30 Hrs. 11/03/2019 to 16/03/2019

Time: Morning Session: 10.00 am to 1.00 pm

Afternoon session: 2.00pm to 5.00 pm

Note: This course is free of cost to all students.

Course Coordinator

NASHIK-3



K. K. Wagh Education Society's

K. K. Wagh College of Agriculture,
(Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code; 11135

AISHE Code: C-50690

:(0253)2555221, 255522 - principal-bscagri@kkwagh.edu.in https://agri-bsc.kkwagh.edu.in

STUDENT REGISTRATION FORM

Academic Year: 2019-20 (Department of AHDS)

Affix recent passport size photograph (colour)

CERTIFICATE COURSE Manufacturing of Indigenous Milk Products Technology

For Department Use Only						
Registration No.: Student ID:						
Name of the Student:		 	 			
Mother's Name:						
Father's Name:						
E-Mail ID:		 	 			
Address:						
State:PIN Code:		 	 			
Mobile No:Alternate contact nur						
Gender: Male Female	Other			ligior	1:	
Date of Birth:						
Educational Qualification (at the time of admission):						
HSC Other						
Signature of Student						
Place:						
Date:						



K. K. Wagh College of Agriculture, (Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code;11135

AISHE Code: C-50690

🛣.:(0253)2555221, 255522 🖲 - principal-bscagri@kkwagh.edu.in 🌐 https://agri-bsc.kkwagh.edu.in

Department of Animal Husbandry and Dairy Science

Certificate course in "Manufacturing of Indigenous Milk Products Technology" Academic Year 2019-20

Enrolled Student List

SR	REGISTRATION	NAME OF STUDENT
NO	NO	
1	AKN-2015/107	Thikekar Dnyaneshwari A
2	AKN-2015/105	Tayade Tejasvini Rajesh
3	AKN-2015/101	Suryawanshi Rajani Khemchand
4	AKN-2015/056	Kulkarni Rasika Mahesh
5	AKN/D-2016/022	Shinde Kajal Sharad
6	AKN-2015/067	Nikale Roshni Govind
7	AKN-2015/092	Sarawat Nikhil Shivaji
8	AKN-2015/046	Kanade Tanmay Ramesh
9	AKN-2015/038	Jadhav Saurabh Ramkrishna
10	AKN-2015/037	Jadhav Saurabh Haribhau
11	AKN-2015/071	Pagar Chetan Manohar
12	AKN-2015/031	Hiray Arpita Yogesh
13	AKN-2015/016	Chandsare Shantanu Sanjay
14	AKN-2013/060	Masal Mahesh Rajaram
15	AKN-2015/112	Undare Rushikesh Shankarao
16	AKN-2014/083	Patil Dinesh Ishwar
17	AKN-2014/072	Navale Nageshwar Balasaheb
18	AKN-2014/119	Watpade Amit Pundalik
19	AKN-2015/091	Salve Mayuri Dnyandeo

(DY-KDMORY)



K. K. Wagh College of Agriculture, (Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code;11135

AISHE Code: C-50690

a.:(0253)2555221, 255522 - principal-bscagri@kkwagh.edu.in https://agri-bsc.kkwagh.edu.in

Department of Animal Husbandry and Dairy Science

Certificate course in "Manufacturing of Indigenous Milk Products Technology" Academic Year 2019-20

Schedule of the course

Sr	zopie	Description	Name of the	Department
1	Introduction to Overview of traditional mi		teacher	
1	Indigenous Milk		Dr.K.D.More	AHDS
	Products Technology	products, Importance of		
	Troducts reclinology	indigenous milk products in		
		different cultures and		
		Historical background and		
		cultural significance.		
2	Basic Principles of Milk Processing	Composition and properties of milk Unit operations in milk processing, Handling and storage of raw milk	Dr.K.D.More	AHDS
3	Yogurt and Fermented	Production methods for	Prof. N.G.Devshete	AHDS
	Milk Products	yogurt		
	4	Types of yogurt cultures and		
		their characteristics		
		Fermented milk products		
4	Butter and Ghee	(e.g., kefir, buttermilk)	Prof. N.G.Devshete	ATTEC
	Production	Butter production techniques	Pioi. N.G.Devsnete	AHDS
		(churning, continuous butter		
		making) Clarification and		
		production of ghee Quality parameters and storage		
		considerations.		
5	Sweetened Milk	Production of traditional	Prof. J.Y.Mote	AHDS
	Products	sweetened milk products		
		(e.g., condensed milk,		
		evaporated milk)		
		Processing techniques and applications		
6	Indigenous Milk	Preparation methods for	Prof. J.Y.Mote	AHDS
	Desserts	milk-based desserts (e.g.,		
		rice pudding, kheer, flan)		



