



**भारतीय मानक ब्यूरो**  
**BUREAU OF INDIAN STANDARDS**

Address : 3<sup>rd</sup> Floor, Navjivan Amrut Jayanti  
Bhavan, Behind Gujarat Vidyapith, Off.  
Ashram Road, Ahmedabad 380014

Phones : 079-27540317, 27540318, 27540319,  
27540320, 27540314

Fax : 079-27540636

E-mail : abo@bis.org.in/

Web : http://www.bis.org.in

Ahmedabad Branch Office

Our Ref: CM/L- 7200195907

Date: 07-12-2020

मेसर्स जे हेच इंटरकेम.

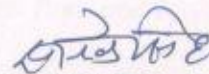
प्लॉट न. 309 /A, फेज II, बायर प्राइवेट लिमिटेड के सामने,  
जी आई डी सी, वापी, वलसाड - 396 195. गुजरात. भारत.

इस पत्र के साथ निम्नलिखित संलग्न करके आपको भेजा जा रहा है। कृपया इस संबंध में आवश्यक कदम उठाए।  
आपसे अनुरोध है कि आप इसकी पावती भिजवा दें।

Please find enclosed following for necessary steps at your end. Kindly acknowledge the receipt of this  
communication and confirm.

1. आवेदन पत्र की पावती Acknowledgment letter for receipt of Application.
2. मानक मुहर का प्रयोग करने के लिए आवेदन पत्र की प्राप्ति के संबंध में Letter regarding receipt of Application to use this Standard Mark.
3. नमूनों के परीक्षण के लिए अनुरोध पत्र Letter of request for sample testing.
4. मुहरांकन फीस में परिवर्तन की सूचना देने के लिए Letter intimating revision of Marking fee.
5. शाखा कार्यालय द्वारा लाइसेंस स्वीकृति की सूचना Intimation about grant of Licence by BO.
6. नवीकरण के लिए नोटिस Renewal notice.
7. लाइसेंस की वैधता अवधि समाप्त होने का सूचना पत्र Letter intimating expiry of Licence.
8. अपूर्ण आवेदन पत्र लौटाने के बारे में पत्र Letter regarding returning of incomplete application.
9. आवेदन पत्र पूरी तरह अस्वीकार करने के बारे में पत्र Letter summarily rejecting the application.
10. आवेदन पत्र को अस्वीकार करने का नोटिस Notice for rejection of application.
11. नए लाइसेंस द्वारा जारी किए जाने वाले विज्ञापनों के संबंध में निर्देश Instruction regarding advertisements to be issued by new licences.
12. लाइसेंस नवीकरण के लिए स्मरण पत्र Reminder renewal notice.
13. लाइसेंस देने (स्वीकृति) के लिए प्रक्रिया संबंधी सूचना बुकलेट भेजना Supply of information of procedure for grant of licence.
14. आस्थगन पत्र Deferment letter/मुहरांकन रोकना Stop marking
15. आवेदन-पत्र संबंधी कमियाँ Discrepancies regarding application.
16. मुहरांकन पुनः आरंभ Resumption of marking.
17. लाइसेंस की स्वीकृति Grant of Licence.
18. आवेदन-पत्र समाप्ति सूचना Application Closure Notice.
19. लाइसेंस समाप्ति सूचना Licence Expiry Notice.
20. असफल नमूना (आवेदक) / (लाइसेंस) Failure sample (applicant) / (licence).
21. पृष्ठांकन Endorsement FOR RENEWAL OF LICENCE / & CHANGE OF ADDRESS.
22. INCLUSION OF VARIETIES.
23. अन्य Other. GRANT OF LICENCE .& LICENCE DOCUMENT.
24. भारतीय मानक के विक्रय संबंधी / Regarding sales of IS specification

संलग्न / उपरोक्तानुसार।

  
( एस. के सिंह. )

