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BUREAU OF INDIAN STANDARDS
MINUTES

Name of the Committee	No. of Meeting	Date	Time	Venue
Water Purification Systems Sectional Committee, FAD 30	6th	**15 Feb 2023**	**10:30 AM**	Through WebEx

CHAIRPERSON:

Dr. Pawan Kumar Labhasetwar
Chief Scientist & Head
Water Technology and Management Division
CSIR-National Environmental Engineering Research Institute (NEERI), Nagpur

MEMBER SECRETARY:

Dr. Nitasha Doger
Scientist - D
Food & Agriculture Department,
Bureau of Indian Standards, New Delhi

ATTENDANCE SHEET– Please see ***Annex-A*** **(Page 6)**

Item 0 GENERAL

0.1 Welcome

Ms. Nitasha Doger, Member Secretary FAD 30 extended a warm welcome to the Chairperson and the members of Water Purification Systems Sectional Committee, FAD 30 to its 6th meeting and thanked them for sparing their valuable time for supporting BIS, the National Standards Body of India in its pursuit of standardization.

0.2 Opening Remarks by the Chairman, FAD 30

Dr. Pawan Kumar Labhasetwar extended a warm welcome to the members of the Committee to its 6th meeting. Dr. Labhasetwar, appreciated the the Experts panel FAD 30/ P-1 for expediting the task assigned to it in the last meeting of the Committee held on 8 February 2023 and sharing its recommendation with the Committee in such a short period for further deliberations in the Committee. The Chairman encouraged the members for fruitful deliberations during the meeting.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The Committee confirmed the minutes of the 5th meeting of Water Purification Sectional Committee, FAD 30 held on 8 February 2023 at BIS, New Delhi which were circulated vide e-mail dated 10 February 2023.

ITEM 2 DRAFT INDIAN STANDARDS COMPLETED WIDE CIRCULATION

2.1 Doc. No. FAD 30 (20096) Reverse osmosis based point-of-use water treatment system for drinking purposes — Specification (*First Revision of IS 16240*)

2.1.1 ***Proposed change in scope of IS 16240 with regard to capacity***

The Committee noted the information provided under agenda item **2.1.1** regarding the Expert Panel's recommendation to change product water capacity from "up to 25 litre per hour" to "up to 50 litre per hour" in the scope of IS 16240 and that the matter was referred to MoEF & CC to seek their views if extension in scope of IS 16240 upto 50 litres per hour capacity will have any implication on implementation notification issued by MoEF on 4th Oct 2021 called as *Environment (Protection) 115 Amendment Rules*, 2021 which covers Domestic water purification systems with a capacity of up to 25 litres per hour.

During the meeting, Dr. Sonu Singh representing MoEF & CC informed that modification in product water capacity from "up to 25 litre per hour" to "up to 50 litre per hour" in the scope of IS 16240 is a welcome change to ensure that the standard does not restrict design aspects of the product and supports enhanced recovery efficiency. Dr. Singh further informed that the matter is under consideration at MoEF&CC and they would be sending a formal communication to BIS in this regard expressing 'no objection' on extension in scope of IS 16240 upto 50 litre per hour.

The Committee requested MoEF & CC to send an early confirmation in this regard and decided to change product water capacity from "up to 25 litre per hour" to "up to 50 litre per hour" in the scope of IS 16240 subject to receipt of confirmation from MoEF&CC.

2.1.2 Issues referred back to the Expert Panel FAD 30/P-1 for further deliberations during 5th meeting of FAD 30 (held on 8 Feb 2023)

The Committee noted the information provided under agenda item **2.1.2** and deliberated on the report submitted by the expert panel on issues regarding use of hand held TDS meter as an alternative to inbuilt TDS display meter, concerns raised by FICCI w.r.t. TDS meter and suggestions made by Dr. Sandhya Shrivastva, Bhavan's Research Institute on microbiological testing in IS 16240.

The Committee deliberated on the recommendation of the Expert Panel and endorsed the recommendation of the Expert Panel. The Chairman of the Committee further emphasized that the provision TDS display using either of the available options, inbuilt TDS display meter, handled TDS meter or using IoT enabled display methods is an essential requirement in consumer interest for better understanding about TDS of the water after undergoing RO treatment and performance of the system in TDS reduction.