K. K. Wagh College of Agriculture, (Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code;11135

AISHE Code: C-50690

a.: (0253)2555221, 255522 - principal-bscagri@kkwagh.edu.in https://agri-bsc.kkwagh.edu.in

		Flavorings, spices, and		
		variations in different cultures		
7	Quality Control and Food Safety	Quality parameters for indigenous milk products Good manufacturing practices (GMP) and hygiene standards Hazard Analysis and Critical Control Points (HACCP)	Dr.K.D.More	AHDS
8	Marketing and Commercialization	principles Market trends and consumer preferences for indigenous milk products Packaging, branding, and distribution strategies Entrepreneurial opportunities in the indigenous milk products sector	Prof.S.D.Kale	Agril Economics
9	Practical Sessions and Demonstrations	Hands-on training in the production of indigenous milk products Laboratory exercises, demonstrations, and sensory evaluations	Dr.K.D.More & Prof. P.Y. Shinde	AHDS & SSAC

Course Coordinator (DV. JCD More)



K. K. Wagh College of Agriculture,

(Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code;11135

AISHE Code: C-50690

Department of Animal Husbandry and Dairy Science

Certificate course in "Manufacturing of Indigenous Milk Products Technology" Academic Year 2019-20

Time Table

Sr Date Time Table										
Sr	Date	Date Time		Topic						
no										
1	11/03/2019	10.00 am-	01.00 pm -	Introduction to Indigenous Milk Products						
		02.00 pm	05.00 pm	Technology						
2	12/03/2019	10.00 am-	01.00 pm -	Rasic Principles of Mills Process						
		02.00 pm	05.00 pm	Basic Principles of Milk Processing						
3	13/03/2019	10.00 am-	01.00 pm -	Yogurt and Fermented Milk Products						
		02.00 pm	05.00 pm							
4	14/03/2019	10.00 am-	01.00 pm -	Butter and Ghee Production and Quality						
		02.00 pm	05.00 pm	Control and Food Safety						
5	15/03/2019	10.00 am-	01.00 pm -	Sweetened Milk Products & Marketing						
		02.00 pm	05.00 pm	and Commercialization						
6	16/03/2019	10.00 am-	01.00 pm -	Indigenous Mills Descente & Durasia						
		02.00 pm	05.00 pm	Indigenous Milk Desserts & Practical Sessions and Demonstrations						

Course Coordinator (DY-X DMOW)



K. K. Wagh Education Society's K. K. Wagh College of Agriculture, (Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri) Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra College Code;11135 AISHE Code: C-50690

🕿.:(0253)2555221, 255522 🖲 - principal-bscagri@kkwagh.edu.in 🕮 https://agri-bsc.kkwagh.edu.in

Department of Animal Husbandry and Dairy Science

Certificate course in "Manufacturing of Indigenous Milk Products Technology" Academic Year 2019-20

Students Attendance Sheet

K K WAGH COLLEGE OF AGRICULTURE, NASHIK Department of AHDS

Certificate course in "Manufacturing of Indigenous Milk Products Technology"