वैज्ञानिक-ई एवं प्रमुख



सत्यमेव जयते  
Government of India

भारतीय मानक ब्यूरो

उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय  
भारत सरकार

**BUREAU OF INDIAN STANDARDS**

Ministry of Consumer Affairs, Food & Public Distribution  
Government of India

अहमदाबाद शाखा कार्यालय / Ahmedabad Branch Office

तीसरा तल, नवजीवन अमृत जयंती भवन, गुजरात विद्यापीठ के पीछे, ऑफ आश्रम रोड, अहमदाबाद - 380 014 दूरभाष : 079-27540317, 27540318 ई-मेल : ahbo@bis.gov.in वेबसाइट : www.bis.gov.in  
3<sup>rd</sup> Floor, Navjivan Amrut Jayanti Bhavan, Behind Gujarat Vidyapith, Off. Ashram Road, Ahmedabad - 380 014. Tel.: 079-27540317, 27540318 Email : ahbo@bis.gov.in Website : www.bis.gov.in

Our Ref : AHBO/CM/L 7200195907

Dated: 07-12-2020

Subject: Grant of BIS Certification Marks Licence No 7200195907 per IS 11673 : PART 2:2019.

M/S. J H INTERCHEM.  
PLOT NO 309/A, PHASE II, OPP. BAYER PVT. LTD.,  
GIDC, VAPI,  
VALSAD-396195. GUJARAT.INDIA.

Dear Madams(s)/Sir,

With reference to your application, we are pleased to inform you that the Certification Marks Licence has been granted to you to use the Standard Mark in respect of the followings:

IS NO	IS 11673 : PART 2:2019.
Product	SODIUM HYPOCHLORITE SOLUTION - SPECIFICATION PART 2 WATER TREATMENT USE
Grade/Class/Type/Variety	Grade 1 and Grade 2

1. The licence is granted on the explicit condition that you will mark entire/substantial production which conforms to the Indian Standards.

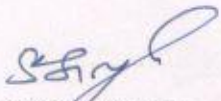
2. The number assigned to this licence is CM/L- 7200195907 which has been made operative from 2020-11-18 and is valid upto 2021-11-17. The licence number should invariably be referred to in your future correspondence.

According to sub-regulation (1) & (3) of Paragraph 5 of scheme I of Schedule II under Bureau of Indian Standards (Conformity of Assessment) Regulation, 2018, the annual licence fee of Rs. 1000.00 and the marking fee for use of standard mark as per Annexure-I of Scheme I of BIS (Conformity assessment) Regulation 2018 is payable by you with effect from 2020-11-18 for the period of validity of the licence licence in advance.

3. Minimum marking fee stipulated in Annexure -I of scheme I of BIS (Conformity Assessment) Regulation 2018 is payable by you regardless of the whether you actually mark your product or not with the Standard Mark. **Our Receipt No. 0072PC2020002630 dated 2020-11-18** for the licence fee and the minimum marking fee for the first operative period is already issued.

4. This advance minimum marking fee will be carried over to the next year on every renewal. The actual marking fee calculated on the unit rate on the production marked or the minimum marking fee, whichever is higher shall be payable by you at the time of renewal.
5. With a view to streamlining the reporting of quantity marked, calculation and collection of marking fee on the unit rate basis, fees will be calculated on the production marked during the first nine months of operation of the licence at the time of first renewal, and on the production marked during twelve months comprising the last three months of the previous operative year and the first nine months of the current operative year, at the time of the second and subsequent renewals. In case the licence expires, the entire production marked till the expiry date shall be taken into account for calculating the marking fee payable.
6. The Scheme of Testing and Inspection as specified by BIS will have to be implemented by your organization strictly and completely. This supervision of the operation of the Scheme shall be done by a person responsible for the quality control function in your organization. Kindly inform us the name and designation of the person who will be held responsible for the operation and maintenance of the Scheme. Any future change in this respect will have to be communicated by you to us as and when these take place.
7. We are enclosing a sheet giving the preferred dimensions of the Standard Mark to enable you to prepare the designs of the Standard Mark for marking the above product. Photographic reduction in any size is permissible. This will ensure the relative proportions of the different dimensions maintained. Preferred dimensions be used as far as possible.
8. On commencement of marking of your product for which you are licensed, you may advertise your product with Standard Mark in various media only during the validity of your licence. The use of Standard Mark on letterheads and publicity literature will be permitted only on receipt of your assurance that in the event of cancellation or lapsing of your licence, the Standard Mark on your letterheads, publicity literatures etc. will be destroyed/obliterated.
9. This licence is granted for your factory situated at **PLOT NO 309/A, PHASE II, OPP. BAYER PVT. LTD. GIDC, VAPI, VALSAD-396195. GUJARAT.INDIA.** Privileges under the licence shall not be exercised by any other firm company/factory etc. This licence is not transferable in the event of shifting the manufacturing and testing equipment from the licensed premises to some other place, use of Standard Mark shall be stopped till the new premises are inspected and found to be satisfactory by us in respect of manufacturing and testing facilities available there and the address of the new premises is endorsed in the licence.

