

BUREAU OF INDIAN STANDARDS

MINUTES

INORGANIC CHEMICALS SECTIONAL COMMITTEE, CHD 01 26th MEETING

10:30 AM, Monday, 19 June 2023

WebEx Video Conferencing/

Auditorium, Bureau of Indian Standards

Manak Bhawan, New Delhi

Chairperson : Dr. Kannan Srinivasan, Director, CSMCRI

Member Secretary : Shri Sagar Singh, Bureau of Indian Standards (BIS)

Members present

1. Dr. Kannan Srinivasan, Director, CSMCRI
2. Dr. J.R. Chunawala, CSMCRI
3. Dr. Pratyush Maiti, CSMCRI
4. Dr Vishal Choudhary, Department of Chemicals & Petrochemicals (DCPC)
5. Shri K Srinivasan, Alkali Manufacturers Association of India
6. Shri H S Das, Alkali Manufacturers Association of India
7. Shri Brijesh Tomar, CQA(M), Kanpur, Ministry of Defence
8. Smt Richa Kundra, NTH
9. Smt. Anshumala Shukla, NTH
10. Shri PVVR Sarma, Geological Survey of India
11. Shri Nageshwar Kapuri, Hindalco
12. Shri Prasad, Hindalco
13. Shri NH Khan, Tata Chemicals
14. Shri Sojan Varghese, HUL
15. Smt Ankita Narvankar, HUL
16. Smt Ritu Grover, Delhi Jal Board
17. Shri Satyen Rohitkumar, Industrial Carbons Pvt. Ltd.
18. Shri Mandar Gaikwad, The Dharamsi Morarji Chemical Company Limited
19. Shri Ashok Nagarch, The Dharamsi Morarji Chemical Company Limited
20. Dr Trilochan Mishra, NML
21. Shri R S Baghel, in personal capacity
22. Shri MAU Khan, Consumer Voice
23. Dr. Prashant Sharma, NMDC
24. Shri Vibhuti Roshan, NMDC
25. Shri Bhavesh Vora, GACL
26. Shri V K Mahida, GACL
27. Smt S S Tripathy, NPL
28. Shri Rahul Dhanuka, Global Adsorbents Pvt Ltd
29. Shri Lalit Panda, Global Adsorbents Pvt Ltd
30. Shri D K Jain, in personal capacity
31. Shri O P Sharma, Department of Chemicals and Petrochemicals (DCPC)
32. Shri Pravin Likhar, ICT
33. Shri Kuldeep, The Dharamsi Morarji Chemical Company Limited

Invitees:

1. Prof V R Kanetkar, Institute of Chemical Technology, Mumbai
2. Shri P S Haridas, Navin Fluorine International Limited
3. Shri Sajal Jain, Indoborax
4. Shri Chandrakant Mody, Indoborax
5. Smt Laxmi Menon, Indoborax
6. Shri Vishal Patel, Prime Industries
7. Shri Naman Choudhary, Indianborax, Kolkata
8. Shri Anand Shetty, Organic Industries Pvt Ltd
9. Shri Pravir Shetty, Organic Industries Pvt Ltd
10. Shri Sritam Kumar Mishra, Organic Industries Pvt Ltd
11. Shri Girish Mehta, Borochemie India Pvt.Ltd
12. Shri Mitulkamar Patel, Rasoham Chemicals
13. Dr Hemlata, IIP
14. Dr Kishore, Gujarat Boron Derivatives
15. Dr Dinesh, Shree Tirupati Industries, Gujarat
16. Shri Naman Choudhary
17. Shri A K Mitra, MSME
18. Kumar Siddhartha, Chemexcil
19. Shri Ashok Mer, UPL
20. Shri Saurabh Tripathi, Cabot Sanmar Ltd
21. Dr Prashanta Kumar Jal, Cabot Sanmar Ltd
22. Shri DS Padmanabhan, Cabot Sanmar Ltd
23. Shri Sankarshan Joshi, All India Alum Manufacturer's Association

Item 1 WELCOME AND INTRODUCTORY REMARK**1.1 Welcome by BIS**

On behalf of BIS, Shri Ajay Lal (Head, Chemical Department) and Shri Sagar Singh (Member Secretary) welcomed the Chairman and all the participants present in the meeting and requested them to participate actively in the deliberations. Shri Ajay Lal highlighted that IS 10116 Boric Acid Specification is presently under mandatory certification. This standard specifies the requirements as well as the sampling and testing methods for boric acid used in the production of capacitors, electronics, nuclear energy, foundries, fireproofing of worker's apparel, glass and ceramics, explosives, refractories, paints, chemicals, dye intermediates, electroplating, leather, adhesives, and enamel. Three grades of boric acid are specified in the Standard based on the application - Special quality (SQ), Technical (TECH) and Explosive grade.