Acade	amic	Vear	201	Q.	.2∩

Sr	Registration no	Name of students	11/03	/2019	12/0	3/2019	13/03	3/2019	14/03	3/2019	15/03/	/2019	16/03	/2019
no		Date:												
		Time:	10 00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5 00	10.00-1.00	2 00-5 00
1	AKN-2015/107	Thikekar Dnyaneshwari A	Anu-	Ami	Sent.	Aut	A	Augi	Anill	Ami	Aug.	Andi	Levi	Auni.
2	AKN-2015/105	Tayade Tejasvini Rajesh	Tayade	Payadi	Tayad	Tayade,	Payade	Tayade	Payade,	A	Payat	Tayad	Hayad!	tayade
3	AKN-2015/101	Suryawanshi Rajani Khemchand	Des Manufactor	Bridens H	A,	234Halsan	Day ade	Descripations.	Danigarine	DSUP GOOD	S S Constant	Day Son	Ozie Parker	Description:
4	AKN-2015/056	Kulkarni Rasika Mahesh	Pulkan	Rulkon	Rulkari	Rulkomi	A	Rulland	Rulkarni		Bulkari	Rulling	Rulknei	Rulensi
5	AKN/D- 2016/022	Shinde Kajal Sharad	Kehide	Kshinde	A	Kshindes	Kshinde	gyhindes	Kehinde	-Kehides	A	You saes	Kehinder	Schride
6	AKN-2015/067	Nikale Roshni Govind	RMKale	A	R. Nikale	RNIKOL	A	R. Nikale	Q. Nikolo	K.Nikale	R. Nikale	RNIEL	Q-Nisale	R.Nikay
7	AKN-2015/092	Sarawat Nikhil Shivaji	Annual	Derous	+ A	Maraud	Arone	Marau	A Storanul	Maramo	Harayust	Α	Morami	Haraus
8	AKN-2015/046	Kanade Tanmay Ramesh	Tany.	Tane.	Tance	Tame	A	Tanu.	Tane	Tanue	Tanuc	Tane.	Taren	Tanus
9	AKN-2015/038	Jadhav Saurabh Ramkrishna	And I	1	那十	purt	4	A	1	#	Per !	Bor	Ber	By
10	AKN-2015/037	Jadhav Saurabh Haribhau	Jews	Joseph	A	Jores	Jessey	Fay	Seus	Jsan	Town	Fore	Jour	Jsan
11	AKN-2015/071	Pagar Chetan Manohar	Gagar	Cowar.	Cagar.	Coagar.	Cougar.	Gazar.	Coyar.	Cagar.	Cecycir.	Conguer.	Coyar.	Cayar
12	AKN-2015/031	Hiray Arpita Yogesh	Appito.	They	Arpity.	Horal.	Hispita.	Arpity.	Appita.	Appita.	Aspity.	Ampita	A Pirat	Arpira.
13	AKN-2015/016	Chandsare Shantanu Sanjay	Alv.	6 m.	Elec.	Chris	Ā	6,12.	ENY,	Mr.	This !	8 her	A.W.	Elmit.
14	AKN-2013/060	Masal Mahesh Rajaram	Muh	. Mech :	Mein.	Muhr.	Mahr.	Meih .	A	Minn.	Marn.	Min .	Mecha.	Man.
15	AKN-2015/112	Undare Rushikesh Shankarao	Rushi	Rushi	Rushi	Rushi	Rushi	Rushi	Rushi	Rushi	Rushi	Rushi	Rushi	Rushi
16	AKN-2014/083	Patil Dinesh Ishwar	DAPEL	Dipay	Dipel	Dipol	Dipol	Dipal	Dipot	Diecet	Dipolis	Head	Dipol	Pripoers
17	AKN-2014/072	Navale Nageshwar Balasaheb	Mis.	Mu	Sur	A	Aus.	Aus.	Me	Au.	Alle	Au	Alia.	Ne
18	AKN-2014/119	Watpade Amit Pundalik	westlyn	uxosam	water.	martery.	indran.	A	watery	waster	waspert	water	water	water
19	AKN-2015/091	Salve Mayuri Dnyandeo		Salvenezó	Salvemyn	Salveneyis	A	salremayi	Salvemayi	Salvemayin	salvenagi	Salvenny		Salvemayo
			٠ انست							^		-		

Course Coordinator

(Dr. KDMore)

COLLEGE OF ACHIK-3) COLLEGE OF ACHIEVE OF AC



K. K. Wagh Education Society's K. K. Wagh College of Agriculture, (Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra AISHE Code: C-50690

College Code;11135

🛣 .: (0253)2555221, 255522 🖲 - principal-bscagri@kkwagh.edu.in @https://agri-bsc.kkwagh.edu.in

Department of Animal Husbandry and Dairy Science

Certificate course in "Manufacturing of Indigenous Milk Products Technology" Academic Year 2019-20

Exam Time Table

All enrolled students of the Certificate Course are hereby informed that for the academic year 2019-20, the Certificate Course on "Manufacturing of Indigenous Milk Products Technology" has been completed. The examination for this certificate course is scheduled to be conducted on 18/03/2019. Therefore, all students are required to be present without exception.

Note: Time Table is as follow

Sr no	Date	Time	Certificate course subject
1	18/03/2019	02:00 to 03:00 pm	Theory exam: "Manufacturing of Indigenous Milk Products Technology"
2		03:00 to 04:00 pm	Practical Exam: "Manufacturing of Indigenous Milk Products Technology"

Exam Incharge



K. K. Wagh Education Society's K. K. Wagh College of Agriculture, (Affiliated to Mahatma PhuleKrishi Vidyapeeth, Rahuri) Saraswati Nagar, Panchavati, Nashik- 422 003, Maharashtra College Code;11135 AISHE Code: C-50690

🕿.:(0263)2866221, 286622 (^{ട്ടി} - <u>principal-becagri@kkwagh.edu.in</u>@https://agri-bsc.kkwagh.edu.in

Department of Animal Husbandry and Dairy Science

Certificate course in

"Manufacturing of Indigenous Milk Products Technology"

Academic Year 2019-20

Exam Block Report

Class- Final Year Date- 18/03/2019

Subject: Theory Paper of "Manufacturing of Indigenous Milk Products Technology"