Thanking You,

  
( S K SINGH )  
SCIENTIST-E AND HEAD

Encl :As above



भारतीय मानक ब्यूरो  
BUREAU OF INDIAN STANDARDS

Ahmedabad Branch Office

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27540320,27540314

Fax : 079-27540636

E-mail : abo@bis.org.in/

Web : http://www.bis.org.in

Our Ref: CM/L- 7200195907

Dated : 07-12-2020

To:

M/S. J H INTERCHEM.  
PLOT NO 309/A, PHASE II, OPP. BAYER PVT. LTD.,  
GIDC, VAPI,  
VALSAD-396195. GUJARAT.INDIA.

Dear Madam(s)/Sir(s),

**Subject : Advertisement to be issued by the new licensees.**

By obtaining the BIS Certification Marking Licence you have joined the large family of licensees operating the BIS Certification Marking Scheme.

As you are, no doubt, aware that consumers are anxiously looking for products conforming to the standard and they would be interested to know the new BIS Licensees. It is, therefore, necessary that the fact that your product has been covered under a BIS Licence should be made known far and wide and for this purpose we would suggest that you advertise this fact in the newspapers giving this information and details of your product for which the licence has been granted. To create a better image in the consumer's mind, the standard mark which has been granted may also be displayed in the advertisements in regional newspapers to obtain better coverage.

**YOU MAY ALSO CONSIDER HAVING ADDITIONAL PUBLICITY THROUGH OTHER MEDIA SUCH AS RADIO OR TV.**

We do hope that you would implement the above suggestions and we would request you to send us the text of your advertisement for our approval together with entire advertisement/ publicity programme for the year.

Thanking you,

Yours faithfully,

  
( S.K. SINGH )

SCIENTIST-E & HEAD.

## (Licence No. CM/L -7200195907)

### Conditions of the licence

- (1) The design of Standard Mark shall be identical to the facsimile given in the licence.
- (2) The photographic enlargement or reduction of the Standard Mark may also be used, unless otherwise specified by the Bureau.
- (3) The licensee shall be responsible for the conformity of the goods, article, process, system or service to the Indian Standard in relation to which Standard Mark is used or applied.
- (4) The licensee shall not use the Standard Mark in relation to goods, articles, process, system or service which are non-conforming or outside the scope of the licence.
- (5) If goods and articles in relation to which a Standard Mark has been used do not conform to the requirements of the relevant standard, the Bureau may direct the licensee or his representative to recall such non-conforming goods.
- (6) The Standard Mark shall not be used or applied in relation to any goods, article, process, system or service during deferment or suspension, or, after expiry or cancellation of the licence.
- (7) The licensee shall comply with the provisions of the conformity assessment scheme under which licence is granted, including labelling and marking requirements.
- (8) The licensee shall maintain records as specified by the Bureau from time to time.
- (9) The licensee shall provide the Bureau all assistance in connection with carrying out inspection or audit at its premises.
- (10) The licensee shall provide information relating to production and use or applying of Standard Mark as and when it is required by the Bureau.
- (11) If the licence is granted to use or apply Standard Mark on goods or articles, the licensee shall provide the list of consignees, distributors, dealers or retailers to whom goods or articles With Standard Mark is supplied.
- (12) The licence shall not be transferred to any person without approval of the Bureau.
- (13) If a complaint regarding quality of any goods, article, process, system or service bearing Standard Mark is established, the Bureau may direct the licensee or his representative to repair or replace or reprocess the standard marked goods and articles.
- (14) The Bureau shall have the right to amend any of the conditions of licence by giving a notice of not less than one month to the licensee.

