**BUREAU OF INDIAN STANDARDS**

**MINUTES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of the Committee** | **No. of Meeting** | **Date** | **Time** | **Venue** |
| Foodgrains, Allied Products and Other Agricultural Produce Sectional Committee, FAD 16 | 28th | 20 August 2024  (Tuesday) | 10 30 hrs | Virtual meeting |

*Attendance is placed at* ***Annex I***

|  |  |
| --- | --- |
| **CHAIRPERSON:**  **Dr. Nachiket Kotwaliwale**  Director,  ICAR-Central Institute of Post-Harvest Engineering & Technology,  Ludhiana | **MEMBER SECRETARY:**  **Ms. Lavika Singh**  Scientist-C/Deputy Director  Food & Agriculture Department,  Bureau of Indian Standards,  New Delhi |

**Item 0 GENERAL**

* 1. **Welcome by Head, Food & Agriculture Depart**
  2. **ment**

Ms. Lavika Singh, Scientist-C, Food & Agriculture Department, BIS extended warm welcome to the chairperson and members to the 28th meeting of FAD 16.

**0.2 Opening Remarks by the Chairperson, FAD 16**

Dr. Nachiket Kotwaliwale, Chairperson, FAD 16 extended a warm welcome to the members of the Committee to its 28th meeting. Dr. Kotwaliwale highlighted the importance of attendance in committee meetings and active participation in national standardization for continued membership in FAD 16. Further, he requested all the members to have fruitful and amicable deliberations upon issues raised in Agenda.

**ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING**

There being no comment, the committee confirmed the minutes of the 27th meeting of Foodgrains, Allied Products and Other Agricultural Produce Sectional Committee, FAD 16 held on 27 June 2024 as circulated by the secretariat vide portal dated 16 July 2024.

**ITEM 2 PLANNING FOR 2024-25**

**2.1 Rolling Annual Action Plan for 2024-25**

The committee reviewed the annual action plan (AAP) 2024-25 of FAD 16 attached at Annex II of Agenda. The committee requested members to expedite the task allocated to them, for timely completion of projects specified in AAP.

**2.2 Annual Calendar of Sectional Committee Meetings**

The frequency of sectional committee meetings is increased to quarterly meetings. The draft plan for FAD 16 meetings is placed below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Planned frequency (Months)** | **June 2024** | **August 2024** | **December**  **2024** | **March 2025** |
| **3** | **27 June** | **20 August** | **02 December, 2024**  **(CIPHET, Ludhiana)** | **February**  4th week  **(CFTRI, Mysore)** |

**Item 3 SCOPE, ACTIVITIES & COMPOSITION OF FAD 16**

**3.1 Scope & Activities of the Committee**

**3.1.1** The committee noted the updated scope of FAD 16 enclosed at Annex II of Agenda.

**3.2 Composition of the Sectional Committee**

**3.2.1** The committee noted the composition attached at Annex III of the agenda and directed all the members to regularly attend all the committee meetings and provide comments on preliminary drafts.

The committee decides to withdraw the following Organizations due to a lack of participation and shortage of attendance –

1. ICAR - Central Tuber Crop Research Institute, Thiruvananthapuram
2. Indian Institute of Packaging, New Delhi

**3.2.2** The committee decides to co-opt National Institute of Technology Rourkela, Rourkela.

**3.3 Composition of Panels Under the Committee**

The committee decides to disband the following panel:

1. FAD 16/P VI 'Develop and review Indian standards on wheat products’
2. FAD 16/P VII ‘Develop Indian Standards on specifications for Fortified rice kernels & related products’
3. FAD 16/P VIII ‘Formulate Indian Standard on Soy Products’

**3.3.1** The committee decides to constitute a new panel named as Panel IX ‘Storage Structure’ for revision of Standards on foodgrain storage specifications.