1.2 Opening remarks by the Chairman

Dr. Kannan Srinivasan, Director, CSMCRI welcomed all the members present in the meeting and called for collective effort of the members to formulate national standards of value. He requested all the members to participate actively in the meeting and advised them to give their inputs with regard to the chloride and sulphates contents of Boric Acid specification (IS 10116). He also highlighted the importance of this technical committee from International perspective (ISO/TC 47 Chemistry and ISO/TC 298 Rare Earth). He further requested all the members to participate actively in the meeting and advised them to give their inputs timely so that the process of standard formulation is not hindered.

Item 2 CONFIRMATION OF MINUTES OF THE 25th MEETING OF CHD 1

The Committee CONFIRMED the Minutes of the 25th Meeting of Inorganic Chemicals Sectional Committee, CHD 01 held on 15th March 2023 via Video Conferencing as circulated.

Item 3 COMPOSITION OF CHD 01

3.1 & 3.2 The Committee noted and reviewed the composition of CHD 1 given at **Annex I** and **Annex II** of the agenda and requested the Member Secretary to update the committee composition accordingly.

Item 4 SCOPE AND ACTIVITIES OF THE INORGANIC CHEMICALS SECTIONAL COMMITTEE, CHD 01

4.1 The Committee NOTED the information given at Item 4.1 of the agenda.

Item 5 REVIEW OF INDIAN STANDARDS

5.1 DOCUMENTS TO BE SENT FOR WIDE CIRCULATION

The Committee noted Item 5.1 of the agenda and decided to send these documents for Wide Circulation for a period of 2 months to receive inputs from various stakeholders. If no comments are received, then the documents are to be directly processed for printing. If comments are received, the same would be examined at BIS Sectt level and put up to the Chairman for his approval and decision for processing the documents for printing or discussion in next sectional committee meeting, as required.

Sl. No.	IS No.	Title
1	Doc No. CHD 01 () IS 251	Soda ash, technical — Specification (<i>fourth revision</i>)
2	Doc No. CHD 01 () IS 256	Specification for glauber salt (Sodium Sulphate, Decahydrate), technical (<i>first revision</i>)
3	Doc No. CHD 01 () IS 258	Potash alum — Specification (<i>second revision</i>)
4	Doc No. CHD 01 () IS 259	Specification for ammonium alum (<i>first revision</i>)
5	Doc No. CHD 01 () IS 260	Aluminium sulphate, non - Ferric — Specification (<i>second revision</i>)
6	Doc No. CHD 01 () IS 266	Sulphuric acid — Specification (<i>third revision</i>)
7	Doc No. CHD 01 () IS 297	Sodium sulphide, technical — Specification (Second Revision)
8	Doc No. CHD 01 () IS 381	Sodium silicate — Specification (Second Revision)
9	Doc No. CHD 01 () IS 494	Specification for aluminium stearate for lubricants (<i>first revision</i>)
10	Doc No. CHD 01 () IS 505	Light kaolin — Specification (<i>third revision</i>)

11	Doc No. CHD 01 () IS 566	Specification for disodium phosphate, dodecahydrate (<i>second revision</i>)
12	Doc No. CHD 01 () IS 567	Disodium phosphate, anhydrous — Specification (<i>second revision</i>)
13	Doc No. CHD 01 () IS 571	Monosodium phosphate specification (<i>second revision</i>)
14	Doc No. CHD 01 () IS 573	Trisodium phosphate — Specification (<i>fourth revision</i>)
15	Doc No. CHD 01 () IS 574	Glassy sodium metaphosphate specification (<i>fourth revision</i>)

5.2 DOCUMENTS UNDER PUBLICATION

The Committee noted Item 5.2 of the agenda.

5.3 REAFFIRMATION OF STANDARDS

The Committee noted Item 5.3 of the agenda and requested the members to provide inputs on the below Standards within a time frame of 1 month. If no comments are received, then the Standards are to be reaffirmed as such. If comments are received, the same would be examined at BIS Sectt level and put up to the Chairman for his decision or discussion in next sectional committee meeting, as required.

