

ANNEX E

CM/PF 310  
June 1989

ACCEPTANCE OF SCHEME OF TESTING AND INSPECTION

This is with reference to your letter No.....dated .....

We hereby agree that after a licence is granted to us for Packaged Drinking Water (Other Than Packaged Natural Mineral Water) as per IS 14543 : 2004, we shall follow the Scheme of Testing and Inspection [ Doc : STI/14543/6, August 2005 ] strictly and maintain all records properly.

Signature :

Name :

Designation :

Seal :

Place :

Date :

NOTE – The Scheme of Testing and Inspection is enclosed.

**SCHEME OF TESTING AND INSPECTION  
FOR CERTIFICATION OF PACKAGED DRINKING WATER  
(OTHER THAN PACKAGED NATURAL MINERAL WATER)  
ACCORDING TO IS 14543:2004  
(with 2 Amendments)**

**1.0 LABORATORY-** A laboratory shall be maintained, which shall be suitably equipped and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

**1.1** All the testing equipments shall be periodically checked for continued suitability. Calibrations of Analytical Balance and Temperature Indicators of Incubators shall be got done at least once in year from approved agencies. Calibration of other equipments may be done as per their respective instrument manuals. Records of such checks/calibration shall be maintained.

**2.0 TEST RECORDS-** All records of tests and inspection shall be kept in suitable forms approved by the Bureau of Indian Standards (See Forms 1 to 8). Copies of any records and other connected papers that may be required by the Bureau shall be made available at any time on request.

**3.0 QUALITY CONTROL-** It is recommended that, as far as possible, Statistical Quality Control (SQC) methods may be used for controlling the quality of the product during production as envisaged in this Scheme [See IS 397(Part 1):2003, IS 397 (Part 2):2003 and IS 397 (Part 3):2003].

**3.1** In addition, efforts should be made to gradually introduce a Quality Management System in accordance with IS/ISO 9001 and Hazard Analysis and Critical Control Points (HACCP) in accordance with IS 15000.

**4.0 STANDARD MARK** - The Standard Mark(s), as given in Column (1) of the First Schedule of the Licence shall be clearly marked legibly and indelibly on the label of the bottle/container or on the pouch as the case may be, provided always that the material on which this Mark is applied conforms to every requirement of the specification. The dimension of standard mark shall be in accordance with preferred specified design.

**5.0 PACKING** - The Packaged Drinking Water shall be packed as per clause 3.2, clause 6 and Annex B of IS 14543:2004. The pouches and bottles/containers shall be supplied in secondary packaging as agreed to between the purchaser and the supplier.

**6.0 MARKING** - In addition to the Standard Mark as per clause 7.3 of IS 14543 the following information shall be given legibly & indelibly on each bottle/container or its label or directly printed on the pouch/bottle/container on pouches:

- a) Name of the product (i.e. Packaged Drinking Water)
- b) Name and full address of the processor (i.e. manufacturer);
- c) Brand Name, if any;
- d) Batch or Code Number/Control Unit No.;
- e) Date of processing/packing;
- f) Treatment of disinfection, if any;
- g) Best for consumption upto\_\_ (date/month/year in capital letters); OR Best for consumption within\_\_\_\_days or months from the date of packing;
- h) Net volume;
- i) Direction for storage; and
- j) Any other marking required under the *Standards of Weights and Measures (Packaged Commodities) Rules, 1977* and the *Prevention of Food Adulteration Act, 1954* and Rules framed thereunder.
- k) Recycling symbol as per IS 14535

**6.1** Each secondary packing of pouches shall be marked with the following:

- a) Indication of the source of manufacture of pouch;
- b) Number of pouches of 200/250/300/500 ml.; and
- c) Brand name, if any

**6.2** Each secondary packing of bottles/containers shall be marked with the following:

- a) Nominal capacity; and
- b) Batch No. or Code No.

**6.3 Labeling Prohibitions** - The label on the bottles/containers, pouches and/or the secondary packaging shall not contain claims which are prohibited as per clause 7.2 of IS 14543:2004.

**7.0 LEVELS OF CONTROL-** The tests as indicated in Table 1 and at the levels of control specified therein, shall be carried out on the whole production of the factory covered by this Scheme and appropriate records maintained in accordance with clause 2 of this Scheme. Entire production which conforms to the Indian Standard and covered by the licence shall be marked with Certification Mark of the Bureau.

**7.1 CONTROL UNIT** - For the purpose of this Scheme, the quantity of packaged drinking water treated/processed from same raw water source and filled/packed in one day shall constitute a Control Unit.

**7.1.1** On the basis of tests and analysis results, the decision regarding conformity or otherwise of a Control Unit to the given requirement shall be made.

**7.2** In respect of all other clauses of the Standard (other than those mentioned under Levels of Control - Table 1 of this Scheme) the factory shall maintain appropriate controls and checks to ensure that their product conforms to the various requirements of the standard.

**7.3** The material shall be held for 48 hours before despatch so as to ensure that it conforms to all the requirements applicable for "Each Control Unit" except for the tests of Aerobic Microbial Count at 20°C to 22°C and Yeast & Mould which shall be reviewed for conformity on availability of their reports on completion of their test durations i.e., 3 days and 5 days respectively.

