

भारतीय मानक ब्यूरो/BUREAU OF INDIAN STANDARDS**खाद्य एवं कृषि विभाग /Food and Agriculture Department****अनुमोदित कार्यवृत्त/ APPROVED MINUTES**

अनुभागीय समिति का नाम Name of the Sectional Committee	डेयरी उपकरण अनुभागीय समिति, एफएडी 33 Dairy Equipment Sectional Committee, FAD 33
बैठक क्रमांक/No. of Meeting	4 th
दिन और दिनांक Day and Date	बुधवार , 2 अप्रैल 2025 Wednesday, 2 April 2025
समय Time	02:00 बजे 02:00 hrs.
बैठक का तरीका Mode of the meeting	भौतिक एवं आभासी Physical and Virtual
स्थान Venue	आई डी एम सी, आनंद, गुजरात IDMC, Anand, Gujarat
अध्यक्ष/Chairperson	डॉ. प्रद्युम्न बरनवाल/ Dr. Pradyuman Barnwal (अध्यक्ष, एफएडी 33/Chairperson, FAD 33) प्रमुख/Head (डेयरी अभियांत्रिकी प्रभाग/Dairy Engineering Division) आईसीएआर- राष्ट्रीय डेयरी अनुसंधान संस्थान, करनाल/ ICAR- National Dairy Research Institute, Karnal
सदस्य सचिव/Member Secretary	श्री प्रदीप शर्मा/Mr. Pradeep Sharma (सदस्य सचिव, एफएडी 33/ Member Secretary, FAD 33) वैज्ञानिक-बी/सहायक निदेशक/Scientist-B/Assistant Director खाद्य एवं कृषि विभाग/Food & Agriculture Department भारतीय मानक ब्यूरो/Bureau of Indian Standards नई दिल्ली/New Delhi - 110002

0.1 Welcome

Mr Pradeep Sharma, Member Secretary, FAD 33 welcomed all the members to the 4th meeting of Dairy Equipment Sectional Committee, FAD 33. He apprised the members about the work done since last (3rd) meeting and emphasized on the revision of pre-2000 Indian Standards. He also requested the members to actively participate in the work of development of new and revision of existing Indian Standards so that relevance, competitiveness, and implementability of these standards can be ensured in today's world.

0.2 Opening Remarks by the Chairman

Dr P. Barnwal, Chairperson of FAD 33, extended his warm welcome to all the esteemed members present in the meeting. He apprised the committee members about the scope of the committee and the Indian Standards developed by the committee so far. He also urged all the members to have a fruitful deliberation in the meeting.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST (3rd) MEETING

The committee unanimously confirmed the minutes of the last (3rd) meeting of Dairy Equipment Sectional Committee, FAD 33 held on 25 November 2024 through hybrid mode as circulated to the members vide email dated 5 December 2024.

ITEM 2 SCOPE, ACTIVITIES & COMPOSITION OF THE SECTIONAL COMMITTEE

2.1 Scope & Activities of The Committee

The committee noted the scope and program of work of FAD 33 as given in **2.1** of the agenda.

2.2 Composition of The Sectional Committee

The committee noted the current composition of the committee where following decisions were taken:

2.2.1 The committee observed that the Gujarat Cooperative Milk Marketing Federation Limited, Anand was not present in the meeting and was also absent in last two consecutive meetings. However, the considering the importance of presence of the organization, the committee decided to retain its membership and requested member secretary to send a reminder letter to the organization.

2.2.2 The committee noted the following organizations were not responding even after multiple follow ups & communications made by the BIS secretariat, therefore, the committee recommended to withdraw these organizations:

- a) GOMA Engineering Private Limited;
- b) GEA; and
- c) Indian Dairy Engineers Association.

2.2.3 The committee recommended the Food & Agriculture Division Council (FADC) to co-opt the Neologic Engineers Private Limited, Pune in this committee.