Sl. No.	IS No.	Title
1	IS 11673 (Part 1) : 2019	Sodium hypochlorite solution - Specification: Part 1 household and industrial use (Second Revision)
2	IS 11673 (Part 2) : 2019	Sodium hypochlorite solution - Specification: Part 2 water treatment use (Second Revision)
3	IS 1065 (Part 1) : 2019	Stable bleaching powder - Specification: Part 1 household and industrial use (Third Revision)
4	IS 1065 (Part 2) : 2019	Stable bleaching powder - Specification: Part 2 treatment of water intended for drinking

Item 6 COMMENTS ON PRINTED INDIAN STANDARDS

6.1 IS 10116 BORIC ACID – SPECIFICATION

The Committee noted Item 6.1 of the agenda and deliberated as follows:

1. Based on the decision in the last panel meeting held on 6th June 2023, views/inputs of user industries' association were taken by BIS Sectt vide email dated 9th June 2023. Letters were sent to approx. 15 user industries' association out of which 13 responded and all in favor of retaining the range of chloride and sulphates as currently prescribed in the Standard. 4 individual industries wrote to BIS that boric acid supply should have less levels of chloride and sulphates for better end application. The details were also enclosed in the agenda.

2. Prof V R Kanetkar, ICT Mumbai and Dr Vishal Choudhary, Dy Industrial Advisor, DCPC opined that chloride and sulphates are additives for polishing compounds rather than impurities

and agreed with the inputs received from user industries' associations to retain the range as prescribed currently in the Indian Standard, IS 10116:2015. Prof Kanetkar also emphasized on the need of incorporating instrumental test methods such as AAS, ICP-OES in the Standard.

3. Representatives from Indoborax proposed that no changes to be made in the Sulphate and Chloride ranges prescribed for the Technical Grade of Boric Acid as this product is used in several applications such as ramming mass in induction furnace where the presence of these elements is essential for optimum performance. They informed that the presence of polishing compounds - sulphate and chloride in the range currently specified in IS 10116 for Boric Acid technical grade provide durable and accident free furnace lining as the presence of polishing compounds inhibit corrosion.

4. However, representatives from Organic Industries, Shree Tirupati Industries, Navin Florine stressed that chlorides and sulphates are present as impurities in boric acid and therefore the values should be in terms of maximum permitted and proposed to revise the chloride and sulphates contents by putting a max limit (Chloride - 0.15 max, Sulphate – 0.25 max). They emphasized that they are manufacturing boric acid with low levels of chloride and sulphates (less than that specified in the Indian Standard). The Committee sought information from them about user industries' association for non-polishing compounds boric acid, however they couldn't provide the desired information.

5. BIS Sectt in the presence of Head (Chemical Department) suggested the Committee to think on possible solutions to address this matter as given below:

- a. Retaining the range of chloride and sulphates as currently prescribed in the Standard (based on the inputs and comments of user industries associations).
- b. Creating two sub grades under technical grade as it is commonly used/sold in the market incorporating both the requirements as one being polishing (clause 4.5 of IS 10116) and other being non-polishing.
- c. Instead of having a range, putting a max limit to chloride and sulphates content subject to the condition that these are not impurities and there is demand in the market.
- d. The Committee may consider to carry out a research based study/project on the above issues by some R&D Institute such as ICT, Mumbai etc and if required, BIS may provide the required funding for the same.

6. Dr Kannan Srinivasan, Chairman opined that the Standard was formulated in 2015 by judiciously and thoughtfully considering the functionality aspect and agreed with the viewpoint of user industries' associations and also concurred with BIS Sectt proposal as given above. He deliberated that the range of chloride and sulphates as currently prescribed in the Standard be retained as of now and a research based study/project by an R&D Institute such as ICT Mumbai may be initiated and be completed within a timeframe of 4-6 months. Based on the outcome of this research project, revision of the Standard may be further taken up, if required.

7. Chairman also emphasized that import/export data of high purity boric acid may also be sought from Department of Commerce & Department of Chemicals & Petrochemicals or any relevant stakeholder. Also, details of varieties of raw materials used/their suppliers, their distribution and end use may also be sought from the manufacturers of boric acid.

6.2 IS 798 : 2020 ORTHOPHOSPHORIC ACID — SPECIFICATION (Third Revision)

The Committee noted Item 6.2 of the agenda and decided that if no comments are received, then the amendment is to be directly processed for printing. If comments are received, the same would be examined at BIS Sectt level and put up to the Chairman for his approval and decision for processing the amendment for printing or discussion in next sectional committee meeting, as required.