1. Dr. Prasoon Verma, ICAR-IIPR, Kanpur – **Convenor**
2. Representative of CIPHET
3. Representative of CWC
4. Representative of FCI
5. Representative of IGMRI, Hapur
6. Representative of VSI
7. Representative of Praj
8. Representative of BG Shirke
9. Representative of OSAW, Ambala

**3.4 Co-option Requests through BIS Portal**

The committee reviewed the co-option requests received from BIS Portal and relevant CVs, following detailed deliberations, the committee decided as under:

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Name** | **Organization** | **Decision of the Committee** |
|  | Ms. Dolly A. Jani | The Akshaya Patra Foundation | Seek clarification from Dr. Dolly A Jani regarding relevance of The Akshay Patra Foundation to the national standardization in foodgrains sector |
|  | Vivek Sharma | EMC TESTING & COMPLIANCE LLP | In view of no experience in the field of foodgrains, the co-option request was rejected. |
|  | Dr. P. P. Singh | Individual Capicity | The co-option request was accepted. |
|  | Dr R C Pradhan | Individual Capicity | The request was received in personal capacity, therefore the committee decided to reject the co-option request and Co-opt NIT Rourkela, Rourkela in the committee. |

**ITEM 4 REVIEW OF INDIAN STANDARDS**

**4.1** The committee noted that information mentioned at 4.1 of Agenda regarding reaffirmation of Indian Standards which are due review under five years’ criteria.

**4.2** The Committee noted the list of Indian Standards which are due for review in 2024-25, mentioned at item 4.2 of agenda and decided as under:

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **IS No.** | **IS Title** | **Decision of the Committee** |
|  | IS 609 : 2020 | Improvement of Existing Structures Used or Intended to be Used for Food Grain Storage — Code of Practice (*first revision*) | Allocated to Dr.  Kakasaheb  Konde and CIPHET, Ludhiana for review  Due date: 30 September |
|  | IS 5503 (Part 2) : 2020 | General Requirements for Silos for Grain Storage Part 2 Grain Handling Equipment and Accessories (*first revision*) | Allocated to Dr.  Kakasaheb  Konde and CIPHET, Ludhiana for review  Due date: 30 September |
|  | IS 6151 (Part 1) : 2020 | Storage Management Code Part 1 Terminology (*first revision*) | Allocated to Shri I.C. Chaddha and Dr. Vivek Babu for review  Due date: 30 September |

**4.3 Revision of Pre 2000 Indian Standards**

**4.3.1** The Committee reviewed the list of all Pre 2000 Standards under FAD 16.FAD 16 in its previous meetings, assigned the task of revision of various Pre 2000 Indian standards to various panels under FAD 16, technical experts, secretariat and BIS officer on priority. List of Indian Standards published prior to 2000, under FAD 16 along with the work allocation/status is mentioned below at Table 1.

**Table 1 Category wise - List for Status/Allocation of Pre 2000 Standard under FAD 16 Category wise**

**I. Storage Specifications**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **IS No.** | **IS Title** | **Status/Allocated to** |
|  | IS 9215 : 1979 | Specification for outdoor steel bins for foodgrain storage | The committee constitute a Panel XI ‘Storage Structure’ for revision of Standards on foodgrain storage specifications. The composition of panel is under **3.3.1** of the minutes |
|  | IS 631 : 1979 | Specifications for outdoor aluminium foodgrain storage bins |
|  | IS 5606 : 1970 | Specification for steel bins for grain storage |
|  | IS 7147 (Part 1) : 1973 | Specification for steel bins for domestic storage: Part 1 *Gharelu kothi* |
|  | IS 8453 : 1977 | Code of practice for construction of polyethylene embedded earthen bins for bulk storage of foodgrains |
|  | IS 5503 (Part 1) : 1969 | General requirements for silos for grain storage: Part 1 constructional requirements |

**II. Code of Practice**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **IS No.** | **IS Title** | **Status/Allocated to** |
| 1. | IS 6151 (Part 2) : 1971 | Storage management code: Part 2 general care in handling and storage of agricultural produce and inputs | Under wide circulation |
| 2. | IS 6151 (Part 3) : 1976 | Storage management code: Part 3 specific care in handling and storage of agricultural produce and inputs | FAD 16/Panel II |
| 3. | IS 7003 : 1973 | Code for hygienic conditions for sago (Saboodana) manufacturing units | Member Secretary |