2.2.4 The committee considered the request of Tetra Pak India Private Limited, Pune for nominating Mr Somnath Pagire as a principal member instead of alternative.

2.3 Current Panel & Working Groups

The committee noted the current structure e.g. panels, working groups and the sector/sub-sector associated with them as given in below table where following decisions were taken:

2.3.1 The committee decided to co-opt the following members in FAD33/Panel 1 “Dairy Equipment-I”

- Dr Bhupendra Ghodaki, Assistant Professor, IIT Kharagpur
- Dr Ronit Mondal, Assistant Professor, IIT Kharagpur
- Mr Shreyas Jain, Manager, Engineering Services, NDDB, Anand

2.3.2 The committee decided to co-opt Mr. Sachin Sarvaiyya, Manager, Engineering Services, NDDB, Anand in FAD33/Panel 2 “Dairy Equipment-II”.

Sector	Sub-sector	Concerned Panel	Scope of the Panel
Dairy Industry	Equipment for Processing, packaging and analysis of Dairy products	FAD33/Panel 1 “Dairy Equipment-I”	Development of Indian Standards on the equipment used in processing, packaging and analysis of dairy products
	Equipment for Collection, Handling, Storage and Transport of Dairy products	FAD33/Panel 2 “Dairy Equipment-II”	Development of Indian Standards on equipment used in handling, storage and transport of dairy products
	Milk & Milk Products	Do not pertain to FAD 33 and come under the purview of Dairy Products Sectional Committee, FAD 19	
	Infant Foods		

ITEM 3 INDIAN STANDARDS PUBLISHED

The committee noted the Indian standard(s) published since the last (3rd) meeting of the committee.

ITEM 4 FINALISATION OF DRAFT INDIAN STANDARDS

The committee noted that the following drafts as listed below have completed their WC stage and subsequently, following decisions were taken:

4.1 Doc. No. FAD33 (27325) WC Draft Revision of IS 6684: 1972 Milk Can Trolleys — Specification (first revision)

The Committee reviewed the draft and deliberated upon the comments received from Mr Pravin Prajapati, Manager, IDMC, Anand. As Suggested by Ms Sunil Sinha, Head, Engineering, Services, NDDB, Anand, the committee decided to keep the minimum thickness of galvanization as 55 µm for all the parts wherever galvanization is prescribed and also decided that the galvanization shall be done with hot dip method only. Subsequently, after making the above suggested changes, the committee finalized the draft revision for sending into publication.

4.2 Doc. No. FAD33 (27197) WC Draft Revision of IS 2342: 1963 Specification for Manually Operated Milk-Can Washer (first revision)

The Committee reviewed the draft revisions and noted that no comments were received during the wide circulation stage. However, the committee decided to keep the minimum thickness of galvanization as 55 µm for all the parts wherever galvanization is required and also decided that the galvanization shall be hot dip type only. Subsequently, after making the above suggested changes, the committee finalized the draft revision for sending into publication.

4.3 Doc. No. FAD33 (27196) WC Draft Revision of Indian Standard IS 1825: 1983 Specification for Aluminium Alloy Milk Cans (*third revision*)

The Committee reviewed the draft revision and noted the major changes made in this revision and subsequently, the committee finalized the draft for sending into publication without any further modification.

5. NEW WORK ITEM PROPOSAL

The committee deliberated upon all the new work item subjects as received from the Department of Animal Husbandry & Dairying, Government of India and from the discipline wise workshop held among BIS officials. Accordingly, after due deliberating on the current requirement, potential for commercialization, and implementability of each subject as proposed, following subjects were decided to be taken up in the committee for development of new Indian Standard/s:

5.1 Milk Analysers – Specifications & Test Code

The committee decided to develop a standard on milk analyser including its all types (FTIR, Ultrasonic, etc.), wherein the specifications, test methods and calibrations methods shall be covered. For preparation of this standard, the committee constituted a working group FAD/33/WG 9 “Development of Indian Standard on Milk Analyser” with the following expert members:

- a) Representative from NDDDB-CALF, Anand (*Convenor*)
- b) Representative from Jupiter Glassworks Pvt. Ltd., New Delhi
- c) Representative from Prompt Dairy Tech Pvt. Ltd., Ahmedabad
- d) Representative from Benni Impex Pvt. Ltd., Mumbai
- e) Representative from Everest Instruments Pvt. Ltd., Ahmedabad
- f) Representative from Rajasthan Electronics & Instruments Limited, Jaipur

5.2 Hybrid Bulk Milk Cooler – Specification & Test Codes

The committee noted the points as made by Mr R. K. Malik, Executive Director, IDMC, Anand and representative Indian Dairy Association, New Delhi where he suggested to develop a separate standard on the Hybrid Bulk Milk Coolers along with storage system wherein the cooling shall be in two stage, first reducing the raw milk temperature to 15°C (instant cooling) and subsequent cooling from 15°C to 4°C with the existing bulk milk cooler technique. Following this practice in milk cooling/chilling will reduce cost, energy consumptions, and volume of equipment, Mr Malik said. This standard shall cover the requirement for the equipment used in the instant cooling part only and for the subsequent part, IS 3661 : 2021 ‘Bulk Milk Cooler – Specification (*second revision*)’ shall be referred.

For developing this standard, the committee requested Mr Pravin Prajapati, Manager, IDMC, Anand to prepare the first working draft of this standard.

5.3 Automatic Milking Machine – Specification & Test Code

The committee decided to develop a new Indian Standard on automatic milking machine for both buffalo & cow where the due reference shall be taken from the international standards available on

dairy milking machine. For the preparation of this standard, the committee constituted a working group FAD33/WG 10 “Development of Indian Standard on Automatic Milking Machine” with the following expert members:

- a) Representative from IDMC, Anand (**Convenor**)
- b) Representative from Engineering Services, NDDB, Anand
- c) Representative from SMC College of Dairy Science, Anand
- d) DeLaval Pvt. Ltd., Pune
- e) Vansun Technologies Pvt. Ltd., Noida

5.4 The committee also constituted a working group FAD 33/WG 11 “Development of Indian Standards on Valves & Pumps used in Dairy Plants” with the following expert members:

- a) Representative from IDMC, Anand (**Convenor**)
- b) Representative from GEA
- c) Representative from Engineering Services, NDDB, Anand
- d) Representative from Alfa Laval Pvt. Ltd., Pune
- e) Representative from SPX FLOW Technology India Private Limited, Ahmedabad
- f) Mother Dairy Fruit and Vegetable Limited, New Delhi

This group was also requested to review the Indian Standard IS 3382: 1965 ‘Specification for stainless steel milk pipes and – Fittings’.

ITEM 6 REVIEW OF INDIAN STANDARDS

As per the provisions of the BIS rules and regulations every Indian Standard within five years of its publication/earlier reaffirmation is to be reviewed by the concerned Sectional Committee under the following guidelines:

- i) The Standard may be reaffirmed in the present form.
- ii) The standard may be reaffirmed with minor changes by issuing of an amendment.
- iii) The Standard may be reaffirmed while simultaneously taking up for revision.
- iv) The Standard may be withdrawn.

Under this criterion, following Indian Standards are due for review in the year 2025-26:

Sl. No.	Indian Standard	Due in	Decision taken
1	IS 1223 : 2001 Apparatus for determination of milk fat by Gerber method – Specification (<i>third revision</i>)	February, 2026	The committee requested member secretary to seek inputs from ISO regarding the alternative of use of mercury in the calibration of lactometer, capillary pipette, and in apparatus used in Gerber method.
2	IS 9585 : 2021 Lactometers - Specification		
3	IS 2803 : 1964 Specification for capillary pipette for direct microscopic count of milk		
4	IS 2025: 1962 Specification for cylindrical pipettes for bacteriological examination of milk	February, 2026	The committee decided to send these standards to Dairy Chemistry Division, SMC College of Dairy Science, Anand to seek their inputs.