The Committee decided to finalize the draft revision document with the agreed modifications.

2.2 Doc. No. FAD 30 (16541): Point of Use (POU) Water Purification System for Arsenic Reduction —Specification

The Committee deliberated upon the recommendation of Dr. T.N.V.V. Rao on the comments on draft Indian standard Doc. No. FAD 30 (16541): Point of Use (POU) Water Purification System for Arsenic Reduction —*Specification* referred to him:

Sl. No.	Clause/ Sub-clause/ Para/Table/ Fig.No. commented	Justification	Proposed change	Recommendation from Dr. T.N.V.V. Rao
1.	**5.4.2** Daily Production and Life of the Filter Media	Instead of data logger, we would like to propose of having effective solution / mechanism to prevent the flow of water from exceeding the maximum flow declared by manufacturer for purification to happen. Additionally, the system may have mechanism of automatic cut-off when the flow is exceeded.	The manufacturer shall declare the life of the cartridge used for Arsenic removal in terms of liters of water purified, calculated at the level of maximum contaminant level claimed by the manufacturer. <u>There should be mechanism to ensure the flow of water does not exceed maximum flow supported for purification</u> <u>There can be an additional provision for automatic cut-off when the flow is exceeded.</u> If manufacturer suggests the regeneration of the media, a detailed procedure and the required attachments are to be provided by the manufacturer.	Agreed for the same and can be incorporated in the draft standard.
2.	**6.1** Maintenance of the product	It would be difficult for maintenance service provider to verify periodically the performance of effective reduction by visiting multiple consumers at multiple time period. Alternatively , the easy way to manage this is to give an inbuilt mechanism for easy communication to consumer on life or performance of filter / media and the indication about complete utilisation of filter / media.	Most of the Arsenic removal systems contain a replaceable treatment component critical for effective reduction of Arsenic. The product water shall be tested periodically by maintenance service provider to verify that the system is performing satisfactorily. <u>Alternatively, there can be mechanism to indicate the consumer about the performance of filter or media periodically and when the filter life is exhausted an indicator or such mechanism which can communicate to consumer about filter or media replacement or regeneration can be given</u>.	Agreed for the same and can be incorporated in the draft standard.

The Committee agreed to the proposed changes and decided to finalize the draft standard with modifications agreed during 5th and 6th meeting of the Committee.

ITEM 3 R&D PROPOSAL FROM CSIR- CSMCRI UNDER BIS FUNDING

The Committee noted the information provided under agenda item **3** regarding the revised R&D proposal received from CSIR- CSMCRI under '*BIS Guidelines for Funding R&D Projects'*. The Committee deliberated upon the proposal. The Committee considered that the proposal has suitably addressed the all the observations made by the Committee in its 5th meeting and decided to recommend the same to FADC for consideration and approval.

The Committee also requested that in line with '*BIS Guidelines for Funding R&D Projects'* a forwarding letter from CSIR- CSMCRI may be shared for the revised proposal.

ITEM 4 AGENDA ITEMS DEFERRED DURING 5TH MEETING OF THE COMMITTEE

4.1 Approval of Draft Standards for Wide Circulation (Review of IS 14724: 1999 for UV Water Disinfection System)

The Committee deliberated upon the report from the Expert Panel **FAD 30/P-4** for Review of IS 14724: 1999 for UV Water Disinfection System and the draft revision of IS 14724: 1999 prepared by the panel.

4.1.1 During the deliberations, Dr. Shveta Mahajan, Safe Water Network made following comments on the draft revision prepared by the panel:

(i) The water source suitable for use with the PoU disinfection system needs to be specified

(ii) UV sources needs to be specified as the same would have implication on selection of test organism for microbiological reduction testing.

(iii) There is repetition of requirements (leakage current and earthing resistance) under clause 5.3 on Electrical safety. The same needs to be relooked into for necessary correction.