**III. Test Method**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **IS No.** | **IS Title** | **Status/Allocated to** |
|  | IS 10699 : 1983 | Method for determination of specific heat of foodgrains | Dr. S Mangaraj, CIAE, Bhopal  Due date: 30 September 2024 |
|  | IS 10698 : 1983 | Method for determination of thermal diffusivity of foodgrains |
|  | IS 8972 : 1978 | Determination of coefficient of friction of foodgrains |
|  | IS 9072 : 1978 | Method for determination of thermal conductivity of foodgrains |
|  | IS 6663 : 1972 | Method for determination of angle of repose of grains |
|  | IS 7716 :1975 | Method of testing efficacy of fumigation for disinfestation of grains in domestic bins | Completed wide circulation |
|  | IS 11454 : 1985 | Method for measurement of carbon dioxide in the intergranular atmosphere | FAD 16/WG1:  i) Dr. Vivek Babu, CFTRI  ii) Dr. Guru PN, Scientist, CIPHET, Ludhiana  iii) Shri IC Chadda  Due date: 15 September 2024 |
|  | IS 6261 : 1971 | Methods of analysis for detection of insect and rodent contamination in grains and milled products |
|  | IS 11396 : 1985 | Test methods for determination of storability (Safe Storage Life) of foodgrains |
|  | IS 12529 : 1988 | Storage of foodgrains - Storage losses by insects - Methods for estimation |
|  | IS 10768 : 1984 | Method of test for quality characteristics of pulses | FAD16/WG 3:   1. Dr. Prasoon Verma, ICAR-IIPR, Kanpur 2. Dr. Punit Chandra, In Personal Capacity 3. Dr. Pal Murugan. M, DFRL, Mysore 4. Dr. S. C. Khurana, In Personal Capacity 5. Representative from CFTRI 6. Dr. Vaibhav, IIPR, Kanpur   Due date: 30 September 2024 |
|  | IS 11261 (Part 1) : 1985 | Method for assessment of post - Harvest grain losses by rodents: Part 1 general considerations, direct measurement techniques and biological aspects of survey procedures | FAD 16/Panel II (Dr. Mohan Rao) |
|  | IS 11261 (Part 2) : 1985 | Method for assessment of post - Harvest grain losses by rodents: Part 2 loss determination by population assessment and estimation procedures | FAD 16/Panel II (Dr. Mohan Rao) |
|  | IS 4662 : 1977 | Methods for sampling of starches and starch products | NIFTEM-T, Thanjavur  Word file will be sent to Mr. M. Loganathan  Due date: 15 October 2024 |
|  | IS 4706 (Part 1) : 1978 | Methods of test for edible starches and starch products: Part 1 physical methods (First Revision) |
|  | IS 4706 (Part 2) : 1978 | Methods of test for edible starches and starch products: Part 2 chemical methods (First Revision) |
|  | IS 7715 : 1975 | Method for testing suitability of bins for safe storage of food grains | FAD 16/Panel II |
|  | IS 4333 (Part 5) : 1970 | Methods of analysis for foodgrains: Part 5 determination of uric acid | Completed wide circulation |
|  | IS 8184 : 1976 | Method for determination of ergot in foodgrains | Dr. Vivek Babu, CFTRI, Mysore  Due date: 15 October 2024 |

**ITEM 5 R&D PROJECT TO BE TAKEN UP**

**5.1 Method for Degree of Milling of Rice**

The committee noted theupdate regardingR&D Project for development of test method for determination of degree of milling of rice mentioned at Item 5.1 of Agenda.

**ITEM 6 DRAFT INDIAN STANDARDS UNDER WIDE CIRCULATION**

**6.1 Revision of IS 6151-2: 1971 ‘Storage management code Part 2 General care in handling and storage of agricultural produce’ [FAD 16 (26240)]**

The committee noted that the information regarding wide circulation of draft revision of IS 6151-2: 1971 and last date of commenting is 24 September 2024. The secretariat committee requested the committee members to review the draft revision, provide comments and further disseminate the draft to relevant stakeholders. The committee decided to organize a webinar for dissemination of draft revision of IS 6151 and its parts on 16 September 2024.