**7.4 Microbiological Requirements** - As and when a failure is noticed in any of the microbiological requirements in a control unit during in-process quality control, the control unit shall not be despatched. Also the previous control units available in stock shall be released into the market only after rechecking. The manufacturer should reject or re-process the entire previous defective stock including the control unit found failing.

**7.4.1** The licensee shall take immediate corrective actions, which would involve complete investigation of the reasons for contamination and non-conformity. The manufacturer should re-start marking and despatch only after the completion of satisfactory corrective actions and availability of satisfactory results of all microbiological tests as applicable for each control unit, for next five consecutive control units. The original frequency of despatch after 48 hours shall be restored, if all the five control units are found conforming to the microbiological requirements. The manufacturer shall keep complete records of such instances for review by BIS.

**8.0 RAW WATER** - The source water used in production of Packaged Drinking Water may be initially tested for Colour, Odour, Taste, Turbidity, pH, Total Dissolved Solids, Microbiological & Chemical requirements including Toxic Elements & Pesticides Residues and Radioactive Residues. Subsequently, its quality may be regularly assessed at least once in three months through in-house testing for Colour, Odour, Taste, Turbidity, pH, Total Dissolved Solids and Microbiological requirements. In addition, any other requirements as considered necessary for process control, are to be tested where the incidence of their presence in higher levels has been detected during the previous tests.

**8.1** Whenever, the quality of processed water is found to be not meeting the requirements of Table 2, Table 3 & Clause 5.3 of IS 14543, the source water shall be checked again for such parameters in which failure is observed for deciding upon the necessary controls to be exercised for conformance of quality of processed water to IS 14543.

**8.2** In case non-conformity is observed for radioactive residues, the source of raw water shall be abandoned.

**8.3** As and when there is change in source of raw water, it shall be intimated to BIS. The raw water collected from the new source shall be tested in accordance with Clause 8.0 as above and the processed water produced from such raw water shall be tested for conformity to IS 14543. The reports of raw water and the product water produced from the new source shall be submitted to BIS for approval before commissioning for regular production and marking.

**8.4** The raw water collected from the source shall be treated as per clause 3.2 of IS 14543:2004. In case the licensee carries out remineralisation as part of its treatment process, the ingredients used shall conform to the requirements of PFA Act 1954 Act & the Rules framed there under.

**8.5** The means adopted for disinfection of the product water shall be declared and shall be done in accordance with Clause 3.2 of IS 14543.

**8.6 Plastic Bottles/Containers** - The plastic container used for packing the material shall conform to IS 15410:2003. The conformity assessment shall be carried in accordance with the levels of controls as given under Table 2.

**8.6.1** In addition, the top lid for glasses/cups shall be of suitable peelable structure in accordance with Clause 4.2.1 of IS 15410:2003.

**8.7 Pouches** - The polyethylene film and pouches shall conform to IS 15609:2005. The conformity assessment shall be carried in accordance with the levels of controls as given under Table 3.

**8.8 REUSED CONTAINERS** - Licensee shall ensure use of only such jars for packing the product water whose transparency continues to meet the requirements as per IS 15410 even after its repeated use. Jars which get soiled, de-shaped and/or mutilated during the course of use and refilling shall not be used.

**8.9** Water to be used for the purpose of cleaning etc, IS 4251:1967 may be followed as Good Manufacturing Practices.

**9.0 HYGIENIC CONDITIONS-** The raw water and the Packaged Drinking Water shall be collected, processed, handled, stored, packed and marketed in accordance with the hygienic practices given under Annex B of IS 14543:2004. Other clauses shall also be complied in day to day production and quality control activities. Schedule for each activity for this purpose shall be displayed prominently in the factory premises and records of compliance shall be maintained for scrutiny by the Bureau. The hygienic conditions shall also be maintained at the site of raw water source. A check list for good hygienic practices and food safety system for packaged drinking water processing units is given in Annex C of IS 14543:2004.

**10.0 REJECTION-** A separate record providing the detailed information regarding the rejected control units and mode of their disposal shall be maintained. Such material shall in no case be stored together with that conforming to the specification.

**11.0 SAMPLES-** The licensee shall supply, free of charge, the sample(s) required in accordance with Bureau of Indian Standards (Certification) Regulations, 1988 (as subsequently amended) from its factory or godowns. The BIS shall pay for the samples taken by it from the open market.

**12.0 REPLACEMENT-** Whenever a complaint is received soon after the goods with Standard Mark have been purchased and used, and if there is adequate evidence that the goods have not been misused, defective goods are replaced free of cost by the licensee, in case the complaint is proved to be genuine and the warranty period (where applicable) has not expired. The final authority to judge conformity of the product to the Indian Standard shall be with BIS. The firm should have own complaint investigation system as per IS 15400.

**12.1** In the event of any damages caused by the goods bearing the standard mark, or claim being filed by the consumer against BIS Standard Mark and not "conforming to" the relevant Indian Standards, entire liability arising out of such non conforming products shall be of licensee and BIS shall not in any way be responsible in such cases.

