

How to Apply

1. Download and take a printout of the application form appended to this brochure, fill it in completely and obtain the approval of the competent authority of your organization.
2. Submit the advance copy of the application by e-mail to Dr. Saurabh Kadyan / Dr. Sonu K S, Course Coordinator, at kadyan.saurabh3@gmail.com / sonuksgowda@gmail.com/ and post the original approved application so as to reach the correspondence address given below on or before 3rd December 2026.
3. Pay the ₹50/- registration fee (non-refundable) in the form of an Indian Postal Order or Demand Draft drawn in favor of "ICAR UNIT, NDRI", payable at Karnal, and enter the payment details in the application form.

Important: The application will be considered for final selection only after receipt of the approved original application before the prescribed last date. As the ICAR Capacity Building Programme (CBP) portal is not functional, applications are invited through e-mail/post as per the ICAR sanction.

Important Dates

Last date for receipt of applications	3 rd December 2026 (Thur.)
Intimation to selected candidates	7 th December 2026 (Mon.)
Commencement of the Short course	4 th January 2027 (Mon.)
Conclusion of the Short course	13 th January 2027 (Wed.)

Boarding and Lodging

Free boarding and lodging will be provided to the participants during the training programme as per the approved ICAR norms for short courses. The candidates are eligible for Travelling Allowance for travel by train only, to a maximum of AC II Tier fare (AC III Tier for Rajdhani/Duronto/ Vande Bharat trains) by the shortest route. Please note that, strictly, no accommodation in the guest house will be provided to family members or guests of the participants. No DA will be paid, and participants are required to produce original tickets in support of their TA claim.

Chief Patron

Dr. Dheer Singh
Director, ICAR-NDRI

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Joint Director Academic, ICAR-NDRI

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ICAR-Sponsored 10-Days Short Course

ON

Emerging Diagnostic and Analytical Technologies in Dairy Quality and Food Safety

04 – 13 January, 2027



Sponsored by
**Agricultural Education Division,
Indian Council of Agricultural Research, New Delhi**

Organized by
**Division of Dairy Microbiology
ICAR-National Dairy Research Institute
(Deemed University), Karnal-132001**

www.ndri.res.in

About the Course

The dairy sector is rapidly evolving, with increasing demands for safe, high-quality and authentic milk and milk products. Ensuring dairy safety requires timely detection of microbial pathogens, chemical contaminants, veterinary drug and pesticide residues, mycotoxins and adulterants across the dairy value chain.

Conventional analytical methods, although reliable, may require considerable time, laboratory infrastructure and skilled personnel, limiting their application for rapid or field-level testing. Emerging technologies such as biosensors, paper-strip assays, lateral-flow devices, paper-based microfluidics, molecular diagnostics, automated microbial identification and advanced instrumental techniques offer opportunities for rapid, sensitive and user-friendly assessment of dairy quality and safety.

Integration of these technologies with portable devices, digital platforms, artificial intelligence and data-driven approaches can further enhance rapid screening, data interpretation and decision-making. The proposed Short Course will provide participants with theoretical knowledge and hands-on exposure to these emerging diagnostic and analytical technologies, along with relevant food-safety, quality-assurance and accreditation frameworks, supporting their application in dairy research, testing and industry.

Topics to be Covered

1. Rapid microbiological diagnostics
2. Chemical contaminants and residues
3. Paper-based and biosensor platforms
4. Milk adulteration and authenticity
5. Advanced microbial and molecular methods
6. Advanced analytical applications
7. Quality assurance and food-safety systems
8. Research translation

The Short Course will comprise classroom lectures, technical demonstrations and hands-on practical

exercises. Practical sessions will cover paper-strip sensors, rapid detection of foodborne pathogens, lateral-flow assays and μ PADs. Participants will receive practical exposure to pesticide-residue analysis, milk adulteration testing, automated microbial identification and rapid mastitis detection. Sessions will also cover aflatoxin detection, molecular diagnostic techniques, food-safety standards and NABL accreditation as per ISO/IEC 17025:2017. Lecture materials and practical handouts will be provided to participants for effective learning and application of the technologies.