**ITEM 7 DRAFT INDIAN STANDARD COMPLETED WIDE CIRCULATION**

**7.1 Revision of IS 4333 (Part 5): 1970 Methods of analysis for foodgrains: Part 5 determination of uric acid [FAD 16 (25134)]**

The committee reviewed the comments received from Dr. Puneet Chandra and Dr. Deepika Goswami, CIPHET on draft revision of IS 4333-5 [FAD 16 (25134)]. The committee accepted all the comments received from Dr. Deepika (all comments were editorial). Further, the committee deliberated in detail upon the concern raised by Dr. Puneet Chandra regarding use of sodium cyanide in photoelectric method prescribed in the standard and decided to delete the photoelectric method. Further, Dr. Vivek Babu raised the concern regarding specification of uricase used in uricase solution. Dr. Vivek Babu informed that CFTRI uses HPLC based method for determination of uric acid. Therefore, the committee decided to mention the specification of uricase in the spectrophotometric method, and also incorporate HPLC method in the draft revision. Further, the committee decided to once again wide circulate the draft revision for a period of 30 days for eliciting public comments on modified draft **(including the HPLC method).**

**7.2 Revision of IS 7716: 1975 Method for testing efficacy of fumigation for disinfestation of grains in domestic bins [FAD 16 (24620)C]**

The committee reviewed the comments of decided to accept the comment received from Shri IC Chadda for converting g/m3 to ppm for all the gas concentration ranges mentioned in the draft revision of IS 7716 [FAD 16 (24620)C]. Further, the committee decided to finalize draft revision IS 7716 [FAD 16(24620)] for publication after incorporating agreed changes.

**ITEM 8 INTERNATIONAL ACTIVITIES**

The committee noted the information regarding Indian’s Vote for ballots received under ISO/TC 34/SC 4 Cereals and Pulses Sub-Committee and ISO/TC 93 Starches (including derivatives and by-products) Sub-Committee mentioned at Item 8.1 of Agenda. As the BIS (India) is currently an ‘P’ (Participating) member in ISO/TC 34/SC 4 and ISO/TC 93.

**ITEM 9 PROPOSAL FOR MERGING OF SECTIONAL COMMITTEES**

The committee noted that Foodgrains, Allied Products and Other Agricultural Produce Sectional Committee, FAD 16 and Ready-to-Eat Foods and Specialized Products Sectional Committee, FAD 24 are two interconnected committees and FAD 16 develops Indian standard on the primary foodgrain produce as well as their secondary processed products, while FAD 24 undertake standardization in the field of tertiary processed products of foodgrains such as bakery and savoury. The committee was also informed about the number of published standards under FAD 16 and FAD 24 along with the numbers of archived food product specification standards as per GoMs decision on rationalization of standardization and certification agencies in the food sector, under both the committees. The committee further noted that FAD 24, was carved out from FAD 16 for the purpose of proper maintenance of large number of standards, however, now, the no. of active standards has been decreased. Following detailed deliberation, the committee recommend to merge FAD 24 in FAD 16.

**10 ANY OTHER BUSINESS**

**10.1 Request of WDRA to reduce the distance between warehouses and other sources of fire such as factories, petrol pumps recommended in IS 16144:2014**

The committee deliberated in detail upon the request received from WDRA for reducing the distance between warehouses and other sources of fire such as factories, petrol pumps recommended at 4.2 (c) of IS 16144:2014. Based on the discussion held in panel, Shri IC Chadda, Convenor, FAD 16/Panel II expressed the risk of potential fire hazard on reduction of distance. Further, Dr. Anurag Tripathi, CWC, highlighted that reduction of distance between warehouses and other sources of fire such as factories, petrol pumps is detrimental to the safety parameter of stored food commodity. Benzene, toluene and xylene (BTX) belong to an important group of aromatic volatile organic compounds (VOCs) that are usually emitted from various sources such as petrol pumps gas stations. BTX play a vital role in the tropospheric chemistry as well as pose health hazard to human beings. Results show that the average concentration of benzene, toluene, and xylenes level around fuel stations remains 10.30, 4.09, and 2.47 ppm, respectively. All means of concentration values of BTX around fuel stations are exceeding the limits of air quality standards values. All of the BTX chemicals can produce neurological impairment, and exposure to benzene, which can additionally cause hematological effects including aplastic anemia and acute myelogenous leukemia. The impact of BTX decreases with increase in the distance from the source of emission i.e. petrol pump. For schools the threshold limit may be taken as 100 M because exposure is limited to study hours only. Whereas, in the conventional warehouses foodgrain stock regularly requires aeration and remains exposed to same micro/ macro climate for 24X7. In the instant case if we reduce the distance, it food commodities will be exposed to higher levels of BTX concentration, which may be detrimental to the health of end consumers. Following detailed deliberations, the committee decided to retain the existing minimum distance of 150 m between foodgrains warehouses and other sources of fire such as factories, petrol pumps etc.