उपाबंध

(अनुज्ञप्ति सं. सीएम/एल.....)

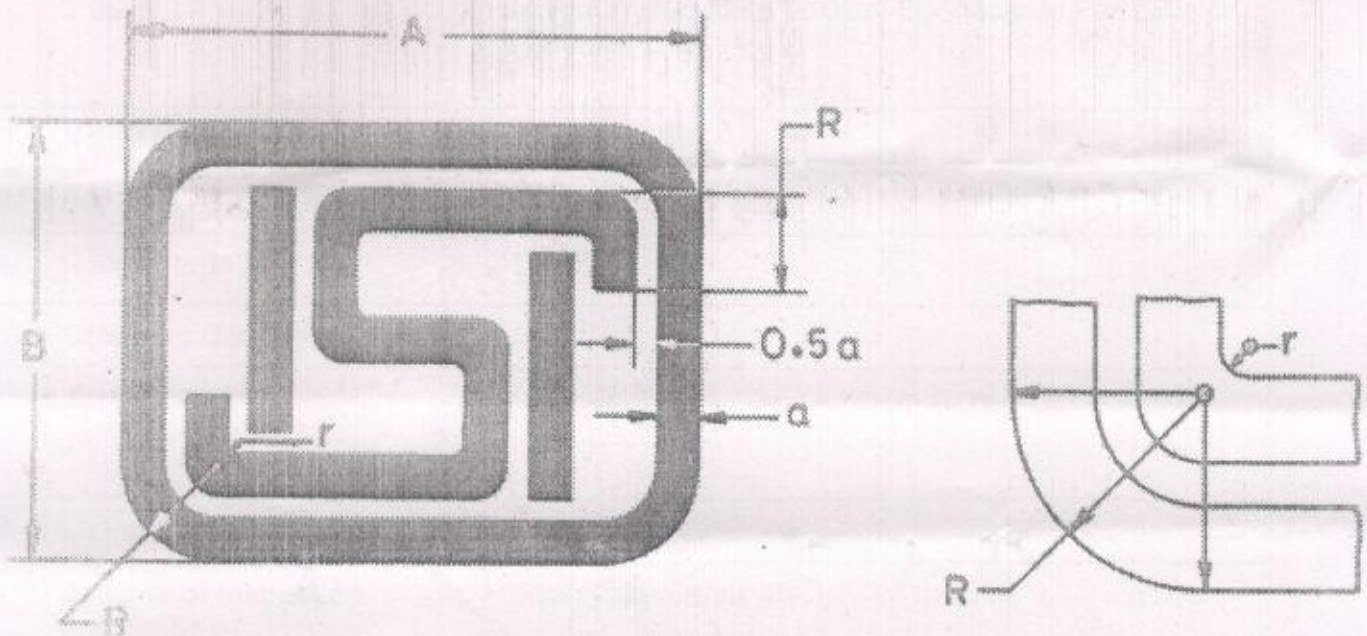
अनुज्ञप्ति की शर्तें

- (1) मानक चिन्ह का डिजाइन अनुज्ञप्ति में दी गई गई प्रतिकृति के आनुपंगिक होगा।
- (2) मानक चिन्ह के फोटोग्राफिक विस्तार अथवा लघुकरण का उपयोग भी किया जा सकता है, जब तक ब्यूरो द्वारा कोई अन्य विनिर्दिष्ट न दिए गए हों।
- (3) अनुज्ञप्तिधारी उस संबद्ध माल, वस्तुओं, प्रक्रिया, प्रणाली अथवा सेवा की भारतीय मानक के अनुसार अनुरूपता के लिए उत्तरदायी होगा जिसके लिए मानक चिन्ह का उपयोग अथवा अनुप्रयोग किया गया है।
- (4) अनुज्ञप्तिधारी उस माल, वस्तुओं, प्रक्रिया, प्रणाली अथवा सेवा के लिए मानक चिन्ह का उपयोग नहीं करेगा जो गैर-अनुरूप अथवा अनुज्ञप्ति के विषय-क्षेत्र से बाहर है।
- (5) जिस माल और वस्तुओं के लिए मानक चिन्ह का उपयोग किया गया है अगर वे संबद्ध मानक की अपेक्षाओं के अनुरूप नहीं हैं, तो ब्यूरो अनुज्ञप्तिधारी अथवा उसके प्रतिनिधि को ऐसे गैर-अनुरूपता वाले माल को वापिस लेने का निर्देश दे सकता है।
- (6) अनुज्ञप्ति के आस्थगन अथवा निलंबन के दौरान अथवा उसकी समाप्ति अथवा रद्द होने के पश्चात् किसी संबद्ध माल, वस्तु, प्रक्रिया, उपयोग अथवा सेवा के लिए मानक चिन्ह का उपयोग अथवा अनुप्रयोग नहीं किया जाएगा।
- (7) अनुज्ञप्तिधारी को उस अनुरूपता आकलन योजना के उपाबंधों का पालन करना होगा जिसके अंतर्गत उसे अनुज्ञप्ति प्रदान किया गया है, जिसमें लेबलिंग और चिन्हांकन अपेक्षाएं भी शामिल हैं।
- (8) अनुज्ञप्तिधारी ब्यूरो द्वारा समय-समय पर यथा-विनिर्दिष्ट अभिलेख अनुरक्षित रखेगा।
- (9) अनुज्ञप्तिधारी अपने परिसरों में निरीक्षण अथवा लेखापरीक्षा करने से संबंधित सभी प्रकार की सहायता ब्यूरो को उपलब्ध कराएगा।
- (10) अनुज्ञप्तिधारी उत्पाद और मानक चिन्ह के उपयोग अथवा अनुप्रयोग से संबंधित जानकारी जब अपेक्षा ब्यूरो को प्रदान करेगा।
