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**BUREAU OF INDIAN STANDARDS**

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*भारतीय मानक मसौदा*  
**ऐलकोहलयुक्त पेय के लिए स्वास्थ्यकर संहिता**  
(*आई एस 14348 का पहला पुनरीक्षण*)

*Draft Indian Standard*  
**CODE FOR HYGIENIC CONDITIONS FOR**  
**ALCOHOLIC BEVERAGE INDUSTRY**  
(*First Revision of IS 14348*)  
ICS 67.160.10

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Alcoholic Drinks Sectional Committee, FAD 29

Last Date of Comments  
05 September 2024

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**FOREWORD**

(*Formal clause will be added later*)

Alcoholic beverage industry has established itself in India as a well-organized industry. Besides meeting the indigenous demand, some quantities of alcoholic drinks are exported and there is considerable potential for exports. The broad objective of this standard is not only to enable the Indian consumers to get a product of good quality manufactured under hygienic conditions but also to guide the manufacturers in maintaining and manufacturing their products under hygienic conditions.

The standard was originally published in 1996. The standard has been undertaken for revision to bring the standard in line with the current industrial practices and technology. In this revision, the following major modifications have been incorporated:

- a) The requirements for site and building of the alcoholic beverage plant have been updated;
- b) The distillery and processing hygiene requirements have been modified to include detailed conditions to be followed during malt mashing and grape crushing;
- c) The requirements for the equipment and container cleanliness have been updated;
- d) The parameters for hygiene quality of ingredients have been updated;
- e) The check list for hygiene/sanitation and safety measures of the alcoholic beverage plant has been updated.

This standard is subject to the provisions of the *Factories Act*, 1948 and other food safety legislations, such as the *Food Safety and Standards Act*, 2006 and regulations framed thereunder.

*Draft Indian Standard*  
**CODE FOR HYGIENIC CONDITIONS FOR  
ALCOHOLIC BEVERAGE INDUSTRY**  
*(First Revision of IS 14348)*

**1 SCOPE**

This standard prescribes the hygienic conditions required for establishing and maintaining an alcoholic beverage producing units.

**2 REFERENCE**

The following standard contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
6895 : 1973	Specification for barley malt
10500 : 2012	Drinking Water - Specification (Second Revision)

**3 SITE**

**3.1** An alcoholic beverage industry shall be situated in open, clean and healthy surroundings away from cattle sheds, open sewage drains and other such places likely to breed insects and pests.

**3.2** Premises shall be devoid of objectionable odour or smoke. There shall not be accumulation of garbage or similar wastes in the vicinity of the plant.

**3.3** Site shall be preferably so situated that no pesticide/chemical/petrochemical/paper/leather industries are nearby, since effluent from these industries results in contamination of ground water through seepage, rendering ground water unfit for usage.

**3.4** When subsequent (after establishment of unit) developments in the area result in any deterioration of conditions, appropriate measures shall be put in place to prevent contamination in final product during its processing, filling, storage and dispatch.

**4 BUILDING**

**4.1** Structure shall be of permanent nature and shall be designed as to provide sufficient and separate space for equipment and material storage and facilitate carrying out process/packing operations in hygienic manner.

**4.2** Material of construction shall be bricks, Reinforced Cement Concrete (RCC), plaster, tiles or any such suitable material which ensures cleanliness.

**4.3** No portion of building shall be used for domestic purposes or other food preparations unless separated by suitable partitions to avoid contamination of product with microbes, off odour, filth, etc.

#### **4.4 Floor**

Floor of receiver room, malt mashing/ grape crushing, fermentation room, aging, blending room and bottling hall shall be laid with smooth and easily cleanable, anti-skid material like stone, tiles or cement. The floor of fermentation room shall be laid with acid/alkali proof tiles. Floor should be properly sloped (about 1%) to avoid water stagnation and provided with trap drains. Holes and drains must be sealed for pest prevention. Adequate drainage system for cleaning shall be designed.

