

No. WQ-11021/1/2020-WQ-DDWS-149  
Government of India  
Ministry of Jal Shakti  
Department of Drinking Water and Sanitation  
(National Jal Jeevan Mission)

4<sup>th</sup> Floor, Antyodaya Bhawan,  
CGO Complex, Lodhi Road,  
New Delhi – 110 003  
Dated July 10, 2023

To

The Addl. Chief Secretary/ Principal Secretary/ Secretary  
Rural Water Supply/ PHE Department,  
All States/ UTs

**Subject:** Usage of Certified Reference Materials for testing/ calibration in laboratories – regarding  
**Madam/ Sir,**

As you are aware, under JJM, States/ UTs have been advised to conduct water quality testing for all drinking water sources at least once for chemical parameters and at least twice for bacteriological parameters (Pre and Post monsoon) in a year also at household level/ delivery points including schools and anganwadis.

2. During the testing/ calibration, Certified Reference material (CRM) is being used in laboratories. Council of Scientific & Industrial Research – National Physical Laboratory (CSIR-NPL), New Delhi is producing indigenously developed CRM trademarked as Bharatiya Nirdeshak Dravya (BND) in collaboration with various accredited reference material producers (RMPs) in different domains. As per Bureau of Indian Standards (BIS) and National Accreditation Board for Testing and Calibration Laboratories (NABL), the BNDs are produced using stringent manufacturing procedures following ISO accreditation standards and therefore have international equivalence to Certified Reference Materials (CRMs) produced by any international NMI like NIST, USA. Moreover, these are much cheaper than the reference materials produced and supplied by foreign manufacturers. The list of available BNDs is **enclosed** for ready reference. Also available at weblink [https://www.nplindia.org/wp-content/uploads/2023/05/list\\_available\\_BNDs.pdf](https://www.nplindia.org/wp-content/uploads/2023/05/list_available_BNDs.pdf) (under food and chemical category). These BNDs may be listed on GeM Portal soon.

3. Usage of these BNDs may help in making testing/ calibration process more economical and in promoting Government of India's Make in India policy and Atmanirbhar Bharat Abhiyaan, which is about self-sustaining and self-reliant domestic manufacturers.

4. The State/UTs are, therefore, advised to explore for using these Bharatiya Nirdeshak Dravya (BNDs) as Certified Reference Materials for testing/ calibration in laboratories, after due examination of techno-economic feasibility.

**Encl:** As above

Yours faithfully,

  
(Ajay Kumar)  
Director (WQ)

**Copy to:** Engineer-in-Chief/ Chief Engineer, In-charge Rural Water Supply, All States/ UTs for information and necessary action



### Price List 2023-24: Certified Reference Material

S. no.	CRM no.	CRM Description	Pack size	HSN Code	Price
1	BND1003	Copper Standard Solution (1000 ppm)	100ml	38220090	2856
2	BND1004	Nickel Standard Solution (1000 ppm)	100ml	38220090	2856
3	BND1005	pH Buffer Solution 4.00	500ml	38220090	4032
4	BND1006	pH Buffer Solution 7.00	500ml	38220090	4032
5	BND1007	pH Buffer Solution 9.00	500ml	38220090	4032
6	BND1008	Conductivity Std Solution 1.41ms/cm	500ml	38220090	8456
7	BND1009	Nitrate Standard Solution (1000 ppm)	500ml	38220090	5992
8	BND1010	Lead Standard Solution (1000 ppm)	100ml	38220090	3080
9	BND1011	Arsenic Standard Solution (1000 ppm)	100ml	38220090	3080
10	BND1012	Mercury Standard Solution (1000 ppm)	100ml	38220090	3752
11	BND1013	Cadmium Standard Solution (1000 ppm)	100ml	38220090	2968
12	BND1014	Silver Standard Solution (1000 ppm)	100ml	38220090	3416
13	BND1015	Zinc Standard Solution (1000 ppm)	100ml	38220090	2856
14	BND1016	Potassium Hydrogen Phthalate	45g	38220090	5040
15	BND1017	Potassium dichromate	45g	38220090	4312
16	BND1018	Sodium chloride	45g	25010090	4500
17	BND1019	Iron Standard Solution (1000 ppm)	100ml	38220090	3304
18	BND1019	Iron Standard Solution (1000 ppm)	500ml	38220090	8960



### Price List 2023-24: Certified Reference Material

S. no.	CRM no.	CRM Description	Pack size	HSN Code	Price
19	BND1020	Potassium Standard Solution (1000 ppm)	100ml	38220090	2856
20	BND1021	Total Dissolve Solids (1000 ppm)	500ml	38220090	4032
21	BND1022	pH Buffer Solution 9.2	500ml	38220090	4032
22	BND1023	Sodium Carbonate	45g	38220090	5880
23	BND1024	Calcium Carbonate	20g	38220090	5880
24	BND1025	Chromium Standard Solution (1000 ppm)	100ml	38220090	3304
25	BND1026	Aluminum Standard Solution (1000 ppm)	100ml	38220090	3416
26	BND1027	Sodium standard Solution (1000 ppm)	100ml	38220090	3416
27	BND1028	Fluoride Standard Solution (1000 ppm)	500ml	38220090	5992
28	BND1029	Sulphate Standard Solution (1000 ppm)	500ml	38220090	5992
29	BND1030	Calcium Standard Solution (1000 ppm)	100ml	38220090	3416
30	BND1031	Barium Standard Solution (1000 ppm)	100ml	38220090	3752
31	BND1032	Manganese Standard solution (1000 ppm)	100ml	38220090	3416
32	BND1033	Nitrite Standard Solution (1000 ppm)	500ml	38220090	5992
33	BND1034	Bromate Standard Solution (1000 ppm)	100ml	Available	Soon
34	BND1035	Selenium Standard Solution (1000 ppm)	100ml	Available	Soon
35	BND1036	Antimony Standard Solution (1000 ppm)	100ml	38220090	5656
36	BND1037	Boron Standard Solution (1000 ppm)	100ml	38220090	5656



### Drinking Water Parameter wise CRMs list

Sr. No.	Specific Test Performed	CRMs to be used in water analysis as per IS/APHA method
1.	Colour	Platinum Cobalt Color Standard Solution – 500 Hazen
2.	Turbidity	Turbidity standard solution 1000 NTU
3.	pH at 25 °C	pH buffer solution 4.00 pH buffer solution 7.00 pH buffer solution 9.00 pH buffer solution 9.20 pH buffer solution 10.00
4.	Total Dissolved Solids	Total Dissolved Solids 1000 PPM
5.	Total Hardness (as CaCO <sub>3</sub> )	Calcium Carbonate
6.	Calcium (as Ca)	Calcium Carbonate
7.	Chloride (as Cl)	Sodium Chloride
8.	Total Alkalinity (as CaCO <sub>3</sub> )	Sodium Carbonate
9.	Sulphate	Sulphate Standard Solution 1000 PPM
10.	Fluoride	Fluoride Standard Solution 1000 PPM
11.	Nitrite	Nitrite Standard Solution 1000 PPM
12.	Nitrate	Nitrate Standard Solution 1000 PPM Potassium Dichromate Potassium Chloride
13.	Iron	Iron Standard Solution 1000 PPM
14.	Arsenic	Arsenic Standard Solution 1000 PPM
15.	Sodium	Sodium Standard Solution 1000 PPM
16.	Potassium	Potassium Standard Solution 1000 PPM
17.	Conductivity	Conductivity Standard Solution 1.41 ms/cm Conductivity Standard Solution 0.147 ms/cm Conductivity Standard Solution 12.8 ms/cm