- (11) यदि माल अथवा वस्तुओं पर मानक चिन्ह का उपयोग अथवा अनुप्रयोग के लिए अनुज्ञप्ति प्रदान किया गया हो तो अनुज्ञप्तिधारी को उन परेपिती, वितरकों, व्याहारी अथवा फुटकर विक्रेता की सूची देनी होगी, जिनको मानक चिन्ह वाले माल अथवा वस्तुओं की आपूर्ति की गई है।
- (12) ब्यूरो के अनुमोदन के बिना अनुज्ञप्ति किसी व्यक्ति को अंतरित नहीं किया जाएगा।
- (13) मानक चिन्ह वाले किसी माल, वस्तुओं, प्रक्रिया, प्रणाली अथवा सेवा से संबंधित शिकायत प्रमाणित होने पर ब्यूरो अनुज्ञप्तिधारी अथवा उसके प्रतिनिधि को मानक मुहरांकित माल और वस्तुओं की मरम्मत अथवा बदलने अथवा पुनर्निर्माण के निर्देश दे सकता है।
- (14) अनुज्ञप्तिधारी को कम से कम एक माह के नोटिस दे कर ब्यूरो, अनुज्ञप्ति की किसी शर्त को संशोधन का अधिकार रखता है।

# GENERAL INSTRUCTIONS ON SIZES OF ISI MONOGRAM TO BE USED BY LICENSEES UNDER BIS CERTIFICATION MARKS SCHEME

Refer to the Standard Mark indicated in your licence. Regarding size please note that :

- a) Photographic reduction in any size of Figure 1 is permissible ; and
- b) Preferred dimensions as given in Table 1 be used as far as possible.



**FIG.1**

**TABLE 1 PREFERRED DIMENSIONS OF ISI MONOGRAM**

All dimensions in millimetres

A	B	a	R	r	SIZE OF LETTERS
2.5	1.9	0.2	0.4	-	1.0 mm
5	3.8	0.4	0.8	0.1	1.0 mm
10	7.5	0.7	1.7	0.2	2.0 mm
20	15	1.5	3.3	0.5	3.0 mm
40	30	2.9	6.7	1.0	4.0 mm
80	60	5.9	13.4	1.9	6.0 mm
160	120	11.7	26.7	3.8	10.0 mm
320	240	23.4	53.4	7.6	16.0 mm



**PRODUCT MANUAL FOR**  
**Sodium Hypochlorite Solution Part 2 Water Treatment Use**  
**According to IS 11673 (Part 2):2019**

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification/licence/certificate.