Block no: 02

SR NO	REGISTRATION NO	NAME OF STUDENT	SIGN
1	AKN-2015/107	Thikekar Dnyaneshwari A	Aml.
2	AKN-2015/105	Tayade Tejasvini Rajesh	Paya de
3	AKN-2015/101	Suryawanshi Rajani K	Wilmonehi
4	AKN-2015/056	Kulkarni Rasika Mahesh	Pulikorni
5	AKN/D-2016/022	Shinde Kajal Sharad	Kehridas.
6	AKN-2015/067	Nikale Roshni Govind	P. Nikale
7	AKN-2015/092	Sarawat Nikhil Shivaji	Maranat
8	AKN-2015/046	Kanade Tanmay Ramesh	Tank
9	AKN-2015/038	Jadhav Saurabh Ramkrishna	Avil.
10	AKN-2015/037	Jadhav Saurabh Haribhau	Trans.
11	AKN-2015/071	Pagar Chetan Manohar	Gagen.
12	AKN-2015/031	Hiray Arpita Yogesh	Arpiralian
13	AKN-2015/016	Chandsare Shantanu Sanjay	Allu
14	AKN-2013/060	Masal Mahesh Rajaram	Muhre
15	AKN-2015/112	Undare Rushikesh Shankarao	Rushi
16	AKN-2014/083	Patil Dinesh Ishwar	Dipali.
17	AKN-2014/072	Navale Nageshwar Balasaheb	Dun.
18	AKN-2014/119	Watpade Amit Pundalik	watpally.
19	AKN-2015/091	Salve Mayuri Dnyandeo	Salvemayors

Total no of student:

No of student present: No of students absent:

Name and Sign of Jr. Supervisor

Name and Sigh of Sr. Supervisor



K. K. Wagh College of Agriculture,

(Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code; 11135 AISHE Code: C-50690

a.:(0253)2555221, 255522 - principal-bscagri@kkwagh.edu.in https://agri-bsc.kkwagh.edu.in

Department of Animal Husbandry and Dairy Science

Certificate course in

"Manufacturing of Indigenous Milk Products Technology"

Academic Year 2019-20

Student Result

Sr. No.	Registration no	Name of the students	Theory marks (30)	Practical Marks (20)	Mark Out of Total 50
1	AKN-2015/107	Thikekar Dnyaneshwari A	22	17	39
2	AKN-2015/105	Tayade Tejasvini R	16	16	32
3	AKN-2015/101	Suryawanshi Rajani K	20	14	34
4	AKN-2015/056	Kulkarni Rasika M	23	15	38
5	AKN/D-2016/022	Shinde Kajal S	23	13	36
6	AKN-2015/067	Nikale Roshni G	22	13	35
7	AKN-2015/092	Sarawat Nikhil Shivaji	21	14	35
8	AKN-2015/046	Kanade Tanmay Ramesh	19	15	34
9	AKN-2015/038	Jadhav Saurabh R	22	16	38
10	AKN-2015/037	Jadhav Saurabh Haribhau	19	16	35
11	AKN-2015/071	Pagar Chetan Manohar	19	15	34
12	AKN-2015/031	Hiray Arpita Yogesh	17	17	34
13	AKN-2015/016	Chandsare Shantanu Sanjay	22	16	38
14	AKN-2013/060	Masal Mahesh Rajaram	20	15	35
15	AKN-2015/112	Undare Rushikesh S	24	17	41
16	AKN-2014/083	Patil Dinesh Ishwar	19	17	36
17	AKN-2014/072	Navale Nageshwar B	17	14	31
18	AKN-2014/119	Watpade Amit Pundalik	22	13	35
19	AKN-2015/091	Salve Mayuri Dnyandeo	20	19	34

Course Coordinator
(DNKDM ON)



K. K. Wagh College of Agriculture, Nashik Department of Animal Husbandry & Dairy Science Certificate course in Manufacturing of Indigenous Milk Products Technology

Academic Year 2019-20

THEORY EXAMINATION

Classi	EXMINITIATION	
Class:	Semester:	
Day & Date:	Time:	
Subject:	Marks:	
Name of student:	Registration no:	
Mu	Iltiple Choice Questions	
1. Which enzyme is tested for cream	pasteurization?	
a) Plasmin	1.) D1 1 .	