(iv) Under clause 5.6.3 % drop on intensity of UV transmittance which triggers the 'No pass' system needs to be specified. Further, requirements for alarm system needs to be specified.

(v) Influent challenge preparation for turbidity test and adsorption test needs to be prescribed.

(vi) For microbiological testing, more detailed protocols, comprising apparatus/ reagents, influent challenge preparation, enumeration etc. are needed to incorporated suitably.

(vii) Sampling clause needs to be incorporated in the draft revision.

4.1.2 During the meeting, BIS secretariat made an observation that during the 4th meeting of the Committee which was held on 22 June 2022, comments received from Innovative Technocare Pvt. Ltd. on IS 14724 : 1999 were referred to the Expert Panel **FAD 30/P-4** with the request to take these comments into account while reviewing the standard. However, these comments have not been addressed in the report submitted by the panel

4.1.3 The Committee decided to refer back the draft revision to the Expert Panel **FAD 30/P-4** for further deliberations in light of the observations made at **4.1.1** and **4.1.2** above. The Committee also requested Dr. Shveta Mahajan, Safe Water Network to share their comprehensive comments on IS 14724 : 1999 for consideration and further deliberations by the panel.

4.2 New Work Item Proposals for Standardization (Indian Standard on Ultrafiltration (UF) Based Water Purification System)

The Committee deliberated upon the draft Indian Standard on Ultrafiltration (UF) based Water Purification System prepared by the Expert Panel **FAD 30/P-2** and decided to circulate the draft as P-draft amongst the Committee members for 30 days for comments.

5 Review of Indian Standards (IS 14724 : 1999)

The committee noted that revision of IS 14724: 1999 has already been initiated and work is under progress by the Expert Panel **FAD 30/P-4.** The Committee accordingly decided that IS 14724: 1999 may be reaffirmed while simultaneously taking up for revision

ITEM 6 TIME AND PLACE FOR THE NEXT MEETING

The Committee decided to hold the next meeting of t in consultation with the Committee Chair.

ITEM 7 ANY OTHER BUSINESS

There being no other business, the meeting ended with a hearty note of thanks to the Chair & the members.

Annex A

Attendance for the 6th meeting of Water Purification Systems Sectional Committee, FAD 30 held on 15th February 2023

Sl. No.	ORGANISATION	REPRESENTED BY
1.	CSIR-National Environmental Engineering Research Institute (NEERI), Nagpur	**Dr. P. K. Labhasetwar (CHAIRMAN)**
2.	Bhavan's Research Centre (Microbiology), Mumbai	Dr. Sandhya Shrivastava
3.	CSIR - Institute of Minerals and Materials Technology, Bhubaneswar	Dr. Jayant Kumar Pothal Shri Debabrata Singh
4.	Confederation of Indian Industry (CII), New Delhi	Shri J. S. K. Srinivasan Ms. Mamta Arora Budhiraja
5.	Consumer Education and Research Centre, Ahmedabad	Ms. Karuna Chauhan
6.	Consumer Electronics and Appliances Manufacturers Association, Noida	Shri Aditya Anil Shri Mohit Jain
7.	Development Alternatives, New Delhi	Dr. K. Vijaya Lakshmi
8.	Indian Water Works Association, Mumbai	Shri Anil Kumar Gupta
9.	Ministry of Environment Forest and Climate Change, New Delhi	Dr. Sonu Singh
10.	National Chemical Laboratory, Pune	Dr. Vinay M. Bhandari
11.	National Institute of Virology, Pune	Dr. Kavita Lole
12.	Safe Water Network, New Delhi	Dr. Shveta Mahajan
13.	Water Quality India Association, Mumbai	Dr. Neeraj Gupta
14.	In Personal Capacity	Dr. T. N. V. V. Rao
15.	Food & Agriculture Department, BIS, New Delhi	Smt. Nitasha Doger, Scientist-D & Member Secretary, FAD 30
	Invitees/also attended	
16.	CMD 2, BIS, New Delhi	Shri Shouvik Chanda
17.	CSIR-Central Salt and Marine Chemicals Research Institute, Bhavnagar	Dr. Anshul Yadav