#### **4.5 Walls and Ceilings**

Internal walls shall have a smooth, non-absorbant surface, free from sharp angles and crevices to facilitate their efficient cleaning. The walls in bottling hall shall have a tiling up to the height reached by splash or water spray. Ceiling should have proper slope to prevent water logging and shall be provided with facilities of fresh air circulation. Avoid the use of paints on walls and ceilings which releases intense odours.

#### **4.6 Doors and Windows**

Fermentation and aging rooms should be free from any window. Blending room and bottling area shall be provided with meshed, self-closing doors or air curtains and meshed windows to prevent entry of insects, dust, etc. Doors and windows shall open outside. Glass windows shall be protected against breakage to prevent physical hazard.

#### **4.7 Ventilation and Lighting**

Manufacturing/fermentation, packing and storage area shall be well lighted and ventilated. Movement of fresh air is needed at an interval of 15 to 30 minutes to avoid CO<sub>2</sub> level in fermentation area. To check the CO<sub>2</sub> level, CO<sub>2</sub> sensors and alarming system should be fixed in the fermentation room. Light source may be natural, artificial or a combination of both. Natural light should be emphasized as far as possible. Low light intensity is needed in wine storage block. The electrical wiring in manufacturing as well as storage areas should be fool proof to prevent

short circuiting which otherwise can cause a major fire. Proper grounding should be provided to electric connections.

#### **4.8 Maintenance and Repair**

A scheduled repairs and maintenance programme including white wash, painting and disinfection should be carried out regularly.

### **5 DISTILLERY AND PROCESSING HYGEINE**

#### **5.1 Malt Mashing and Grape Crushing**

##### *5.1.1 Malt mashing*

**5.1.1.1** During malting, nitrosodimethylamine is formed during kilning which is reaction between NO<sub>x</sub> and organic materials especially in beer. Regular checks should be carried out so that residual risk caused by polluted air is kept as low as possible.

**5.1.1.2** Malt mashing areas shall be thoroughly cleaned before, during and after processing of above at regular intervals with potable water.

**5.1.1.3** Spillage of cooked malt on floor, machinery and other equipment shall be avoided to prevent fungal growth and off odours in mashing area.

**5.1.1.4** To control the process, antimicrobials such as sulfur di oxide shall be used separately.

**5.1.1.5** Lautering machine on the shaft to which rotating rakes are attached to facilitate draining should be rinsed with hot water delivery system.

##### *5.1.2 Grape crushing*

**5.1.2.1** Grapes shall be crushed immediately on receipt. During grape crushing, care should be taken to avoid spillage of juice and pulp on the floor, machinery and equipment to prevent infestation by fungi, insects, etc, and avoid emanation of foul smell.

**5.1.2.2** All the spent grain and grape pulp waste shall be thoroughly decanted and disposed to outside agencies on a daily basis.

**5.1.2.3** The supply chain from grape receiving to finished wines should be through lines/pipes only. Avoid exposure of grape juice/must and material under fermentation process as well as finished wines to oxygen.

**5.1.2.4** Grape crushing areas shall be thoroughly cleaned before, during and after processing of above at regular intervals with potable water.

## **5.2 Fermentation**

**5.2.1** The fermentation area including equipments shall be cleaned/sanitized regularly to prevent contamination. Floor of the fermentation area should have anti-skid and acid/alkali proof tiles. Yeast propagation vessels, fermentation tanks, pipelines, valves, plate heat exchangers and all other equipment should be cleaned and disinfected using prescribed sanitising agents on a regular basis.

**5.2.2** Temperature of the fermentation should not be allowed to exceed 35 °C.

**5.2.3** It should be ensured that molasses obtained is free from contamination. Molasses should be stored in closed mild steel tanks.

**5.2.4** Selection, maintenance and supply of suitable strain of yeast shall be done. Routine assessments, purity and detection of microbial contamination should be carried out.

## **5.3 Distillation/Redistillation**

All the distillation/redistillation columns, pipe joints, etc., shall be leak proof. All the pipelines shall be of copper or stainless steel. In distillation plant, analyser columns and plates may be of stainless steel material whereas purifier and rectifier columns and plates should be of copper material or suitable non-toxic material. Inadequate thermal process might result in possible microbial hazard thus deviations can be observed which can lead to rejection of batch.

