

(ii) Dr. K S M S Raghavarao (*In personal capacity*)

The Committee further decided that on issues of specific interest and expertise, the above members may be invited in relevant Committee meetings or may be involved as experts in relevant expert panels, if required.

2.3.2 The Committee deliberated that it is important for Industry Associations to represent the interest of all its stakeholders in a neutral manner. In order to give equal opportunity to all the stakeholders, the Industry Associations are expected to periodically review and update their nominations particularly where the same member is representing the industry for more than 5 years. It is also important for the industry associations to protect the interest of MSME and to nominate at least one of the two members (Principal or Alternate) from MSME sector. The Committee accordingly requested the Industry associations in the Committee to review and update their nominations accordingly.

2.3.3 The Committee further deliberated that Task 737 from ePARINAM dashboard of Hon'ble Minister, Ministry of Consumers Affairs, Food and Public Distribution, New Delhi requiring action from BIS to reconstitute technical committees having members who have served more than 5 years may not be applicable in the case of FAD 14 Committee as the Committee has been reconstituted in the year 2020, after splitting of earlier Drinks and Drinking Water Sectional Committee, FAD 14 into three committees i.e., Drinking Water & Carbonated Beverages Sectional Committee, FAD 14, Alcoholic Drinks Sectional Committee, FAD 29 and Water Purification Systems Sectional Committee, FAD 30.

ITEM 3 DRAFT INDIAN STANDARDS COMPLETED WIDE CIRCULATION

3.1 The Committee noted the information provided under the agenda item 3 regarding revision of Indian standards IS 14543: 2016 and IS 13428: 2005 which were taken up with a view to amalgamate all the amendments issued to these standards till date. The draft revision document **FAD 14 (18833)WC** for Packaged Drinking Water (other than Packaged Natural Mineral Water) - Specification (*Third Revision* of IS 14543) and draft revision document **FAD 14 (18832) WC** for Packaged Natural Mineral Water - Specification (*Third Revision* of IS 13428) have completed WC period (60 days) on **26 March 2022**. The Committee also noted that finalization of these WCs were delayed due to the urgent need for issuance of Amendment No 8 to IS 14543: 2016 and Amendment No. 11 to IS 13428: 2005 for harmonization of labelling and packaging requirements in drinking water standards with the FSS Regulations. This was followed by additional comments received from CMD 2, BIS on microbiological requirements and from BIS labs particularly for incorporation of advanced instrumental test methods which were also referred to the Expert Panel (**FAD 14 : P8**) for deliberations and recommendations in the matter.

3.2 The Committee deliberated upon the reports of the three meetings of the Expert Panel (**FAD 14 : P8**) held on 16 December 2022, 24 May 2023 and 6 June 2023 indicating the comments received and recommendations of the Panel as provided in Annex IVA, Annex IV B and Annex IV C of the agenda. The Committee noted the following major changes in IS 14543 and IS 13428 as recommended by the Panel:

- (i) ISO 16266-2 which prescribes Most Probable Number (MPN) Method for detection and enumeration of *P. aeruginosa* has been incorporated as additional alternate alternative test method for *P. aeruginosa*.
- (ii) IS 3025 (Part 65) which applies inductively coupled plasma mass spectrometry (ICP-MS) for determination of selected elements has been referred for determination of various elements in Table 2 and Table 3 of IS 14543 as well as IS 13428.
- (iii) IS 3025 (Part 75) which prescribes method for determination of dissolved anions by liquid chromatography of ions has been referred for determination of chloride, fluoride, nitrate, nitrite and sulphate.
- (iv) IS 3025 (Part 2) which is inductively coupled plasma optical emission spectrometry (ICP-OES) based method has been referred for determination of silver, aluminum, selenium, antimony, cadmium, arsenic, lead, nickel.
- (v) IS 3025 (Part 78) which is continuous flow analysis method has been prescribed as an additional alternative test method for determination of Anionic surface active agents.
- (vi) Revision of the maximum permissible limit of Copper from 0.05 mg/l to 1 mg/l in Indian standard IS 14543 for Packaged Drinking Water (Other than Packaged Natural Mineral Water) — *Specification*