1.	<b>Product</b>	:	IS 11673(part2):2019
	<b>Title</b>	:	Sodium Hypochlorite Solution-Specification Part2 Water Treatment Use.
	<b>No. of amendments</b>	:	0
2.	<b>Sampling Guidelines</b>	:	None
a)	<b>Raw material</b>	:	Not Applicable
b)	<b>Grouping Guidelines</b>	:	None
c)	<b>Sample Size</b>	:	500ml X 2 No.s
3.	<b>List of Test Equipment</b>	:	Please refer Annex - A
4.	<b>Scheme of Inspection and Testing</b>	:	Please refer Annex –B
5.	<b>Possible tests in a day</b>	:	All tests except keeping quality as per IS 11673(part2):2019
6.	<b>Scope of the Licence :</b>		
	Licence is granted to use Standard Mark as per IS11673 (part2):2019 with the following scope:		
	<b>Name of the product</b>	Sodium Hypochlorite Solution-Specification Part2 Water Treatment Use.	
	<b>Variety</b>	Grade 1/Grade 2.	





PM/ 11673 ( Part 2)/  
1 Oct 2020

**Annex – A**  
**PRODUCT MANUAL FOR**  
**Sodium Hypochlorite Solution part2 Water Treatment Use**  
**According to IS11673(part2):2019**

**List of Test Equipment**  
**Major test equipment required to test as per requirements of Indian Standard.**

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Description(Cl 4.1)	Visual
2	Relative Density at 25°c(Cl 4.3 and Sl.No 1 of Table1)	Capillary stoppered relative density bottle or Twaddell or Baume Hydrometer, Weighing Balance —Least Count 0.1 mg., Water Bath,chromic acid,sulphuric acid,Alcohol,Ether.
3	Available Chlorine(Cl 4.3 &Sl.No 2 of Table1)	Weighing balance with accuracy of 0.001g,Laboratory equipment, glassware and Reagents: Glacial Acetic Acid, Starch Indicator Solution, Potassium Iodide —Iodate-free, Standard Sodium Thiosulphate Solution (Hypo ), distilled water
4	Total Chlorine(Cl 4.3 &Sl.No 3 of Table1)	Weighing balance with accuracy of 0.001g,Laboratory equipment, glassware and Reagents: Iron Indicator Solution, Concentrated Nitric Acid, Standard Sodium Chloride Solution, Standard Potassium Thiocyanate Solution, Standard Silver Nitrate Solution, Sodium Metabisulphite, Potassium Chromate, distilled water
5	Free Alkali (Cl. 4.3&Sl.No 4 of Table1)	Weighing balance with accuracy of 0.001g, Suction pump, Laboratory equipment, glassware and Reagents: Barium Chloride Solution, Standard Hydrochloric Acid, Hydrogen Peroxide Solution, Phenolphthalein Indicator Solution, Sodium Hydroxide Solution, distilled water
6	Free Sodium carbonate(Cl. 4.3&Sl.No 5 of Table1)	Weighing balance with accuracy of 0.001g, Laboratory equipment, glassware and Reagents: Standard Hydrochloric Acid, Dilute Hydrogen Peroxide Solution, Standard Sodium Hydroxide Solution, methyl red-bromocresol mixed indicator solution, distilled water
7	Iron – (Cl. 4.3 &Sl.No 6 of Table1)	Weighing balance with accuracy of 0.001g, Nessler cylinders (50 ml), Silica dish, Laboratory equipment, glassware and Reagents: Ammonium Persulphate, Butanolic Potassium Thiocyanate Solution, ferrous ammonium sulphate, sulphuric acid, potassium permanganate, distilled water
8	Sodium chlorate – (Cl. 4.3 &Sl.No 7 of Table1)	Apparatus as per Annex G of IS 11673 (Part 1), and Reagents: Concentrated Hydrochloric Acid, Sodium Bromide Solution, Potassium Iodide Solution, Standard Sodium Thiosulphate Solution, Starch Indicator Solution
9	Lead(Cl. 4.3 &Sl.No 8 of Table1)	Nesslers cylinder 100ml capacity, Lead nitrate, Acetic acid, Hydrogen sulphide gas apparatus, Analytical balance. <b>ICP -OES method:</b> Inductive coupled plasma optical emission Spectrophotometer, Argon gas supply, Radio frequency generator, Mass flow Controller, Nebulizer, Multi