1. Which enzyme is tested for cream pasteurizat	ion?			
a) Plasmin b) Phosphatas				
c) Catalase	d) peroxidase			
2. Milk is a good source of all water-soluble vitamins except for				
a) Cyanocobalmin	b) Riboflavin			
c) Ascorbic Acid	d) Thiamine			
	easily digested by those with a sensitive digestive			
system.	easily digested by those with a sensitive digestive			
a) Ionization	b) Evaporation			
c) Pasteurization	d) Homogenization			
4. Milk contains 87 % water and the rest is solid	s and fats. Which of the following is not included as			
milk solid?	s and fats. Which of the following is not included as			
a) Protein b) Water				
c) Carbohydrate	d) Milk Fat			
5. What is the application of any effective method or substance to a clean surface for destruction of				
pathogen is called?	of substance to a clean surface for destruction of			
a) Pasteurization	b) High Temperature Treatment			
c) Sanitization	d) Cleaning			
6. The process of raising or lowering the percent of fat in milk or cream to a desired standard is called?				
a) Enrichment	b) Fortification			
c) Standardization	d) None of these			
7. The process to increase in volume caused by whipping air into the ice cream mix during freezing is				
called?	an into the ice cream mix during freezing is			
a) Homogenization	b) Aging			
c) Overrun	d) Hardening			
8. Reagent used for determination of cane sugar adulteration in milk is				
b) Resorcinol b) Amyl alcohol				
c) Ethyl alcohol	d) None of those			
9. Adulteration of water in milk can be detected	quickly by			
a) Lactometer	neter b) Kjeldhal method			
c) Centrifugal	d) None of these			
10. The natural acidity of milk ranges between				
a) 0.13-0.15% b) 0.05-0.10%				
	0) 0.00 0.10/0			

	15 0 01 0 0504			
e) 0.25-0.50%	d) 0.21-0.25%			
11. Milk spoilage results in				
a) Increase in PH	b) Decrease in PH			
c) PH remain constant	d) All the above			
12. Principal protein in milk is				
) Albumin b) Lactalbumin				
c) Casein	d) Lactoglobulin			
13. Example of soft cheese is				
a) Cheddar	b) Swiss			
c) Brick	d) Cottage			
14. Whey is the by-product in the manufacture of	f			
a) Skimmed milk	b) Butter			
c) Cheese	d) Yogurt			
15. Emulsifiers are used in the manufacture of				
a) Ice cream	b) Paneer			
c) Khoa	d) Yogurt			
16. The alkaline solution of Annatto is used in	for colour?			
a) Cheese	b) Ghee			
c) Yogurt	d) Butter			
17. In khoa making when mass reaches at the pa	sty consistency the stage is known as			
a) Dough	b) Crystal			
c) Milky	d) Liquid			
18. Overrun in ice cream is due to?				
a) Moisture	b) Solid			
c) Air	d) None of these			
19is used as base material for preparation				
a) Chakka	b) Dahi			
c) Lassi	d) Yoghurt			
20. Salting is taking place in?	1			
a) Butter	b) Khoa			
c) Lassi	d) Milk Shake			
21.In clarified ghee containsmilk fat?	1			
a) 90.5% milk fat	b) 95.5% milk fat			
c) 92.5% milk fat	d) 99.9% milk fat			
22. Speed required for Gerber's centrifuge mach	nine?			
a) 1000 rpm b) 1100 rpm				
c) 2010 rpm d) 2200 rpm				
23. Which of the following test is used to test he	eat stability of milk for processing?			
a) Resazurin test	b) Alcohol test			
c) COB test d) Sediment test				
24. Refers to milk prepared by dispersing whole	e milk powder in water?			
a) Reconstituted milk	b) Recombined milk			
c) Standardized milk. d) Toned milk.				
25is a lactic acid alcohol fermented mi	25is a lactic acid alcohol fermented milk originated in Russia?			
a) Bulgarian butter milk	b) Kefir			

c) Kumiss	d) Khoa		
26. Which of following Bacteria is responsible fo	or Conversion of milk into Acidophilus milk		
a) Lactobacillus acidophilus	b) Streptococcus thermophilus		
c) Lactococci	d) Lactobacillus bulgaricus		
27. Ice cream should contain minimum fat	and total sugar?		
a) 20 % fat and 40 % total sugar.			
c) 10 % fat and 15 % total sugar.	c) 10 % fat and 15 % total sugar. d) 10 % fat and 20 % total sugar.		
28. The cream, having the highest 'clumping abi	lity', is generally obtained from		
a) Gravity separated cream			
c) Both (a) and (b)	d) None of these		
29. What is the principal carbohydrate in the mi	lks of all mammals?		
a) Lactose	b) Glucose		
Sucrose d) Fructose			
30. Reagent used for detection of starch adulteration in milk is			
a) Iodine solution	b) Silver nitrate		
c) Sulphuric acid	d) Hydrochloric acid		