5	IS 2311 : 1973 Specification for fat extraction apparatus for milk and milk products (First Revision) for milk	February, 2026	
6	IS 2495 : 1963 Specification for cheese hoops	February, 2026	The committee decided to allocate this standard as an ARP (Action Research Project) for reviewing it to Mr Yogesh Kumar Vekariya, Assistant Professor, SMC College of Dairy Science, Anand
7	IS 2498 : 1963 Specification for cheese knife	February, 2026	The committee decided to allocate this standard as an ARP (Action Research Project) for reviewing it to Mr Pravin Prajapati, Manager, IDMC, Anand
8	IS 2504 : 1964 Specification for hand - Operated cheese press (Vertical)	February, 2026	The committee decided to allocate this standard as an ARP (Action Research Project) for reviewing it to Er Ankit Deep, Scientist, ICAR-NDRI, Karnal
9	IS 2647 : 1964 Specification for cheese mill	February, 2026	The committee decided to allocate this standard as an ARP (Action Research Project) for reviewing it to Er Shreyas Jain, Manager, Engineering Services, NDDB, Anand
10	IS 3893 : 1966 Specification for slides for direct microscopic count of milk	February, 2026	The committee decided seek inputs on these standards from Borosil Glassworks Limited where Mr Nihir Soni, NDDB-CALF, Anand & Mr Anuj Kondal, Mother Dairy Fruit and Vegetable Limited, Delhi were requested to share the details of concerned technical person of Borosil Glassworks Limited with the Member Secretary.
11	IS 5567 : 1970 Specification for Bottles for sterilized milk	February, 2026	
11	IS 6684 : 1972 Specification for milk can trolleys	February, 2026	The committee noted that the draft revisions of these standards have been finalized.
13	IS 2342 : 1963 Specification for manually operated milk - Can washer		
14	IS 1825 : 1983 Specification for aluminium alloy milk cans (<i>second revision</i>)		
15	IS 16440 : 2016 Stainless steel milk cans - Specification	February, 2026	The committee noted that the amendment has been issued on this standard.
16	IS 2336 : 1963 Specification for stainless steel milk vats	February, 2026	The committee noted that the standard has been revised.

ITEM 7 REMAINING SUBJECTS

The current status of the subjects mentioned in the minutes of last meeting but not covered in the above agenda points is as given below:

Sl. No.	Subject	Decision taken
1	Draft Indian Standard on “Continuous Milk Pasteurizer — Specification”	The committee requested to FAD33/Panel 1 “Dairy Equipment-I” review these working drafts once again.
2	Draft Indian Standard on “Continuous Milk Sterilizer — Specification”	
3	Draft Indian Standards on “Cleaning-in-Place (CIP) of Dairy Factory Equipment — Code of Practice”	The committee noted the current status of the draft and requested the FAD33/Panel 1 “Dairy Equipment-I” to include the types of valves to be used in CIP in this standard.
4	IS 11585 : 2009 Insulated stainless steel silos for milk Storage capacity 30, 40, 60 and 100 kilo litres — Specification (<i>first revision</i>)	The committee noted the current standards of the review work of this standard and revamped the composition of this FAD33/WG3 with the following expert members: <ul style="list-style-type: none"> a) Mr Pravin Prajapati, IDMC, Anand (Convenor) b) Representative from Engineering Services, NDDB, Anand c) Mr Somnath Pagire, Tetra Pak India Private Limited, Pune d) Mr. Anuj Koundal, Mother Dairy Fruit and Vegetable Limited, Delhi
5	IS 2343 : 2009 Specification for can washing trough	The committee noted that this standard is yet to be reviewed; accordingly, the FAD33/Panel II was requested to expedite the review of it.
6	IS 2492 : 2019 Stainless Steel Milk Tankers (second revision)	The committee requested the FAD33/WG3 to review this standard.
7	IS 5253: 1969 Guidelines for Cleaning and Sterilizing Dairy Equipment.	The committee requested the member secretary to remind the FAD33/Working Group 6 once again to complete the review of this standard.