## **5.4 Receiving Room**

Tanks in the receiving room for Extra Neutral Alcohol (ENA)/ Rectified Spirit (RS) should be of mild steel or stainless steel material. They should be cleaned and maintained in such a way as to prevent corrosion. The pumps in this area shall be flameproof. Pipes and fittings shall be leak proof. In case of receiving of grapes in winery unit, the conveyer belts shall be sanitized properly on periodic interval.

## **5.5 Blending Room**

**5.5.1** Tanks with agitators and pipe lines in blending room shall be constructed of wooden vats and stainless steel material. The pumps in this area shall be flame proof. Tanks and pipelines shall be preferably earmarked for a particular product to prevent contamination from one product to other. Pipes and fittings shall be leak proof. Caramel and food flavours shall be properly marked to prevent mix up. Motors driving the agitators shall be so placed as to prevent dripping oil into the tanks. Wooden vats and stainless steels barrels shall have undergone a decontamination treatment and must be free of undesirable odors as residues could taint the alcohol and can constitute a potential problem in its stability.

**5.5.2** Demineralized water storage tanks shall be constructed of stainless steel material and the pipelines for demineralized water may be of stainless steel or any suitable material.

**5.6** Filter paper used for filtration of liquor shall be calcium free. Filter papers may be replaced by centrifugation and treatments like the addition of clays to absorb colloidal material and proteolytic enzymes to further solubilize the protein fraction.

**5.7** Spillage on floor should be kept minimum and the floor should be cleaned periodically to avoid slippery floor and to facilitate free movement.

## **5.8 Bottlery**

All the tanks, pipelines, bends, filling lines, etc, shall be made of non-corrosive material such as stainless steel. The entry and exit points shall have air curtains to prevent entry of insects and dust. Electronic insect destroying devices shall be installed at suitable places like entry and exit points, bottle washer, etc, to act as further deterrent to insects and flies. Roads surrounding bottlery should be kept dust free.

### **5.8.1 *Bottle Washing***

All bottles shall be thoroughly cleaned immediately before filling by automatic/semi automatic washing machines. Washing shall be accomplished by pre-rinse and final rinse. For final rinse dechlorinated potable water shall be used. Bottles should be thoroughly drained after final rinse so that strength of liquor is not affected after filling. Water jets in the washing machine should be so designed and jet pressure so maintained as to thoroughly rinse the whole internal and external surface area of the bottles. Wash water in the bottle washer should be thoroughly drained and changed frequently to prevent algal growth.

**5.8.1.1** Wherever second-hand bottles are being used, all the bottles should be pre-washed prior to feeding to the bottle washer. This should be done in the following manner:

- a) Pre-rinse by soaking in a tank to remove labels and other extraneous matter.
- b) Rinse in the second tank with hot water around 60°C and 3 percent caustic solution at 60°C using brushes to clean the interior and exterior of bottles thoroughly. SO<sub>2</sub> solution may also be used for rinsing purpose.
- c) Final rinse in the third tank with potable water.
- d) Feed the bottles to bottle washer.

### **5.8.2 *Bottle Filling***

**5.8.2.1** Online filling lines is preferred option. Filler nozzles shall be of stainless steel material with poly liners or PVC to prevent chipping of bottles. Filler bungs above the nozzles shall be

cleaned everyday and periodically replaced to prevent particulate matter settling into liquor. Filling of the product into bottles may be automatic/semi automatic fillers. Liquor falling on line due to breakage of bottles should be immediately cleaned and broken glass should be taken off to prevent contamination.

**5.8.2.2** Removal of residues should be done via Cleaning-In-Place (CIP) system. Contamination sources such as inadequate pressure in fillers or faulty CIP system shall be checked to prevent remains of cleaning solution in pressure tank or ring bowl of filler.

**5.8.2.3** Proper emptying and extraneous entrapped material should be checked for prevention.

### **5.8.3 *Bottle Sealing***

Bottle sealing can be on automatic/semi automatic sealing machines. Sealing heads shall be adjusted so as to prevent defects like tucking defects, over tightening, etc. Filling pressure of bottle caps on mouths of bottle shall be adjusted to ensure a justified blow off effect to avoid bottle bursting. The corks and caps should also pass a decontaminating step to prevent microflora, residue of heavy metals, SO<sub>2</sub> etc. Corks and caps shall be correctly sized to avoid possible leaks. Bottles shall be flushed with CO<sub>2</sub> before filling.