**13.0 STOP MARKING-** The marking of the product shall be stopped under intimation to the Bureau if, at any time, there is some difficulty in maintaining the conformity of the product to the specification, or the testing equipment goes out of order. The marking may be resumed as soon as the defects are removed under intimation to BIS. The marking of the product shall be stopped immediately if directed to do so by BIS for any reason. The marking may then be resumed only after permission is given by the BIS. The information regarding resumption of markings shall also be sent to the Bureau.

**14.0 PRODUCTION DATA-** The licensee shall send to BIS, as per the enclosed proforma, a statement of the quantity produced, marked and exported by him and the trade value thereof during the half year ending 30 June and 31 December. This statement is required to be forwarded to BIS on or before the 31st day of July and January for the proceeding half-year.

.... **TABLE 1**

**IS 14543:2004**  
**PACKAGED DRINKING WATER**  
**(OTHER THAN PACKAGED NATURAL MINERAL WATER)**  
**TABLE 1 LEVELS OF CONTROL**  
**Para 7 of the Scheme of Testing and Inspection)**

TEST DETAILS				LEVELS OF CONTROL		REMARKS
Cl.	Requirement	Test Method		No. of Sample	Frequency	
		Clause	Reference			
5.1	Microbiological Requirement					
5.1.1	Escherichia coli	--	IS 5887 (Pt. 1)** or IS 15185	One	Each control unit	
5.1.2	Coliform Bacteria	--	IS 5401 (Pt. 1)** or IS 15185	One	Each control unit	
5.1.3	Faecal streptococci and Staphylococcus aureus	--	IS 5887 (Pt. 2)** or IS 15186	One	Once in month*	
5.1.4	Sulphite Reducing anaerobes	--	Annex C of IS 13428	One	Each control unit	
5.1.5	Pseudomonas aeruginosa	--	Annex D of IS 13428	One	Each control unit	
5.1.6	Aerobic Microbial Count	--	IS 5402	One	Each control unit	
5.1.7	Yeast & Mould count	--	IS 5403	One	Each control unit	
5.1.8	Salmonella and Shigella	--	IS 5887 (Pt. 2)**, 5587 (Pt. 7) or IS 15187	One	Once in month*	
5.1.9	Vibrio cholera and V parahaemolyticus	--	IS 5887 (Pt. 5)	One	Once in month*	

Note:

1. The requirements indicated with \* shall be got tested from outside approved laboratory
2. In case of dispute, the method indicated by \*\* in 5.1.1 to 5.1.3 & 5.1.8 shall be the referee method.

Table 1 (continued)

TEST DETAILS				LEVELS OF CONTROL		REMARKS
Clause	Requirement	Test Method		No. of Sample	Frequency	
		Clause	Reference			
5.2 and Table 1	i) Colour	-	IS 3025 (Part 4)	One	Every four hours	See Note 2
-do-	ii) Odour	-	IS 3025 (Part 5)	One	-do-	-do-
-do-	iii) Taste	-	IS 3025 (Part 8)	One	-do-	-do-
-do-	iv) Turbidity	-	IS 3025 (Part 10)	One	-do-	-do-
-do-	v) Total dissolved solids	-	IS 3025 (Part 16)	One	Each Control Unit	See Note 3
-do-	vi) pH	-	IS 3025 (Part 11)	One	Every four hours	See Note 2
5.2. and Table 2	i) Barium (as Ba)	-	Annex F of IS 13428** or IS 15302	One	Once in a week	See Note 4
-do-	ii) Copper (as Cu)	-	IS 3025 (Pt. 42)	One	-do-	-do-
-do-	iii) Iron (as Fe)	-	IS 3025(Pt 53)** or IS 15303	One	-do-	-do-
-do-	iv) Manganese (as Mn)	-	35 of IS 3025	One	-do-	-do-
-do-	v) Nitrate (as NO3)	-	IS 3025 (Pt. 34)	One	-do-	-do-
-do-	vi) Nitrite (as NO2)	-	IS 3025 (Pt. 34)	One	-do-	-do-
-do-	vii) Fluoride (as F)	-	23 of IS 3025	One	Once in six months	See Note 6
-do-	viii) Zinc (as Zn)	-	IS 3025 (Pt.49)	One	Once in a week	See Note 4
-do-	ix) Silver (as Ag)	-	Annex J of IS 13428	One	-Once in six months -See Note 6 also	-Once in a month for licensees using silver in any form. -See Note 5 also
-do-	x) Aluminium (as Al)	-	IS 3025 (Pt 55) or IS 15302**	One	Once in a week	See Note 4
5.2 & Table 2	xi) Chloride (as Cl)	-	IS 3025 (Pt 32)	One	Each control unit	
-do-	xii) Selenium((as Se)	-	IS 3025 (Pt 56) or IS 15303**	One	Once in six months	See Note 6
-do-	xiii) Sulphate ( as SO4)	-	IS 3025 (Pt. 24)	One	Each control unit	
-do-	xiv) Alkalinity as (HCO3 )	-	IS 3025 (Pt. 23)	One	Each control unit	
-do-	xv) Calcium (as Ca)	-	IS 3025 (Pt. 40)	One	Once in a week	See Note 4
-do-	xvi) Magnesium (as Mg)	-	IS 3025 (Pt. 46)	One	Once in a week	See Note 4
-do-	xvii) Sodium (as Na)	-	IS 3025 (Pt. 45)	One	Once in six months	See Note 6
-do-	Xviii ) Residual free chlorine	-	IS 3025 (Pt. 26)	One	Each control unit	
-do-	xix) Phenolic compounds (asC6 H5 OH)	-	IS 3025 (Pt. 43)	One	Once in a month	See Note 5
-do-	xx) Mineral Oil	-	IS 3025 (Pt. 39)	One	Once in a month	- See Note 5 also