**10.1** There being no any other business for discussions, the meeting ended with a vote of thanks by secretariat to the Chairperson FAD 16 and committee members.

**ANNEX I**

Attendance Sheet

28th Meeting of Foodgrains, Allied Products and Other Agricultural Produce Sectional Committee, FAD 16

**Date:** **20 August 2024 Venue: Virtual Mode (Through Webex)**

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| --- | --- | --- | --- |
| **S. No.** | **Organization** | **Name** | **E-mail** |
|  | ICAR–Central Institute of Post-Harvest Engineering & Technology, Ludhiana | Dr. Nachiket Kotwaliwale | Nachiket.kotwaliwale@icar.gov.in |
|  | CSIR–Central Food Technological Research Institute, Mysore | Mr. Vivek Babu CS | vivekbabu.cs@cftri.res.in |
| Dr. M S Meera | meera@cftri.res.in |
|  | Central Warehousing Corporation, New Delhi | Dr. Anurag Tripathi | anurag.cwc@cewacor.nic.in |
|  | Confederation of Indian Food Trade And Industry, New Delhi | Kannan B. | Kannan.B@itc.in |
|  | Confederation of Indian Industry, New Delhi | Mr. Himalaya Koul | himalaya@krblindia.com |
|  | Consumer Guidance Society of India, Mumbai | Mr. Sitaram Dixit | sitaram.dixit@gmail.com |
|  | Defence Food Research Laboratory, Mysore | Dr. Pal Murugan. M | palmurugan@dfrl.drdo.in |
| Ms. Sakshi Sharma |
|  | Directorate of Marketing and Inspection, Faridabad | Shri B K Tiwari | jtama-dmi@gov.in |
|  | Food Corporation of India (FCI), New Delhi | Ravi Kumar Sinha | raviksinha.fci@gov.in |
|  | G B Pant University of Agriculture and Technology, Pantnagar | Dr. Satish K. Sharma | sksharmajee@gmail.com  headfoodtech@gmail.com |
| Dr. Sweta Rai | swetafoodtec@gmail.com |
|  | ICAR–Central Institute of Post-Harvest Engineering and Technology, Ludhiana | Ms. Deepika Goswami | Deepika.Goswami@icar.gov.in |
|  | ICAR–Indian Institute of Pulses Research, Kanpur | Dr. Prasoon Verma | pv.kanpur@gmail.com |
|  | ICMR–National Institute Of Nutrition, Hyderabad | Dr. Ananthan | ananthan.nin@gmail.com |
|  | National Institute of Food Technology, Entrepreneurship and Management, Thanjavur | Mr. M. Loganathan | director@iifpt.in |
|  | National Sugar Institute, Kanpur | Dr. Ananthalakshmi Ranganathan | ananthuknocks@gmail.com |
|  | Protein Foods and Nutrition Development Association of India, Mumbai | Dr. Shashank Bhalkar | executivedirector@pfndai.org |
|  | Roller Flour Millers Federation of Inda, New Delhi | Shri D. V. Malhan | dvmalhan@rfmfoi.com  dvmalhan2003@yahoo.com |
|  | Vasantdada Sugar Institute, Pune | Dr. Kakasaheb Konde | kakasaheb.konde@gmail.com |
|  | Warehousing Development and Regulatory Authority, New Delhi | Shri Mukesh Sinha | mukesh.sinha@govcontractor.in |
|  | In Personal Capacity | Dr. Punit Chandra | chandra.punit@gmail.com |
|  | In Personal Capacity | Dr. S. C. Khurana | khurana183@gmail.com |
|  | In Personal Capacity | Shri I.C. Chaddha | icchadda@gmail.com |
|  | BIS Secretariat | Ms. Lavika Singh | fad16@bis.gov.in |

**Invitee**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Organization** | **Name** | **E-mail** |
| 1. | Central Warehousing Corporation, New Delhi | Ms. Reenu Banga | reenu.banga@cewacor.nic.in |