Item 7 REVISION OF A5 STANDARDS

7.1 The Committee deliberated on Item 7.1 of the agenda and requested the Committee members to voluntarily take Standards from the list given below based on their interest and expertise and provide their comments to BIS Sectt within 1 month.

Sl. No.	IS No.	Title
1	IS 2317 : 1975	Method for gravimetric determination of sulphates (First Revision)
2	IS 2780 : 1964	Specification for sodium bromide, pure
3	IS 2797 : 1998	Potassium bromide - Specification (Third Revision)
4	IS 1540 (Part 1) : 1980	Specification for quick lime and hydrated lime for chemical industries: Part 1 quick lime (Second Revision)
5	IS 1540 (Part 2) : 1990	Quicklime and hydrated lime for chemical industries - Specification: Part 2 hydrated lime (Third Revision)
6	IS 4150 : 1984	Specification for potassium chloride, technical (Second Revision)
7	IS 4285 : 1967	Method for volumetric determination of calcium
8	IS 5305 : 1969	Method for volumetric determination of phosphorus
9	IS 5813 : 1970	Method for determination of crystallizing point
10	IS 10271 : 1982	Specification for anhydrous hydrogen fluoride, technical
11	IS 10332 : 1982	Specification for hydrofluoric acid, aqueous
12	IS 1040 : 1987	Specification for calcium carbide, technical (Third Revision)
13	IS 10614 : 1983	Method for atomic absorption spectrophotometric determination of sodium and potassium
14	IS 1078 : 1987	Specification for copper naphthenate (Second Revision)
15	IS 1089 : 1986	Specification for oleum, technical (Second Revision)
16	IS 10895 : 1984	Specification for copper nitrate
17	IS 10896 : 1984	Specification for aluminium hydroxide, technical
18	IS 10904 : 1984	Specification for sodium fluoride, technical
19	IS 1109 : 1980	Specification for borax (Second Revision)
20	IS 11112 : 1984	Specification for alumina, chromatographic grade
21	IS 11123 : 1984	Method for determination of copper by atomic absorption spectrophotometry
22	IS 11124 : 1984	Method for atomic absorption spectrophotometric determination of arsenic
23	IS 1113 : 1965	Specification for ammonium chloride, technical and pure (Revised)
24	IS 11224 : 1985	Specification for rock phosphate for chemical industries
25	IS 11236 : 1985	Specification for manganese acetate
26	IS 11237 : 1985	Specification for manganese carbonate
27	IS 11305 : 1985	Specification for thionyl chloride
28	IS 8814 : 1978	Specification for sodium metal
29	IS 8770 : 1978	Specification for artificial sea water for laboratory use
30	IS 11782 : 1986	Specification for sodium cyanide, technical
31	IS 12041 : 1987	Method for the determination of mercury by atomic absorption spectrophotometer
32	IS 12042 : 1987	Method for determination of molybdenum by atomic absorption spectrophotometer
33	IS 12046 : 1987	Method for the determination of manganese by atomic absorption spectrophotometer
34	IS 12074 : 1987	Method for determination of lead by atomic absorption spectrophotometer
35	IS 12122 : 1987	Method for determination of nickel by atomic absorption spectrophotometry
36	IS 2263 : 1979	Methods of preparation of indicator solutions (First Revision)