TEST DETAILS				LEVELS OF CONTROL		REMARKS
Clause	Requirement	Test Method		No. of Sample	Frequency	
		Clause	Reference			
						-May be tested preferably from outside approved lab
-do-	xxi) Anionic surface active agents (as MBAS)	-	Annex K of IS 13428	One	Once in a week	See Note 4
-do-	xxii) Sulphide (as H <sub>2</sub> S)	-	IS 3025 (Pt 29)	One	Once in a week	See Note 4
-do-	xxiii) Antimony (as Sb)	-	Annex G of IS 13428*** or IS 15303	One	Once in a month	See Note 5
-do-	xxiv) Borate (as B)	-	Annex H of IS 13428	One	-do-	See Note 5
5.2 & Table 3	i) Mercury (as Hg)	-	IS 3025 (Part 48)	one	Once in six months	See Note 6
-do-	ii) Cadmium (as Cd)	-	IS 3025 (Pt 41)	one	-do-	-do-
	iii) Arsenic (as As)	-	IS 3025 (Pt 37)	one	-do-	-do-
-do-	iv) Cyanide (as CN)	-	IS 3025 (Pt 27)	one	-do-	-do-
-do-	v) Lead (as Pb)	-	IS 3025 (Part 47)	one	-do-	-do-
-do-	vi) Chromium (as Cr)	-	Annex J IS 13428	one	-do-	-do-
-do-	vii) Nickel (as Ni)	-	Annex L IS 13428	one	-do-	-do-
-do-	viii) Polychlorinated bi-phenyle (PCB)	-	Annex M of IS 13428	one	-do-	-do-
-do-	ix) Poly-nuclear aromatic hydrocarbons	-	APHA 6440	one	-do-	-do-
5.2. & Table 4	i) Alpha emitters	-	IS 14194 (Pt.2)	one	Once in two years	
	ii) Beta emitters	-	IS 14194 (Pt.1)	one	-do-	
5.3	Pesticide residues i) Individually ii) Total	5.3.1 -do-	Annex D of IS 14543 -do-	one -do-	Initially once in six months for 1 <sup>st</sup> operative period. Thereafter once in a year -do-	See Note 1 below.

\*\*\* Shall be got tested from recognized laboratory using internationally established test method as specified in Annex D of IS 14543

Note 1 Operative period for the purpose of testing pesticide residues shall begin from 1 September 2005. For existing licensees, in case no failure is observed during the first operative period (sample tested every 6 months) the frequency of such test may be reduced to one year. In case any failure is observed, the frequency shall be increased to once in three months. The original frequency of once in 6 months may be restored only if two consecutive samples pass.

Note 2 In case of failure in any requirement like colour, odour, taste, turbidity and pH, the frequency to be increased from every four hours to every hour for one month. Thereafter frequency of every 4 hours may be restored if all the samples during the month are found passing.

Note 3 In case of failure in total dissolved solid, the frequency to be increased from each control unit to every four hours for one month. Thereafter frequency of each control unit may be restored if all the samples during the month are found passing.

Note 4 In case of failure in any requirement like Barium, Copper, Iron, Manganese, Nitrate, Nitrite, Zinc, Aluminium, Calcium, Sulphide, Magnesium, Anionic Surface Active Agent, the frequency to be increased from once in a week to each control unit for one month. Thereafter frequency of once in a week may be restored if all the samples during the month are found passing.

Note 5 In case of failure in any requirement like Phenolic Compounds, Mineral Oil, Antimony, Borate, Silver, (licensee using silver in any form) the frequency to be increased from once in a month to each control unit for one month. Thereafter frequency of once in months may be restored if all the samples during the month are found passing.

Note 6 In case of failure in any requirement like Fluoride, Sodium, Selenium, Mercury, Cadmium, Arsenic, Cyanide, Lead, Chromium, Nickel, PCB, PAH, Silver, the frequency to be increased from once in 6 months to once in 3 months for 6 months. Thereafter frequency of once in 6 months may be restored only if both the samples tested at each quarter are found passing.