### **5.8.4 *Inspection***

After sealing, filled bottles shall be checked for presence of foreign material in liquor, sealing of bottle, etc. Inspection table should have diffused lighting from top. Inspection of bottles should be carried out by holding bottles in inverted upright position against board with black and white bands over which diffused light from top should be directed. Defective bottles so found should be kept separately and should be taken off the bottling hall on hourly basis. Bottles with scratches and cracks should be kept separately to prevent cross contamination.

### **5.8.5 *Labelling***

Labelling of filled bottles can be on automatic/semi automatic labellers. Quantity of gum and label rollers should be so adjusted as to avoid excessive gumming or no gumming to prevent labels peeling off. Overprinting of labels for batch, date and other stipulated legends should be carefully carried out to meet excise regulations of the region.

### **5.8.6 *Packing of Bottles***

Sealed and labelled bottles shall be packed in monocartons and master cartons as per requirement. Master carton will be stapled and gum taped cleanly to prevent pilferage.

### **5.8.7 *Finished Good Warehouse***

Master cartons shall be suitably stacked in such a way as to prevent breakages, since any bottle broken results not only in wastage of liquor but also it spoils other bottles/labels monocartons.

## **5.9 Maturation Hall/Warehouse**

**5.9.1** Maturation area including the equipment, vats, etc, should be cleaned periodically to prevent contamination.

**5.9.2** All the pipe lines in this area shall be of stainless steel or copper and shall be leak proof.

**5.9.3** All the oakwood barrels or stainless-steel tanks and casks should be properly hooped and care shall be taken to prevent leakages. Periodic repairs should be carried out as and when required to prevent leakages and cross contamination.

**5.9.4** Specified laid down procedure shall be followed for contamination and to maintain/the desirable quality of matured spirit.

## **6 EQUIPMENT AND CONTAINER CLEANLINESS**

**6.1** The Standard Operating Procedures (SOPs) shall be available for every equipment and equipment shall be designed in such a way that is easily accessible for cleaning. Final handling equipment shall be fitted with metal detectors of appropriate sensitivity

**6.2** Material used for making fabrication tanks, valves, pipe lines, vessels, bottling lines, etc, shall be smooth, corrosion resistant, non-toxic and food grade. All the weldings shall be grounded smooth, joints shall be flush and leak proof

### **6.3 Cleaning and Sanitation of Equipment**

All the tanks, pipe lines, bottling lines, conveyors, filler heads, sealers, labelling machines, etc, shall be immediately cleaned after use thoroughly with potable water. Entire processing system should be flushed out prior to its reuse again. Procedures and frequency shall be documented to facilitate cleaning operation.

Wherever possible, avoid use of chemicals for cleaning and sanitizing the equipments, tanks/vessels and other materials. Hot water for cleaning purpose and steam for sanitization/rinsing can be adopted according to conditions. Insecticides, pesticides and fungicides used for disinfection and cleaning shall be approved by regulatory body and must be labeled and kept outside the production area.

## **7 WATER SUPPLY**

**7.1** Adequate safe and potable water shall be made available for day-to-day running of distillery/winery (*see* IS 10500). Non-potable and potable water pipelines shall be clearly marked and labeled.

### **7.2 Demineralized Water**



Quality of demineralized water plant should be properly maintained with anionic, cationic and mixed beds for proper treatment of water.

### **7.3 Bottlery Wash Water**

Adequate care should be taken to have potable water for use in bottlery especially during final rinse of bottle washer. This water should be passed through sand filters to prevent undesirable organic matter contaminating the above water. Sand filters should be periodically cleaned to prevent building up of organic matter in it.

**7.4** Storage tanks for water should be kept covered with tight fitting lids, examined regularly, and cleaned out thoroughly atleast once in six months.

**7.5** Water shall be periodically analyzed chemically and microbiologically and record of such examinations shall be maintained.