About ICAR-NDRI, Karnal

The ICAR-National Dairy Research Institute (NDRI), Karnal is a premier national institution dedicated to advancing dairy science through research, education and technology development. Established originally in Bengaluru in 1923 as the Imperial Institute for Animal Husbandry and Dairying, the Institute was later renamed the Imperial Dairy Institute and shifted to Karnal in 1955. Since 1970, NDRI has functioned under the Indian Council of Agricultural Research (ICAR) and was accorded Deemed University status in 1989, reflecting its major role in higher education and human-resource development in dairy science.

Located on an extensive campus, NDRI undertakes multidisciplinary research, education and extension activities covering dairy production, processing, quality, safety and management through its specialized research divisions. The Institute houses important national and institutional facilities, including the National Referral Centre for Milk Quality and Safety (NRCMQS), National Library on Dairying, Experimental and Model Dairy Plants, Technology Business Incubator (TBI), Agriculture Technology Information Centre (ATIC), Small Animal House and Central Instrumentation Facility. These facilities provide access to advanced analytical and research platforms, including confocal microscopy, NMR, HPLC, GC, real-time PCR, particle-size analysis and other sophisticated instrumentation, supporting cutting-edge research,

training and technology development in the dairy sector.

The Dairy Microbiology Division of ICAR-NDRI has established expertise in dairy microbiology, food safety, rapid diagnostic methods, biosensors and microbial detection technologies, supported by advanced laboratory and instrumentation facilities. Emerging technologies such as biosensors, paper-strip assays, lateral-flow devices, paper-based microfluidics, molecular diagnostics, automated microbial identification and advanced analytical techniques offer new opportunities for rapid and user-friendly assessment of dairy quality and safety. The proposed Short Course will provide participants with theoretical knowledge and hands-on exposure to these emerging technologies, together with relevant food-safety, quality-assurance and accreditation frameworks, thereby strengthening their capacity for application in dairy research, testing and industry.

Eligibility

Faculty and researchers in dairy science, food science, livestock products technology and related disciplines from State Agricultural Universities, ICAR Institutes, Central and State dairy, fisheries and veterinary universities, deemed to be Universities, Central Agricultural Universities and Krishi Vigyan Kendras under NARES, not below the rank of Assistant Professor/ Scientist or equivalent in the concerned subject, are eligible to apply. Applicants must hold a Master's degree in the relevant discipline and should be engaged in teaching, research or extension.

Selection of Participants

A maximum of twenty-five participants will be selected for the programme based on the prescribed eligibility criteria. Candidates with experience in areas pertaining to the training will be given preference. Nomination by the head of the sponsoring organization does not entail confirmed participation in the programme. ICAR-NDRI will provide an official confirmation letter to the selected candidates.

ICAR-SPONSORED 10-DAYS SHORT COURSE

on

Emerging Diagnostic and Analytical Technologies in Dairy Quality and Food Safety

Date: 04 – 13 January 2027

Venue: Division of Dairy Microbiology, ICAR-National Dairy Research Institute, Karnal – 132001 (Haryana)

APPLICATION FORMAT FOR PARTICIPATION IN TRAINING

1. Name (in block letters) :
2. Designation :
3. Present employer address :
4. Address to which reply should be sent (in block letters) :
5. Permanent address :
6. Date of birth :
7. Sex :
8. Marital Status :
9. Teaching/research/professional experience :
(mention post held during last five years and numbers of publications)
10. Mention if you have participated in any research seminar, Summer/Winter/Short Course etc. during last five (5) years under I.C.A.R./Other organizations :.
11. Online Payment/Transaction (attach copy of payment receipt) :
12. Academic Record

Degree	Discipline	Year	Class	University
Ph.D				
Master				
Bachelor				
Others				

Signature of the Applicant: _____ Date: _____ Place: _____

13. Recommendation of the Forwarding Institute:

Signature: _____

Name: _____ Designation: _____

Address: _____

Certificate: Certified that the information furnished by the applicant has been verified with the official records and found to be correct.

Signature and Seal of the Competent Authority

Date: _____