		<p>lement standard reference material, general lab ware like Auto Dispensing pipettes etc.</p> <p><b>AAS Method:</b> IS 12074:1987</p> <p>Atomic Absorption spectrophotometer with Lamp current, Air support, Acetylene gas supply, Flame stichiometry, Wavelength of working range, Pure lead metal(Lead CRM), Conc. HNO<sub>3</sub>, Conc. HCL</p>
10	Arsenic(Cl. 4.3 &Sl.No 9 of Table1)	<p><b>Modified Gutzeit method:</b> Distillation setup, Modified Gutzeit Apparatus/Spectrophotometer, Analytical balance, Distilled water, Concentrated Hydrochloric acid, Hydra zinc Sulphate, Sodium Bromide, Lead Acetate, Filter paper strips, Absorbent Cotton Wool, Mercuric Bromide Paper, Dilute Sulphuric Acid, Potassium Iodide, Stannous Chloride, Zinc granules, Arsenic trioxide, Sodium hydroxide</p> <p><b>Silver Diethylcarbamate Method:</b> Silver diethyl carbamate, Pyridine, rectified spirit, ether, Silvernitate, ConcHCL, Potassiumiodide, Stannous chloride, Zincgranules, Apparatus for determination of arsenic, Spectrophotometer &amp; Other necessary glass ware.</p> <p><b>AAS Method:</b> Atomic absorption spectrophotometer(with lamp current-7mA, Support-Air, Fuel-Acetylene, Wave length) Conc HCL, Conc HNO<sub>3</sub>, Conc. H<sub>2</sub>So<sub>4</sub>, Potassium Iodide, Sodium Borohydride, Standard Arsenic Solution/CRM.</p>
11	Mercury(Cl. 4.3 &Sl.No 10 of Table1)	<p><b>Mercury Analyser Method:</b> Mercury analyser, Analytical Balance, Conc. HCL, Stannous chloride, Hydroxyl amine hydrochloride, Mercuric chloride, Potassium dichromate, Potassium permanganate &amp; Other necessary glassware.</p>
12	Manganese (Cl. 4.3 &Sl.No 11 of Table1)	<p>Weighing balance, Nessler's cylinder 100ml capacity, Dil HNO<sub>3</sub>, Dil Phosphoric acid, Potassium periodate, Conc H<sub>2</sub>So<sub>4</sub>, Manganese sulphate monohydrate, Hot plate/Heating mantel.</p> <p><b>ICP-OES Method:</b> Inductive coupled plasma optical emission Spectrophotometer, Argon gas supply m Radio frequency generator, Mass flow controller, Nebulizer, Multielement standard reference material, general lab ware like Auto Dispensing pipettes etc</p> <p><b>AAS Method:</b> IS 12046:1987</p> <p>Atomic Absorption spectrophotometer with Lamp current, Air support, Acetylene gas supply, Flame stichiometry, Wavelength of working range, Manganese metal(CRM),</p>