**7.6** Proper care shall be taken to prevent contamination of ground water by effluent through seepage.

**7.7** Effluent treatment should be managed in such a way that its off odours is minimized and contamination brought down to minimum possible level as specified by the Central Pollution Control Board. Discharge of effluents into open lagoons is not desirable and care shall be taken to locate such lagoons in a place from where contamination/off odours do not spoil the atmosphere.

## **8 EMPLOYEE HYGIENE**

**8.1** Every employee of the distillery shall be medically examined by an authorized medical practitioner and the examination should include X-ray of chest for tuberculosis. This examination should be done once in a year. The examination shall include examination of stools for protozoal infection and salmonella, shigella and cholera infection.

**8.2** All the employees should inform the management in case of fever, vomiting, diarrhoea, typhoid, dysentery, boils, cuts, sores or any other notifiable diseases occurring at home and families.

**8.3** No worker suspected of disorders noted under **8.2** shall be permitted to work in the unit. Staff/workers having frequent cough and cold shall not be deputed in areas prior to packing. and storage of finished products.

**8.4** All the personnel working in blending room and bottling hall must wear clean garments including working apron, cap and a pair of rubber shoes.

**8.5** All the employees shall keep their finger nails short and clean and wash their hands with soap or detergent before commencing work and after each absence, especially, after using sanitary conveniences. Towels used for drying hands should be clean.

**8.6** No employee shall be allowed to chew tobacco, smoke, eat or drink in manufacturing, packing and storage areas.

**8.7** Smoking and eating areas shall be segregated from storage and production areas.

**8.8** Jewelry, watches, pins and earrings etc. shall be avoided.

**8.9** Employees shall not be allowed to store food, beverages, etc, as these might act as carriers for contamination and add to litter. Spitting on the floor shall be strictly prohibited.

**8.10** Toilet and comfort room walls and bowls shall be washed with detergent at regular time intervals.

**8.11** Soap or detergent along with adequate water supply shall be made available for washing and cleaning purposes.

**8.12** Toilet flushing system shall always be in good functioning condition.

**8.13** Trash cans shall be covered and garbage disposed off regularly.

**8.14** Signs shall be displayed in attractive coloured posters on walls as reminders to inculcate good hygiene and sanitation practices in employees.

**8.15** Entire distillery/winery area shall always be kept clean and free of obnoxious odours.

## **9 HYGIENIC QUALITY OF INGREDIENTS**

**9.1** Water used in liquor shall be free from pathogenic organisms and should meet the specifications laid down for demineralized water. Water should be filtered through activated carbon as well as ion exchange resins to remove impurities.

**9.2** All the other materials like Extra Neutral Alcohol (ENA), Rectified Spirit (RS), caramel, food flavours and packaging material shall conform to the specifications laid down as per relevant Indian Standards.

**9.3** In addition to control by official agencies, it is desirable that each bottling unit has their own control laboratory to ensure quality of products made there.

**9.4** The end product has to be analysed and shall conform to standards laid down.

**9.5** The suppliers who are inspected, reviewed and assessed annually on basis of quality and availability of their raw material shall be selected.

**9.6** Bulk bins used for transportation shall be effectively decontaminated to avoid microbial contamination.

**9.7** Rotten or defective raw materials shall be labelled and kept separately otherwise oxidative and microbial contamination can rapidly develop and subsequently disposed.

**9.8** Presence of heavy metals, pesticides and mycotoxins in ingredients shall be with the limits laid down under regulations.

**9.9** Raw materials shall be protected from weather conditions and temperature to reduce microbial contamination.

**9.10 Godown for Barley Malt/Grapes**

**9.10.1** Storage godown shall have provision for ample aeration and ventilation and shall be damp proof. Surrounding areas should be clean and devoid of bushy vegetation, water logged areas, rat holes and burrows.

**9.10.2** Roof shall be terraced and should be free from leakage. Walls should be free from seepage. High plinth and cement flooring should be provided with smooth walls to serve as rodent proofing.