Answer key

1 Hiswel Rey	
1. d) peroxidase	20. a) Butter
2. c) Ascorbic Acid	21. d) 99.9% milk fat
3. d) Homogenization	22. b) 1100 rpm
4. b) Water	23. c) COB test
5. c) Sanitization	24. a) Reconstituted milk
6. c) Standardization	25. c) Kumiss
7. b) Aging	26. a) Lactobacillus acidophilus
8. a) Resorcinol	27. c) 10 % fat and 15 % total sugar.
9. a) Lactometer	28. a) Gravity separated cream
10. a) 0.13-0.15%	29. a) Lactose
11. b) Decrease in PH	30. a) Iodine solution
12. c) Casein	
13. d) Cottage	
14. c) Cheese	
15. a) Ice cream	
16. d) Butter	
17. a) Dough	
18. c) Air	
19. a) Chakka	



K. K. Wagh Education Society's K. K. Wagh College of Agriculture,

(Affiliated to Mahatma Phule Krishi Vidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code;11135

AISHE Code: C-50690

🛣.:(0253)2555221, 255522 💆 - principal-bscagri@kkwagh.edu.in 🌐 https://agri-bsc.kkwagh.edu.in

STUDENT REGISTRATION FORM

Academic Year: 2019-20 (Department of AHDS)

CERTIFICATE COURSE

"Manufacturing of Indigenous Milk Products Technology"

For Department Use Only
Registration No. : $A\mu\nu - 2015 / 016$ Student ID: 615621322
Name of the Student: CHands are Shontony Sanjay
Mother's Name: Milima Sanjay Chards are Father's Name: Sanjay pandwang Chards are year: 1st /2nd /3rd/4th
Father's Name: San Jay pandwang Chandsoney ear: 1st /2nd /3rd/4th
E-Mail ID: Schenollere 05@9mail. Om
Address: Ray 409 Burglow, Mumbai, Alpa Rosa, Taulke, Ohindon
State: Mahareshtra PIN Code:
Mobile No: 9.503635082 Alternate contact number: 9823077 340
Gender: Male Other Religion: HINDO
Date of Birth: $0.6/0.6/199.7$
Educational Qualification (at the time of admission):
HSC (12th) Other
Signature of Student
Place: Noshih
Place: Noshih Date: 07/03/2019



K. K. Wagh Education Society's

K. K. Wagh College of Agriculture,
(Affiliated to Mahatma Phule Krishi Vidyapeeth. Rahuri)
Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra
College Code;11135

AISHE Code: C-50690

1 - principal-bscagri@kkwagh.edu.in ⊕ https://agri-bsc.kkwagh.edu.in

STUDENT REGISTRATION FORM

Academic Year: 2019-20 (Department of AHDS)

CERTIFICATE COURSE

"Manufacturing of Indigenous Milk Products Technology"

For Department Use Only
Registration No. : AKN-2015/101
Name of the Student: Rajani khemehand syryawanshi
Mother's Name: Sangita
Father's Name: Khemchand Year: 1st /2nd /3rd/4th
E-Mail ID: Syryawanahirajani 124@gmail.com
Address: Matoshni Nagar, shahada
State: Maharashtra PIN Code: 425403
Mobile No: 9130345038 Alternate contact number: 9420375098
Gender: Male Female Other Religion: Hindu
Educational Qualification (at the time of admission):
HSCOther
Signature of Student
Place: KKWCDA, N ash) K Date: 07/3/2019 ONEGE OF THE STREET OF THE STR



K. K. Wagh Education Society's

K. K. Wagh College of Agriculture,
(Affiliated to Mahatma Phule Krishi Vidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code; 11135

AISHE Code: C-50690

🛣 :(0253)2555221, 255522 🖲 - principal-bscagri@kkwagh.edu.in (https://agri-bsc.kkwagh.edu.in

STUDENT REGISTRATION FORM

Academic Year: 2019-20 (Department of AHDS)

CERTIFICATE COURSE

"Manufacturing of Indigenous Milk Products Technology"

For Department Ose Only
Registration No. : AKN - 2015 / 112 Student ID: 0615021015
Name of the Student: Ondare Rushikesh Shankarao
Mother's Name: Undare Suresha Shankar
Father's Name: Undare Shankar Dada Saheb Year: 1st /2nd /3rd/4th
E-Mail ID: xushikeshundare 6.787 Qqnail.com
Address: Flat No9B, Saptarshi appt Megal nagor, nashik
State: Maharashka PIN Code: 4.22008
Mobile No:814.J.50.J.5. Alternate contact number:J.J.21.403J.J4
Gender: Male V Pemale Other Religion: Hindu
Date of Birth: 30-07-1997
Educational Qualification (at the time of admission):
HSC passed Other -
Signature of Student
Place: Nashik-3)
Date: 7/3/2014