**FORM 1**

**REPORT FOR FOUR HOURLY TESTINGS**

Date of Production	Batch Number/control unit number	Quantity packed in each type of packing			Total quantity packed in kl	Time of production	Colour	Odour	Taste	Turbidity	pH	Remarks
		Type of packing	Capacity of pack	Quantity								
							Every four hour	Every four hour	Every four hour	Every four hour	Every Four hour	

**FORM 2**

**REPORT FOR DAILY/ EACH CONTROL UNIT TESTING**

Date of Production	Batch Number/control unit number	Chloride	Sulphate	Alkalinity	TDS	Residual free chlorine	E.coli	Coliform Bacteria	Sulphite reducing anaerobes	Pseudomonas Aeruginosa	Aerobic microbial count		Yeast & Mould	Remarks
											20-22C	37C		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

**FORM 3**

**REPORT FOR WEEKLY & MONTHLY TESTING**

Date	Batch/control unit no.	Barium	Copper	Iron	Manganese	Nitrate	Nitrite	Zinc	Aluminium	Calcium	Sulphide	Magnesium	Anionic surface active agent	Antimony	Borate	Phenolic Compounds	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

**FORM 4**

**FORMAT FOR TESTING FROM OUTSIDE LABORATORY**

Month & Year	Batch No./DOM	Type of packing	Dates on which sample sent	Lab to which sample sent	Test report number & date	Results	Remarks

A) REPORT FOR MONTHLY TEST

1. Faecal streptococci and S. Aureus, Salmonella and Shigella, V. cholera and V. parahaemolyticus
2. Mineral Oil, Fluoride, Phenolic Compound, Antimony, Borate
3. Silver (as applicable)

B) REPORT FOR SIX MONTHLY TEST

1. Mercury, Cadmium, Arsenic, Cyanide, Lead, Chromium, Nickel, Fluoride, Selenium, Sodium, PCB, PAH
2. Silver (as applicable)
3. Pesticide Residues

C) REPORT FOR TWO YEARLY TEST

1. Radio Active Residues (Alpha and Beta Emitters)

**FORM 5**

**RAW WATER TESTING (3 MONTHLY TESTS)**

Month & Year	Source of Raw water	In-house testing (if done)	Outside testing (if done)			Record of in-house testing/outside TR	Results	Remarks
			Name of lab	sample sent on	TR No. & Date			

**FORM 6**

**RECORD FOR PLASTIC CONTAINERS USED FOR PACKING WATER**

Date of receipt	Type of packing material	Name of supplier	Quantity received	Whether ISI marked	Suppliers TC number & date	Details of outside testing/ suppliers TC		Results			Remarks
						Name of lab	Date of spending samples	Overall migration	Colour migration	Remaining parameters as per IS 15410	

**FORM 7**

**RECORDS FOR SHELF LIFE ASSESSMENT (SEPARATE FOR EACH TYPE OF CONTAINER BEING USED)**

Date on which sample kept	Batch No./DOM	Type of packing whose sample kept	Declared shelf life	Periodicity of testing (like Monthly)	Date of Testing	Requirements Tested	Results	Remarks

**FORM 8**

**A) FORMAT FOR PE FILM**

Date of Receipt of Rolls	Name of Supplier	Quantity Received (No. of Rolls)	Details of Test Certificate from supplier / O S Lab. With date	Description	Film Form	Winding of Film	Odour	Thickness	Width	Overall Migration	Tensile Strength	Elongation at Break	Dart Impact Resistance	Results	Remark
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

**B) FORMAT FOR POUCH TESTING**

Date of Pouch Production	Time of production	Total quantity produced	Drop Test					Vibration Leakage Test	Stack Load Test	Ink Adhesion of Printed Pouches	Product Resistance of Printed Pouches	Water Potability Test	Results	Remarks
			Machine No.											
			1	2	3	4	Etc.							
(1)	(2)	(3)	(4)				(5)	(6)	(7)	(8)	(9)	(10)	(11)	

**Table 2**  
**Guidelines on ensuring conformity of containers used for Packaged Drinking Water**

Type of container	Parameters	Options for mode of conformity	Frequency to be followed by licensee
a) Plastic Jars	i) Overall migration and colour migration as per Clause 6 of IS 14543:2004 & ii) Conformity to IS 15410:2003	i) 'ISI' marked ii) Test certificate of conformity by the manufacturer of jars iii) In-house Test Reports of licensee, if facilities exist iv) Outside laboratory Test Report of the samples got tested by licensee v) Combination of the above.	Each consignment of specific size/ material of jars received by the licensee  All consignments of plastic material (raw/moulded) and of the same chemical composition shall be treated as one consignment as verified from the test certificate of original manufacturer.
b) Plastic Bottles, Glass/ cups	i) Overall migration and colour migration as per Clause 6 of IS 14543:2004 & ii) Conformity to IS 15410:2003	i) 'ISI' marked ii) Test certificate of conformity by the manufacturer of plastic bottles, glasses/ cups iii) In-house Test Reports of licensee, if facilities exist iv) Outside laboratory Test Report of the samples got tested by licensee v) Combination of the above.	a) In case bottles, glasses/ cups are received from outside source options as given at i) to v) as given in Column 3 may be followed for any one consignment received during a period of <b>every three months</b> for each capacity, shape and material b) In case bottles, glasses/ cups are manufactured from preforms in licensee's own premises, licensee to ensure conformity of containers through in-house or outside lab testing or combination thereof, for each type/ capacity/ shape/ material once in a period of <b>three months</b> .
c) Plastic cap (closures) of containers	i) Overall migration and colour migration as per Clause 6 of IS 14543:2004 & ii) Conformity to IS 15410:2003	i) Declaration/ certificate w.r.t. food grade quality, as permitted under IS 14543 ii) Test certificate from manufacturer for overall migration and colour migration.	<b>Once in a year</b> for each type/ shape/ size/ material of closure received from each manufacturer.
d) Foil (for sealing of plastic cups/ glasses)	i) Overall migration and colour migration as per Clause 6 of IS 14543:2004 & ii) Conformity to IS 15410:2003	Declaration/ certificate w.r.t. food grade quality of the material used for the plastic film.	<b>Once in a year</b> for each type of material received from each manufacturer.