**9.10.3** Godown shall be free from cracks, crevices and holes to prevent hiding places for insects, birds and rodents. Doors, windows and other openings should have wire netting to prevent entry of insects and birds.

**9.10.4** All the materials having strong smell shall under no circumstances be stored in the same godown.

**9.10.5** All the barley malt bags shall be examined for damage, dampness, etc, before stacking in godown. Damaged/infested bags and barley should not be stored as this would attract insects and rodents.

**9.10.6** All the barley malt bags shall not be stored directly on the floor. Care shall be taken to ensure that gunny bags used for packing barley malt are not used previously for storing fertilizers, pesticides, etc. since this would also impart undesirable odour and result in poor quality.

**9.10.7** Barley malt may be stored in silos made of mild steel or stainless steel or other foodgrade material. Silos should be inspected regularly and thoroughly cleaned and disinfected. Silos should have proper ventilation to prevent sweating of malt, which results in mould/fungus infestation. Manholes/lids of the silos should be tight fitting to ensure proper closure to prevent rodent/insect infestation.

**9.10.8** Grapes procured shall be healthy and devoid of any blemishes such as insect/bird/fungal damage/physical damage. The grape harvesting should be done before temperature reaches 20 °C.

**9.10.9** Harvested grapes shall be put in plastic crates with not more than two layers of bunches and reach at winery premises as soon as possible after harvest.

**9.10.10** Harvested grapes shall comply with the maximum residual limits (MRLs) of agrochemicals/heavy metals as per regulations.

**9.10.11** Grapes should go directly to table for cleaning followed by destemming and crushing/pressing.

**9.10.12** Irrespective of whether infestation is apparent or not, the godown shall be thoroughly cleaned and the floor walls, pillars, etc, swept/brushed and disinfected periodically. Fumigation should be carried out regularly using formaldehyde or any other approved fumigant.

**9.10.13** Barley malt should conform to the specification laid down in IS 6895.

## **10 STORAGE**

**10.1** Proper storage conditions such as temperature, light and relative humidity shall be maintained in storage establishments to prevent the deterioration in quality of produce.

**10.2** Storage areas/halls for packaging material and finished goods shall be free from dampness and shall be rodent free.

**10.3** Separate storage space shall be provided for storing packaging material, machinery, equipment, acid, caustic soda, urea, etc.

**10.4** Packaging materials must be stored in their original packing and should be issued on "First in First out" basis.

**10.5** Glass bottles shall be stored appropriately to prevent dust contamination.

**10.6** Roll-on Pilfer Proof (ROPP) caps shall be stored in plastic bags which are then kept in cartons and labels to be stored in cartons to prevent dust contamination, insect damage.

**10.7** Activated carbon/fining materials shall be stored in an area which is completely devoid of odours to prevent pick up of odours by activated carbon.

## **11 SAFETY MEASURES**

**11.1** Fire extinguishers shall be installed at suitable places as to enable easy handling in case of an emergency. These extinguishers should be examined periodically for their proper functioning. Personnel from different sections in the distillery shall be trained in firefighting and such training should be repeated once in six months.

**11.2** Pressure vessels, hoists, lifts, etc, should be regularly checked for their proper functioning.

**11.3** Personnel operating fork lifts should always wear protective head gear.

**11.4** Personnel handling hazardous chemicals like caustic soda, acid, etc, should wear protective glasses, gloves, aprons and rubber boots.

**11.5** First aid boxes with basic first aid equipment shall be provided in each and every division at places where these can be conveniently handled. First aid training should be provided to personnel from each section of distillery. Periodical first aid training must be given regularly.

**11.6** The CO<sub>2</sub> concentration detector should be available outside of each fermentation room. If CO<sub>2</sub> concentration is more than acceptable levels, CO<sub>2</sub> should be removed and fresh air supply should be ensured before entering of anyone inside the fermentation room.

**11.7** An “In-House Safety Committee” should be formed within the distillery comprising of personnel from various sections. This committee should meet atleast once in a month to monitor the abovementioned safety aspects and improve safety aspects wherever necessary.

## **12 CHECK LIST FOR HYGIENE/SANITATION AND SAFETY MEASURES**

The check list given in Annex A shall be used at regular intervals, to ensure hygienic /sanitation and safety measures of the unit.