K. K. Wagh College of Agriculture, Nashik
Department of Animal Husbandry & Dairy Science
Certificate course in Manufacturing of Indigenous Milk Products Technology



Academic Year 2019-20

THEORY	EXAN	IINA	TION
--------	------	-------------	------

Class:	final (fourth) BSC. Agri.	Semester:	8th (1774)
Day & Date:	18/3/2019	Time:	0 0 0
Subject:	AHDS		2-3 pm
Name of student:	71125	Marks:	30 '
rvaine of student.	Kulkarni Rasika Mahesh	Registration no:	AKN-2015/056
			11.1.11

Multiple Choice Questions

a) Plasmin c) Catalase 2. Milk is a good source of all water-soluble vitamins except for a) Cyanocobalmin	b) Phosphatas			
2 Milk is a good source of all water-soluble vitamins except for a) Cyanocobalmin	186 - 1			
a) Cyanocobaimin	(A) peroxidase			
a) Cyanocobaimin	2. Milk is a good source of all water-soluble vitaming execut for			
	a) Cyanocobalmin			
\c) Ascorbic Acid	b) Riboflavin			
is a milk process that makes milk more easily digested by those with a sensitive digestive system.				
c) Pasteurization	b) Evaporation			
4. Milk contains 87% water and the root is called and fix While Contains 87% water and the root is called and the root is calle				
4. Milk contains 87 % water and the rest is solids and fats. Which of the following is not included as milk solid?				
c) Carbohydrate	b) Water			
5 What is the application of any official and a	્ને) Milk Fat			
5 What is the application of any effective method or substance to a) Pasteurization	o a clean surface for destruction of pathogen is called?			
Sanitization	b) High Temperature Treatment			
6. The process of raising on lawying of	d) Cleaning			
6. The process of raising or lowering the percent of fat in milk or cream to a desired standard is called? a) Enrichment				
(a) Standardization	b) Fortification			
7. The process to invest in the second secon	d) None of these			
7. The process to increase in volume caused by whipping air into A Homogenization	the ice cream mix during freezing is called?			
c) Overrun	b) Aging			
	d) Hardening			
8. Reagent used for determination of cane sugar adulteration in milk is				
c) Ethyl alcohol	b) Amyl alcohol			
	d) None of these			
9. Adulteration of water in milk can be detected quickly by				
	b) Kjeldhal method			
c) Centrifugal	d) None of these			
10. The natural acidity of milk ranges between				
a) 0.13-0.15%	(b) 0.05-0.10%			
c) 0.25-0.50%	d) 0.21-0.25%			
11. Milk spoilage results in				
a) Increase in PH	b) Decrease in PH			
c) PH remain constant	d) All the above			
12. Principal protein in milk is				
a) Albumin	b) Lactalbumin			
e) Casein	d) Lactoglobulin			
13. Example of soft cheese is	,			
a) Cheddar	b) Swiss			
c) Brick	d) Cottage			
	1 - 1 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			

	14. Whey is the by-product in the manufacture of				
1	a) Skimmed milk	b) Butter			
	c) Cheese	d) Vogurt			
	15. Emulsifiers are used in the manufacture ofproduct?				
1	(a) Ice cream	b) Paneer			
	c) Khoa	d) Yogurt			
. \	16. The alkaline solution of Annatto is used infor colour?	1) 105			
1	a) Cheese	b) Ghee			
	c) Yogurt	de Rutter			
00	17. In khoa making when mass reaches at the pasty consistency the stage is known as				
O	a) Dough	b) Crystal			
	c) Milky	d) Liquid			
	18. Overrun in ice cream is due to?				
1	a) Moisture	b) Solid			
	c) Air	d) None of these			
	19is used as base material for preparation of shrikhand?				
1	(a) Chakka	b) Dahi			
	c) Lassi	d) Yoghurt			
	20. Salting is taking place in?	a) rogitate			
1	(a) Butter	b) Khoa			
,	c) Lassi	d) Milk Shake			
	21.In clarified ghee containsmilk fat?	a) white office			
1	a) 90.5% milk fat	b) 95.5% milk fat			
	c) 92.5% milk fat	d) 99.9% milk fat			
	22. Speed required for Gerber's centrifuge machine?	(a) 75.570 mink lat			
1	a) 1000 rpm	(b) 1100 rpm			
	c) 2010 rpm	d) 2200 rpm			
~	23. Which of the following test is used to test heat stability of milk for processing?				
0~	Resazurin test	b) Alcohol test			
	c) COB test	d) Sediment test			
	24. Refers to milk prepared by dispersing whole milk powder in	water?			
1	a) Reconstituted milk	b) Recombined milk			
`	c) Standardized milk.	d) Toned milk.			
	25is a lactic acid alcohol fermented milk originated in R	ugio?			
1	a) Bulgarian butter milk	b) Kefir			
	sc) Kumiss	d) Khoa			
	26. Which of following Bacteria is responsible for Conversion of milk into Acidophilus milk				
1					
`	c) Lactococci	b) Streptococcus thermophilus			
	27. Ice cream should contain minimum fat and total sugar?	d) Lactobacillus bulgaricus			
1 ~	a) 20 % fat and 40 % total sugar.				
\	(c) 10 % fat and 15 % total sugar.	b) 15 % fat and 25 % total sugar.			
	28. The cream, having the highest 'clumping ability', is generally	d) 10 % fat and 20 % total sugar.			
00	a) Gravity separated cream				
	Both (a) and (b)	b) Centrifugally separated			
	29. What is the principal carbohydrate in the milks of all mamma	d) None of these			
1	a) Eactose				
,	c) Sucrose	b) Glucose			
-	30. Reagent used for detection of starch adulteration in milk is	d) Fructose			
1~					
'		b) Silver nitrate			
l	c) Sulphuric acid	d) Hydrochloric acid			