**Note:** Licensee to keep records for all types of containers and closures received along with the corresponding test certificate/ reports and to be verified by BIS during periodic inspections for adequacy of the system being followed by licensee to control quality of packaging material received, accepted, rejected and method of disposal.

**Table 3**  
**Levels of control for Polyethylene Flexible Pouches for the packing of Natural Mineral Water and Packaged Drinking Water as per IS 15609:2005**

Test details				Levels of Control		
Clause	Requirement	Test Method		No. of Samples	Lot size	Remarks
		Clause	Reference			
5	Material	5	IS 15609: 2005	One	Each consignment of Polyethylene film	i) Test certificate of conformity by the manufacturer of film OR ii) Outside laboratory Test Report of the samples got tested by licensee iii) Combination of the above.
6.1	Requirement for Polyethylene Film					
6.1.1	Description	6.1.1	IS 15609:2005	One	Each roll of polyethylene film	All rolls to be checked before using the same for making pouches. All such rolls which do not conform to the requirement shall be rejected
6.1.2	Film Form	6.1.2	-do-	-do-	-do-	-do-
6.1.3	Winding of film	6.1.3	-do-	-do-	-do-	-do-
6.1.4	Odour	6.1.4	-do-	-do-	-do-	-do-
6.1.5	Thickness	6.1.5	-do-	-do-	-do-	-do-
6.1.6	Width	6.1.6	-do-	-do-	-do-	-do-
6.1.7	Overall Migration	6.1.7	-do-	-do-	Each consignment from one source	i) Test certificate of conformity by the manufacturer of film OR ii) In house test report, if facility exist with the licensee OR iii) Outside approved laboratory test report of the sample got tested by licensee OR iv) Combination of the above If the sample does not conform to the requirement, the consignment shall be rejected

Test details				Levels of Control		
Clause	Requirement	Test Method		No. of Samples	Lot size	Remarks
		Clause	Reference			
6.1.8	Tensile strength	6.1.8	-do-	-do-	-do-	-do-
6.1.9	Elongation of break	6.1.9	-do-	-do-	-do-	-do-
6.1.10	Dart impact resistance	6.1.10	-do-	-do-	-do-	-do-
<b>7 Requirement for Flexible Pouches</b>						
7.1	Vibration leakage test	Annex D	IS 15609:2005	-do-	One day production	If the sample does not confirm to the requirement the licensee shall follow the criteria for acceptance and retesting as per clause D-5 of IS 15609:2005. If it does not confirm then the same day production shall be rejected.
7.2	Water Potability Test	Annex E	-do-	-do-	Once in two months	Sample of each size shall be tested by rotation so that all the sizes shall be tested in one operative period.
7.3	Stack load Test	Annex F	-do-	-do-	One day production	If the sample does not confirm to the requirement the same day production shall be rejected.
7.4	Drop test	Annex G	-do-	-do-	Every hour for each machine	If the sample does not confirm to the requirement, the licensee shall follow the criteria for acceptance and retesting as per clause G-3 of IS 15609:2005. If it does not confirm then the same day production shall be rejected.
7.5	Ink Adhesion of Printed Pouches	Annex H	IS 15609:2005	-do-	One day production	If the sample does not confirm to the requirement the same day production shall be rejected.
7.6	Product resistance of printed Pouches	Annex J	-do-	One	-do-	-do-

**IS 14543:2004**  
**PACKAGED DRINKING WATER**  
**(OTHER THAN PACKAGED NATURAL MINERAL WATER)**  
**TABLE 1 LEVELS OF CONTROL**  
**Para 7 of the Scheme of Testing and Inspection)**

TEST DETAILS				LEVELS OF CONTROL		REMARKS
Cl.	Requirement	Test Method		No. of Sample	Frequency	
		Clause	Reference			
5.1	Microbiological Requirement					
5.1.1	Escherichia coli	--	IS 5887 (Pt. 1)** or IS 15185	One	Each control unit	
5.1.2	Coliform Bacteria	--	IS 5401 (Pt. 1)** or IS 15185	One	Each control unit	
5.1.3	Faecal streptococci and Staphylococcus aureus	--	IS 5887 (Pt. 2)** or IS 15186	One	Once in month*	
5.1.4	Sulphite Reducing anaerobes	--	Annex C of IS 13428	One	Each control unit	
5.1.5	Pseudomonas aeruginosa	--	Annex D of IS 13428	One	Each control unit	
5.1.6	Aerobic Microbial Count	--	IS 5402	One	Each control unit	
5.1.7	Yeast & Mould count	--	IS 5403	One	Each control unit	
5.1.8	Salmonella and Shigella	--	IS 5887 (Pt. 2)** , 5587 (Pt. 7) or IS 15187	One	Once in month*	
5.1.9	Vibrio cholera and V. parahaemolyticus	--	IS 5887 (Pt. 5)	One	Once in month*	