## ANNEX A

(Clause 12)

**CHECK LIST FOR HYGIENE AND SANITATION IN  
ALCOHOLIC BEVERAGE INDUSTRY**

**A-1 SITE**

a) Are there any pesticide/chemical/ petrochemical/leather paper industries nearby?	Yes/No
b) Are there any cattle sheds and open sewage drains nearby?	Yes/No
c) Is garbage/ waste accumulated in the vicinity of the plant?	Yes/No

**A-2 BUILDING**

a) Is any part of the building being used for domestic purposes/food preparations without proper partitions?	Yes/No
b) Are the floors being maintained properly without any breakages/cracks/holes?	Yes/No
c) Is the floor slippery?	Yes/No
d) Is the floor sloped to avoid water stagnation on the floors?	Yes/ No
e) Are the roofs/ceiling free of water leakage?	Yes/No
f) Are the internal walls easy to clean?	Yes/No
d) Are the doors/windows having proper netting/mesh?	Yes/No
g) Are the fermentation and aging rooms free from any window ?	Yes/No
h) Does windows and doors of blending and bottling areas have provisions to avoid entry of insects, dust etc.. ?	Yes/No
i) Is the plant adequately lighted and ventilated?	Yes/No

j) Are the lights shielded to prevent broken glass contaminating the product?	Yes/No
k) Are the electrical wirings/connections properly insulated ?	Yes/No
l) Are scheduled repairs, white wash, disinfection being carried out regularly?	Yes/No

**A-3 DISTILLERY**

a) Are the grapes being crushed immediately after receipt?	Yes/No
b) Are the malt mashing/ grape crushing areas being cleaned at hourly intervals when in use and periodically when not in use, with potable water?	Yes/No
c) Is the spent grain/grape pulp waste being disposed off on daily basis?	Yes/No
d) Is steam sterilization being carried out regularly and prescribed sanitising agents being used to clean and sterilize the fermentation room, pipes, valves and other equipment in fermentation area?	Yes/No
e) Are the fermentation vats/vessels properly covered?	Yes/No
f) Are the molasses stored in closed mild steel tanks?	Yes/No
g) Are the pipelines, joints, etc, in distillation/redistillation columns leak proof?	Yes/No
h) Are the tanks in the receiving area thoroughly cleaned at periodic intervals to prevent corrosion?	Yes/No
i) Are the pipelines/joints, etc, in receiver room leak proof?	Yes/No
j) Are the pipes and fittings in blending room leak proof?	Yes/No
k) Is there any dripping of oil into blending tanks through agitators?	Yes/No
<del>h) Is the floor in above areas slippery?</del>	<del>Yes/No</del>

l) Are the wooden vats and stainless-steel barrels free from undesirable residues?	Yes/No
m) In case filter papers are used, are they calcium free?	Yes/No
n) Are the air curtains at entry and exit point in bottlery working properly?	Yes/No
o) Are the electronic insect destroying devices in bottlery working properly?	Yes/No
p) Whether water used in bottle washing is free of off odours?	Yes/No
q) Is the water being used for final rinse of bottles free from chlorine and non-alkaline?	Yes/No
r) Are the nozzles and jets in bottle washer clean without clogging and the pressure for cleaning bottles is sufficient to thoroughly clean the bottles?	Yes/No
s) Are the second-hand bottles prewashed prior to feeding to bottle washer?	Yes/No
t) Are the filter bungs/filter nozzles being cleaned everyday?	Yes/No
u) Is the spilt liquor and broken glass being swept off immediately in the bottlery?	Yes/No
v) Are the defective bottles, after inspection, being taken off the bottlery at hourly intervals?	Yes/No
w) Are the master cartons being stapled and labelled immediately after packing?	Yes/No
<del>v) Are the grapes being crushed immediately after receipt?</del>	<del>Yes/No</del>
<del>w) Are the malt mashing/ grape crushing areas being cleaned at hourly intervals when in use and periodically when not in use, with potable water?</del>	<del>Yes/No</del>
<del>x) Is the spent grain/grape pulp waste being disposed off on daily basis?</del>	<del>Yes/No</del>



x) Are all the vats/casks in the maturation area devoid of leaks?	Yes/No
y) Are all the vats/casks being filled and refilled as per the guidelines specified?	Yes/No
z) Are all the vats/casks being repaired immediately if leakages are noticed?	Yes/No