K. K. Wagh College of Agriculture,

(Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)

Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra

College Code;11135

AISHE Code: C-50690

🛣.:(0253)2555221, 255522 🚇 - principal-bscagri@kkwagh.edu.in 🌐 https://agri-bsc.kkwagh.edu.in

Department of Animal Husbandry and Dairy Science

Certificate course in

"Manufacturing of Indigenous Milk Products Technology" Academic Year 2019-20

Report

K.K.Wagh Education Society's K.K.Wagh College of Agriculture, Saraswatinagar, Nashik which provide education in agriculture at U.G. level students. College has to decide introduce new Certificate Course "Manufacturing of Indigenous Milk Products Technology". Total 19 students are enrolled from department of AHDS. Due to this certificate course in "Manufacturing of Indigenous Milk Products Technology" Students get more knowledge of Manufacturing of various milk and milk products to improve quality and quantity of finished products.

Course outcome

- Understanding of Dairy Processing Techniques:
- Knowledge of Indigenous Milk Products
- Quality Control and Assurance
- Production Planning and Management
- **Technological Applications**
- Business and Entrepreneurship Skills
- Environmental and Sustainability Considerations
- Research and Innovation
- Communication and Teamwork
- Ethical and Legal Responsibilities

These outcomes collectively prepare students for careers in the dairy industry, whether in production management, quality assurance, research and development, or entrepreneurial ventures related to indigenous milk products technology.

Students are able to understand advances in Dairy Processing Techniques and its Marketing. The course on Manufacturing of Indigenous Milk Products Technology has proven instrumental in equipping participants with the knowledge, skills, and insights necessary to excel in the dynamic field of dairy processing. The program's success is evidenced by the participants' achievements and the positive feedback received. As we reflect on this journey, we remain committed to advancing education and innovation in dairy



K. K. Wagh Education Society's

K. K. Wagh College of Agriculture,
(Affiliated to Mahatma PhuleKrishiVidyapeeth, Rahuri)
Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra
College Code;11135

AISHE Code: C-50690

technology, preparing future leaders who will drive sustainable growth and excellence in the global dairy industry.

This conclusion serves to encapsulate the achievements and impact of the course while providing guidance for future improvements and developments in the field of indigenous milk products technology. This course also helps to motivate students to improve their entrepreneurship skill. In academic year 2019-20 nineteen students are enrolled for this certificate course. Course structure had been divided into theory and theory practical. Theory has 30 marks while theory practical has 20 marks weightage examination has been conducted for total 50 marks. Duration for this certificate course is 11/03/2019 to 16/03/2019 (Total 30 hrs.). The students who successfully completed the certificate course were given a certificate as appreciation by the college.

Course coordinator is Dr.K.D.More and member for this certificate course are, Prof. N.G.Devshete, Prof. J.Y.Mote, Prof. S.D.Kale and Prof. P.V.Shinde.

Course Coordinator

ator





Place: Nashik

K K Wagh Education Society's

K K WAGH COLLEGE OF AGRICULTURE

(Affiliated to Mahatma Phule Krishi Vidyapeeth, Rahuri) Saraswatinagar, Panchavati, Nashik - 422 003

Certificate

This is to certify that Mr./Ms. Thikekan Dnyaneshwani. A.
Class F. Y. B. C. Completed Certificate Course on Manufacturing. a.F. Ladigenou
Milk producks Technology from 11/03/2019 to 16/03/2019 organized by
Department ofAUDS in academic year201920
Date: 18/03/2019

Course Coordinator
(Dr. X. D. More)



Principal

K Kangan Cottoge All Agriculture