Note:

1. The requirements indicated with \* shall be got tested from outside approved laboratory
2. In case of dispute, the method indicated by \*\* in 5.1.1 to 5.1.3 & 5.1.8 shall be the referee method.

Table 1 (continued)

TEST DETAILS				LEVELS OF CONTROL		REMARKS
Clause	Requirement	Test Method		No. of Sample	Frequency	
		Clause	Reference			
5.2 and Table 1	i) Colour	-	IS 3025 (Part 4)	One	Every four hours	See Note 2
-do-	ii) Odour	-	IS 3025 (Part 5)	One	-do-	-do-
-do-	iii) Taste	-	IS 3025 (Part 8)	One	-do-	-do-
-do-	iv) Turbidity	-	IS 3025 (Part 10)	One	-do-	-do-
-do-	v) Total dissolved solids	-	IS 3025 (Part 16)	One	Each Control Unit	See Note 3
-do-	vi) pH	-	IS 3025 (Part 11)	One	Every four hours	See Note 2
5.2. and Table 2	i) Barium (as Ba)	-	Annex F of IS 13428** or IS 15302	One	Once in a week	See Note 4
-do-	ii) Copper (as Cu)	-	IS 3025 (Pt. 42)	One	-do-	-do-
-do-	iii) Iron (as Fe)	-	IS 3025(Pt 53)** or IS 15303	One	-do-	-do-
-do-	iv) Manganese (as Mn)	-	35 of IS 3025	One	-do-	-do-
-do-	v) Nitrate (as NO <sub>3</sub> )	-	IS 3025 (Pt. 34)	One	-do-	-do-
-do-	vi) Nitrite (as NO <sub>2</sub> )	-	IS 3025 (Pt. 34)	One	-do-	-do-
-do-	vii) Fluoride (as F)	-	23 of IS 3025	One	Once in six months	See Note 6
-do-	viii) Zinc (as Zn)	-	IS 3025 (Pt.49)	One	Once in a week	See Note 4
-do-	ix) Silver (as Ag)	-	Annex J of IS 13428	One	-Once in six months -See Note 6 also	-Once in a month for licensees using silver in any form. -See Note 5 also
-do-	x) Aluminium (as Al)	-	IS 3025 (Pt 55) or IS 15302**	One	Once in a week	See Note 4
5.2 & Table 2	xi) Chloride (as Cl)	-	IS 3025 (Pt 32)	One	Each control unit	
-do-	xii) Selenium((as Se)	-	IS 3025 (Pt 56) or IS 15303**	One	Once in six months	See Note 6
-do-	xiii) Sulphate ( as SO <sub>4</sub> )	-	IS 3025 (Pt. 24)	One	Each control unit	
-do-	xiv) Alkalinity as (HCO <sub>3</sub> )	-	IS 3025 (Pt. 23)	One	Each control unit	
-do-	xv) Calcium (as Ca)	-	IS 3025 (Pt. 40)	One	Once in a week	See Note 4
-do-	xvi) Magnesium (as Mg)	-	IS 3025 (Pt. 46)	One	Once in a week	See Note 4
-do-	xvii) Sodium (as Na)	-	IS 3025 (Pt. 45)	One	Once in six months	See Note 6
-do-	Xviii ) Residual free chlorine	-	IS 3025 (Pt. 26)	One	Each control unit	
-do-	xix) Phenolic compounds (asC <sub>6</sub> H <sub>5</sub> OH)	-	IS 3025 (Pt. 43)	One	Once in a month	See Note 5
-do-	xx) Mineral Oil	-	IS 3025 (Pt. 39)	One	Once in a month	- See Note 5 also