3.3 The Committee noted that major changes recommended by the Panel are for updation of the prescribed test methods standards particularly with respect to incorporation/ addition of advanced instrumental test methods for determination of various parameters in IS 14543 and IS 13428. The Committee endorsed the recommended changes/ modifications by the Panel in the draft revision of IS 13428, document ref: **FAD 14 (18832) WC** and draft revision of IS 14543, document ref: **FAD 14 (18833)WC**. However, for any modification in maximum permissible limit of Copper, the Committee deliberated that revision of the maximum permissible limit of Copper in IS 14543 for Packaged Drinking Water (Other than Packaged Natural Mineral Water) — *Specification* (as recommended by the Expert Panel) would entail parallel amendment in *Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011* as the standard is covered under mandatory BIS certification as per the FSS Regulations. The Committee also noted the information provided under agenda item 3.7 regarding ongoing discussion on maximum permissible limit of Copper in IS 14543 at Scientific Panel on Water & Beverages (Non-Alcoholic) of FSSAI where BIS is also participating.

3.4 The Committee accordingly decided to finalize the draft revision of IS 13428, document ref: **FAD 14 (18832) WC** and draft revision of IS 14543, document ref: **FAD 14 (18833)WC** incorporating recommended changes/ modifications by the Panel (except for the recommendation of to revise the maximum permissible limit of Copper in IS 14543) as provided in Annex V and Annex VI of the agenda for publication (*also refer decision at item 4 and item 5 below*).

ITEM 4 SUITABLE METHOD FOR REFERENCE IN IS 14543: 2016 FOR DETERMINATION OF AEROBIC MICROBIAL COUNT

4.1 The Committee noted that 'IS 5402: 2012, Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of Micro - Organisms - Colony - Count technique at 30°C' which is referred for determination of Aerobic Microbial Count (AMC) in IS 14543: 2016 has been revised and is superseded by following Indian standards:

(i) IS 5402 (Part-1):2021/ ISO 4833-1:2013 - Microbiology of the Food Chain - Horizontal Method for the Enumeration of Microorganisms, Part 1 Colony Count at 30° by the Pour Plate Technique

(ii) IS 5402 (Part-2):2021/ ISO 4833-2:2013 - Microbiology of the Food Chain - Horizontal Method for the Enumeration of Microorganisms, Part 2 Colony Count at 30° by the Surface Plating Technique"

4.2 The Committee considered the comments received from the members on suitable method for determination of AMC in packaged drinking water and recommended IS 5402 (Part-1):2021/ ISO 4833-1:2013 (which is based on pour plate technique) as a more suitable method for testing Aerobic Microbial Count Packaged drinking water (IS 14543). The Committee decided to refer the same in the finalized draft revision of IS 14543 (*Please refer item 3.4 above*).

ITEM 5 SUITABLE METHOD FOR REFERENCE IN IS 14543: 2016 & IS 13428: 2005 FOR DETERMINATION OF YEAST AND MOULD COUNT

5.1 The Committee noted that 'IS 5403 : 1999, Method for yeast and mould count of foodstuffs and animal feeds' which is referred for determination of yeast and mould count in IS 14543 : 2016 and IS 13428 : 2005 was based on ISO 7954 : 1987. ISO 7954 : 1987 has since been revised and split into two parts, ISO 21572-1 : 2008 and ISO 21572-2 : 2008. Both of these ISO standards have been identically adopted as follows:

(i) IS 16069 (Pt-1) : 2013/ ISO 21527-1 : 2008, 'Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of yeasts and moulds: Part 1 Colony count technique in products with water activity greater than 0.95' ; and

(ii) IS 16069 (Pt-2) : 2013/ ISO 21527-2 : 2008, 'Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of yeasts and moulds: Part 2 Colony count technique in products with water activity less than or equal to 0.95

5.2 The Committee deliberated on suitability of the above mentioned test methods for determination of yeast and mould count in packaged waters. The Committee recommended IS 16069 (Pt-1) : 2013/ ISO 21527-1 : 2008 as more suitable test method for yeast and mould count in packaged waters considering that water activity of pure water is 1 and the standard prescribes Colony count technique in products with water activity greater than 0.95. The Committee accordingly decided to refer the same in the finalized draft revisions of IS 14543 and IS 13428. (*Please refer item 3.4 above*).