ITEM 8 TIME AND PLACE FOR THE NEXT MEETING

The committee decided to schedule the next meeting in the last week of June, 2025, however, the place of the meeting shall be decided based on the convenience of the committee members.

ITEM 9 ANNUAL PROGRAM FOR STANDARDIZATION 2025-26

The committee decided that the APS for this committee shall be prepared by the member secretary covering all the ongoing works as discussed in the meeting. The draft APS shall be shared among all the committee members for 7 days to seek their comments, if any. In case of no comments received, the draft APS shall be considered as the final APS for this committee. However, if any comment is done by any member, the modified APS shall be considered as finalized after seeking approval from the chairperson of the committee.

ITEM 10 VOTE OF THANKS

There being no agenda item the meeting concluded with the hearty vote of thanks by the chairman.

ANNEX A

**ATTENDANCE OF
4TH MEETING OF DAIRY EQUIPMENT SECTIONAL COMMITTEE, FAD 33**

Sl. No.	Organization	Member Name
1.	National Dairy Research Institute, Karnal	Dr P. Barnwal (<i>Chairperson</i>) (<i>Virtual</i>)
2.	ICAR - National Dairy Research Institute, Karnal	Dr Chitranayak Sinha (<i>Virtual</i>)
3.	ICAR - Central Institute of Post Harvest Engineering & Technology (CIPHET), Ludhiana	Dr Ravi Prakash (<i>Virtual</i>)
4.	Indian Dairy Association, New Delhi	Mr Raj Kumar Malik (<i>Physical</i>)
5.	Indian Institute of Technology Kharagpur, Kharagpur	Dr Bhupendra M Ghodki (<i>Virtual</i>)
6.	Indian Institute of Technology Kharagpur, Kharagpur	Dr Ronit Mandal (<i>Virtual</i>)
7.	Indigenously Manufacture Dairy Components Limited, Vithal Udyognagar	Mr Pravin Prajapati (<i>Physical</i>)
8.	Jupiter Glass Works, New Delhi	Mr Amreek Singh Puri (<i>Virtual</i>)
9.	Mother Dairy Fruit and Vegetable Limited, Delhi	Mr Anuj Koundal (<i>Virtual</i>)
10.	Mother Dairy Fruit and Vegetable Limited, Delhi	Mr Saurabh Chaudhary (<i>Virtual</i>)
11.	National Dairy Development Board, Anand	Mr Shreyas Jain (<i>Physical</i>)
12.	National Dairy Development Board, Anand	Mr Sachin Sarvaiyya (<i>Physical</i>)
13.	National Dairy Development Board, Anand	Mr S.S. Sinha (Invitee) (<i>Physical</i>)
14.	NDDB CALF Limited, Anand	Mr Nihir Soni (<i>Physical</i>)
15.	Punjab State Cooperative Milk Producers Federation Limited, Punjab	Mr Sanjeev Kumar Sharma (<i>Virtual</i>)
16.	Punjab State Cooperative Milk Producers Federation Limited, Punjab	Mr Harjinder Singh (<i>Virtual</i>)
17.	SMC College of Dairy Science, Anand	Mr Yogesh Kumar Vitthalbhai Vekariya (<i>Physical</i>)
18.	SMC College of Dairy Science, Anand	Ms Arpita Muljibhai Rathva (<i>Physical</i>)
19.	Tetra Pak India Private Limited, Pune	Mr Somnath Pagire (<i>Virtual</i>)
20.	FAD, BIS, New Delhi	Shri Pradeep Sharma (<i>Physical</i>)