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		Dil. HNO <sub>3</sub> , Dil. HCL, general lab ware like Auto Dispensing pipettes etc
13	Total Chromium (Cl. 4.3 & SI.No 12 of Table 1)	<p>Calorimetric method: Sulphuric acid, Phosphoric acid, Diphenylcarbazide, Ethanol, Bromine water, Potassium iodide solution (16%), Sodium hydroxide solution (30%), Neutral sodium sulphite solution, Potassium dichromate, Conc HCL, Aluminium metal, Weighing Balance, Spectrophotometer, Hot plate/Heating mantle.</p> <p><b>ICP-OES Method:</b> Inductive coupled plasma optical emission Spectrophotometer, Argon gas supply Radio frequency generator, Mass flow Controller, Nebulizer, Multi element standard reference material, general lab ware like Auto Dispensing pipettes etc</p> <p><b>AAS Method:</b> IS 13319:1992 (Wet method) Atomic Absorption spectrophotometer with Lamp current, Air support, Acetylene gas supply, Flame stichiometry, Wavelength of working range, Metallic chromium (CRM) Conc. HNO<sub>3</sub>, Conc. HCL, Conc H<sub>2</sub>So<sub>4</sub>, Dil HCL, , Kjeldahl flask, general lab ware like Auto Dispensing pipettes etc</p>
14	Cadmium ( Cl. 4.3 & SI.No 13 of Table 1)	<p><b>AAS Method:</b> IS 3025(part 41):1992 Atomic Absorption spectrophotometer with Cadmium hollow-cathode lamp or multielement hollow-cathode lamp for use at 228.8 nm. Lamp current, Air support, Acetylene Flame, Flame stichiometry, Wavelength of working range, Conc HCL, Conc. HNO<sub>3</sub>, Dil HNO<sub>3</sub>, Standard cadmium sol, Stock cadmium sol</p> <p><b>ICP-OES Method:</b> Inductive coupled plasma optical emission Spectrophotometer, Argon gas supply Radio frequency generator, Mass flow controller, Nebulizer, Multielement standard reference material, general lab ware like Auto Dispensing pipettes etc</p>
15	Selenium (Cl. 4.3 & SI.No 14 of Table 1)	<p><b>ICP-OES Method:</b> Inductive coupled plasma optical emission Spectrophotometer, Argon gas supply Radio frequency generator, Mass flow controller, Nebulizer, Multielement standard reference material, general lab ware like Auto Dispensing pipettes etc</p>

The above list is indicative only and may not be treated as exhaustive.



Annex – B

**PRODUCT MANUAL FOR  
Sodium Hypochlorite Solution part2 Water Treatment Use  
According to IS11673(part2):2019**

**SCHEME OF INSPECTION AND TESTING**

**1. LABORATORY** - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

**2. TEST RECORDS** – The manufacturer shall maintain test records for the tests carried out to establish conformity.

**3. PACKING AND MARKING** – The Standard Mark as given in Schedule of the license shall be incorporated indelibly on each package of Sodium Hypochlorite Solution, provided always the material thus marked conforms to all the requirements of the specification.

3.1 Packing, marking and storing shall be done as per the provisions of the Indian Standard. In addition, BIS Licence No. CM/L-.... and details of BIS website shall be marked on each package as follows: "For details of BIS certification please visit [www.bis.gov.in](http://www.bis.gov.in)"

**4. CONTROL UNIT** – For the purpose of this scheme, the entire quantity of sodium hypochlorite solution of one grade manufactured at a time in one reaction vessel/tank shall constitute a control unit.

**5. LEVELS OF CONTROL** - The tests as indicated in column 1 of Table 1 and the levels of control in column 2 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standards and covered by the license should be marked with Standard Mark.

**6. STORAGE** – Instructions for storage as given in the Indian Standard shall be complied

**7. REJECTIONS** – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016. A separate record shall be maintained giving information relating to all such rejections/defective/substandard material of the production not conforming to the requirements of the Specification and the method of its disposal. Such material shall in no case be stored together with that conforming to the Specification.



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**TABLE**  
**1 LEVELS OF**  
**CONTROL**  
**SCHEME OF INSPECTION AND TESTING**

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Clause	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
4.1	Description	4.1	IS11673(part2):2019	R	01	Each control unit	
4.3 & Table 1	Relative Density	4.3 and Table 1	IS11673(part1):2019	R	01	Each control unit	
-Do-	Available Chlorine	4.3 and Table 1	IS11673(part1):2019	R	02	Each control unit	Both shall pass
-Do-	Total Chlorine	4.3 and Table 1	IS11673(part1):2019	R	02	-do-	-do-
-Do-	Free Alkali	4.3 and Table 1	IS11673(part1):2019	R	01	-do-	
-Do-	Free Sodium carbonate	4.3 and Table 1	IS11673(part1):2019	R	01	-do-	
-Do-	Iron	4.3 and Table 1	IS11673(part1):2019	R	01	-do-	
-Do-	Sodium chlorate	4.3 and Table 1	IS11673(part1):2019	R	01	-do-	
-Do-	Lead	4.3 and Table 1	Annex A of IS11673(part2):2019	R	01	-do-	