37	IS 1612 : 1976	Specification for iron powder (Reduction Grade) (First Revision)
38	IS 9189 : 1979	Method for determination of free chlorine in chlorinated organic liquid compounds (Colorimetric)
39	IS 9190 : 1979	Methods for determination of acidity and alkalinity in halogenated organic solvents and their admixtures
40	IS 9252 : 1979	Method for determination of zinc (Volumetric)
41	IS 9398 : 1987	Specification for silicon tetrachloride, technical (First Revision)
42	IS 9424 : 1979	Specification for sodium metasilicate
43	IS 2730 : 1977	Specification for magnesium sulphate (Epsom Salts) (First Revision)
44	IS 12178 : 1987	Specification for acetylene, black
45	IS 2881 : 1984	Specification for barytes for chemical industry and oil - Well drilling (Second Revision)
46	IS 3204 : 1978	Specification for limestone for chemical industry (First Revision)
47	IS 3205 : 1984	Specification for precipitated barium carbonate, technical (First Revision)
48	IS 3605 : 1984	Specification for bauxite for chemicals and petroleum industries (First Revision)
49	IS 3607 : 1979	Specification for magnesite for chemical industry (First Revision)
50	IS 9931 : 1981	Mercurimetric method for determination of chloride in inorganic chemicals
51	IS 4408 : 1979	Specification for sodium chloride, analytical reagent (First Revision)
52	IS 494 : 1970	Specification for aluminium stearate for lubricants (First Revision)
53	IS 5288 : 1980	Barium Chloride
54	IS 9497 : 1980	Method for determination of sodium and potassium (Flame Photometric)
55	IS 566 : 1984	Specification for disodium phosphate, dodecahydrate (Second Revision)
56	IS 5762 : 1970	Methods for determination of melting point and melting range
57	IS 9506 : 1980	Method for determination of sulphate (volumetric)
58	IS 5877 : 1971	Specification for barium sulphide, technical (Black Ash)
59	IS 7163 : 1989	Potassium iodide, pure and analytical reagent - Specification (First Revision)
60	IS 6015 : 1984	Specification for barium hydroxide (First Revision)
61	IS 6135 : 1981	Specification for soda ash, fused, technical (First Revision)
62	IS 6186 : 1986	Specification for bentonite (First Revision)
63	IS 6361 : 1971	Methods of colorimetric determination of phosphorus
64	IS 6605 : 1972	Specification for potassium chromate
65	IS 6655 : 1972	Methods of test for Sulphur
66	IS 6980 : 1983	Specification for tetrasodium pyrophosphate, anhydrous, technical (First Revision)
67	IS 7017 : 1973	Method for colorimetric determination of traces of heavy metals by dithizone
68	IS 7223 : 1986	Specification for potassium chloride, analytical reagent (First Revision)
69	IS 7541 : 1974	Specification for stabilized liquid sulphur trioxide
70	IS 8769 : 1978	Methods of determination of ash and sulphated ash
71	IS 8883 (Part 2/Sec 1) : 1978	Methods of sampling chemicals and chemical products: Part 2 sampling equipment: Sec 1 for solids
72	IS 8883 (Part 2/Sec 2) : 1978	Methods of sampling of chemicals and chemical products: Part 2 sampling equipment: Sec 2 for liquid
73	IS 8883 (Part 2/Sec 3) : 1978	Methods of sampling chemical and chemical products: Part 2 sampling equipment: Sec 3 for gases

Item 8 NEW SUBJECT FOR STANDARD FORMULATION

8.1 Fumed Silica

The Committee noted Item 8.1 of the agenda and decided that the draft document on Fumed Silica be circulated among the Committee members for their review and inputs within 1 month time frame. The inputs to be received will be taken up for deliberation of the Committee in its next meeting.

Item 9 INTERNATIONAL ACTIVITY

9.1 ISO/TC 47 Chemistry

The Committee noted Item 9.1 of the agenda and requested the Member Secretary to get the delegation approved by the Committee for attending the next Meeting of ISO/TC 47 scheduled in Sumida City (Japan) from 7-9 November 2023.

Item 9.2 ISO/ TC 298 Rare Earth

The Committee noted Item 9.2 of the agenda and requested the Member Secretary to get the delegation approved by the Committee for attending the next Meeting of ISO/TC 298 scheduled in South Korea from 10-13 October 2023.

Item 10 DEVELOPMENT OF STRATEGIC ROAD MAP OF SECTIONAL COMMITTEES

The Committee noted Item 10 of the agenda.

Item 11 PROCESS REFORMS BY BIS

The Committee noted Item 11 of the agenda and agreed to give the desired inputs on priority.

Item 12 ANY OTHER BUSINESS

The Committee requested the Member Secretary to seek inputs from the members on the proposal received from Global Adsorbents Pvt. Ltd (placed at Annex-VII of the agenda). The same would be taken up for deliberation of the Committee in its next meeting.

Item 13 DATE AND PLACE OF NEXT MEETING

The date and place of next meeting will be informed to all members in consultation with the chairman tentatively within 3 months timeframe, preferably at CSMCRI, Bhavnagar or any other city as mutually agreed by the members.

Item 14 VOTE OF THANKS

The Chairman proposed for Industrial Visits by BIS Sectt for knowledge enhancement which will contribute significantly to the Standardization process and improve the quality of Indian Standards. The meeting ended with the hearty vote of thanks to the chair.