TEST DETAILS				LEVELS OF CONTROL		REMARKS
Clause	Requirement	Test Method		No. of Sample	Frequency	
		Clause	Reference			
						-May be tested preferably from outside approved lab
-do-	xxi) Anionic surface active agents (as MBAS)	-	Annex K of IS 13428	One	Once in a week	See Note 4
-do-	xxii) Sulphide (as H <sub>2</sub> S)	-	IS 3025 (Pt 29)	One	Once in a week	See Note 4
-do-	xxiii) Antimony (as Sb)	-	Annex G of IS 13428*** or IS 15303	One	Once in a month	See Note 5
-do-	xxiv) Borate (as B)	-	Annex H of IS 13428	One	-do-	See Note 5
5.2 & Table 3	i) Mercury (as Hg)	-	IS 3025 (Part 48)	one	Once in six months	See Note 6
-do-	ii) Cadmium (as Cd)	-	IS 3025 (Pt 41)	one	-do-	-do-
	iii) Arsenic (as As)	-	IS 3025 (Pt 37)	one	-do-	-do-
-do-	iv) Cyanide (as CN)	-	IS 3025 (Pt 27)	one	-do-	-do-
-do-	v) Lead (as Pb)	-	IS 3025 (Part 47)	one	-do-	-do-
-do-	vi) Chromium (as Cr)	-	Annex J IS 13428	one	-do-	-do-
-do-	vii) Nickel (as Ni)	-	Annex L IS 13428	one	-do-	-do-
-do-	viii) Polychlorinated biphenyle (PCB)	-	Annex M of IS 13428	one	-do-	-do-
-do-	ix) Polynuclear aromatic hydrocarbons	-	APHA 6440	one	-do-	-do-
5.2. & Table 4	i) Alpha emitters	-	IS 14194 (Pt.2)	one	Once in two years	
	ii) Beta emitters	-	IS 14194 (Pt.1)	one	-do-	
5.3	Pesticide residues i) Individually ii) Total	5.3.1 -do-	Annex D of IS 14543 -do-	one -do-	Initially once in six months for 1 <sup>st</sup> operative period. Thereafter once in a year -do-	See Note 1 below.

\*\*\* Shall be got tested from recognized laboratory using internationally established test method as specified in Annex D of IS 14543

Note 1 Operative period for the purpose of testing pesticide residues shall begin from 1 September 2005. For existing licensees, in case no failure is observed during the first operative period (sample tested every 6 months) the frequency of such test may be reduced to one year. In case any failure is observed, the frequency shall be increased to once in three months. The original frequency of once in 6 months may be restored only if two consecutive samples pass.

Note 2 In case of failure in any requirement like colour, odour, taste, turbidity and pH, the frequency to be increased from every four hours to every hour for one month. Thereafter frequency of every 4 hours may be restored if all the samples during the month are found passing.

Note 3 In case of failure in total dissolved solid, the frequency to be increased from each control unit to every four hours for one month. Thereafter frequency of each control unit may be restored if all the samples during the month are found passing.

Note 4 In case of failure in any requirement like Barium, Copper, Iron, Manganese, Nitrate, Nitrite, Zinc, Aluminium, Calcium, Sulphide, Magnesium, Anionic Surface Active Agent, the frequency to be increased from once in a week to each control unit for one month. Thereafter frequency of once in a week may be restored if all the samples during the month are found passing.

Note 5 In case of failure in any requirement like Phenolic Compounds, Mineral Oil, Antimony, Borate, Silver, (licensee using silver in any form) the frequency to be increased from once in a month to each control unit for one month. Thereafter frequency of once in months may be restored if all the samples during the month are found passing.

Note 6 In case of failure in any requirement like Fluoride, Sodium, Selenium, Mercury, Cadmium, Arsenic, Cyanide, Lead, Chromium, Nickel, PCB, PAH, Silver, the frequency to be increased from once in 6 months to once in 3 months for 6 months. Thereafter frequency of once in 6 months may be restored only if both the samples tested at each quarter are found passing.

**FORM 1**

**REPORT FOR FOUR HOURLY TESTINGS**

Date of Production	Batch Number/control unit number	Quantity packed in each type of packing			Total quantity packed in kl	Time of production	Colour	Odour	Taste	Turbidity	pH	Remarks
		Type of packing	Capacity of pack	Quantity								
							Every four hour	Every four hour	Every four hour	Every four hour	Every Four hour	

**FORM 2**

**REPORT FOR DAILY/ EACH CONTROL UNIT TESTING**

Date of Production	Batch Number/control unit number	Chloride	Sulphate	Alkalinity	TDS	Residual free chlorine	E.coli	Coliform Bacteria	Sulphite reducing anaerobes	Pseudomonas Aeruginosa	Aerobic microbial count		Yeast & Mould	Remarks
											20-22C	37C		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

**FORM 3**

**REPORT FOR WEEKLY & MONTHLY TESTING**

Date	Batch/control unit no.	Barium	Copper	Iron	Manganese	Nitrate	Nitrite	Zinc	Aluminium	Calcium	Sulphide	Magnesium	Anionic surface active agent	Antimony	Borate	Phenolic Compounds	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

**FORM 8**

**A) FORMAT FOR PE FILM**

Date of Receipt of Rolls	Name of Supplier	Quantity Received (No. of Rolls)	Details of Test Certificate from supplier / O S Lab. With date	Description	Film Form	Winding of Film	Odour	Thickness	Width	Overall Migration	Tensile Strength	Elongation at Break	Dart Impact Resistance	Results	Remark
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

**B) FORMAT FOR POUCH TESTING**

Date of Pouch Production	Time of production	Total quantity produced	Drop Test					Vibration Leakage Test	Stack Load Test	Ink Adhesion of Printed Pouches	Product Resistance of Printed Pouches	Water Potability Test	Results	Remarks
			Machine No.											
			1	2	3	4	Etc.							
(1)	(2)	(3)	(4)					(5)	(6)	(7)	(8)	(9)	(10)	(11)