**A-4 EQUIPMENT/CONTAINER CLEANLINESS**

a) Are SOPs available for every equipment?	Yes/No
b) Are equipment easy to clean?	Yes/No
c) Is the entire processing system including pipelines, vessels, tanks, filling, sealing and other machinery being cleaned immediately after use?	Yes/No
d) Is entire processing system flushed out prior to its reuse again?	Yes/No

**A-5 WATER SUPPLY**

a) Are the portable and non-portable water pipelines clearly marked and labelled?	Yes/No
b) Is the Demineralized Water (DM) from DM plant conforming to the specifications laid down?	Yes/No
c) Is the bottlery wash water devoid of foul smell and organic matter?	Yes/No
d) Are the sand filters and storage tanks being periodically cleaned once in six months?	Yes/No
f) Are the storage tanks for water thoroughly covered?	Yes/No

g) Is the water being analyzed for its potability and record of such analysis being maintained?	Yes/No
h) Does the effluent treatment plant give any off odours and is there any overflow/leakage from Effluent Treatment Plant (ETP)?	Yes/No
i) Is the distillery effluent being discharged into open lagoons?	Yes/No

**A-6 EMPLOYEE HYGIENE**

a) Are the employees being subjected to complete medical examination once a year?	Yes/No
b) Are any employees with cold and cough being sent to areas prior to packing and storage?	Yes/No
c) Are the personnel in fermentation area, mashing and grape crushing area, receiving room, blending room, bottler wearing clean uniforms with apron, cap and rubber shoes?	Yes/No
d) Are the employees wearing jewelry, watches, pins and earrings in the production area?	Yes/No
e) Are employees keeping finger nails short?	Yes/No
f) Are employees washing their hands with soap or detergent, especially after using sanitary conveniences?	Yes/No
g) Is any employee chewing tobacco, smoking, drinking or eating in manufacturing, packing and storage area?	Yes/No
h) Are the floors and wash basins of toilet and comfort room being thoroughly washed with detergent every two hours?	Yes/No
i) Is there adequate water supply, soaps/ detergents available for sanitary conveniences?	Yes/No
j) Is the toilet flushing system in good functioning condition?	Yes/No

k) Are the trash cans tightly covered and being disposed off thrice a day?	Yes/No
l) Are colour posters and signs displayed?	Yes/No

**A-7 HYGENIC QUALITY OF INGREDIENTS**

a) Are annual inspection and assessment of raw material suppliers conducted?	Yes/No
b) Are the rotten or defective raw materials labelled and kept separately?	Yes/No
c) Are the raw materials stored properly to prevent microbial contamination and rodent/ insect infestation?	Yes/No

**A-8 STORAGE**

a) Is the storage area damp proof and rodent proof?	Yes/No
b) Are the surroundings devoid of bushes?	Yes/No
c) Is the roof free from leakage?	Yes/No
d) Are the walls free from seepage?	Yes/No
e) Are there any insecticides/pesticides being stored in the same area?	Yes/No
f) Are the employees segregating incoming barley/grapes which are soiled, damaged and infested?	Yes/No
g) Are the malt bags/grape boxes stored on pallets?	Yes/No
h) Are the malt bags/grape boxes stored on the floor?	Yes/No
j) Are the bags/boxes being stored at a distance of half meter from walls?	Yes/No
k) Are the bags/boxes numbered and rotated to prevent insect/pest nesting areas?	Yes/No

m) Are damaged bags/boxes stored in separate areas?	Yes/No
n) Is there space between rows for inspection of rodent activity/insect infestation?	Yes/No
p) Have the bags, in which barley malt is packed, used for fertilizers/ insecticides previously?	Yes/No
q) Do the grapes have insecticide/pesticide residue on them?	Yes/No
r) Are the silos/warehouse for malt and grapes being regularly cleaned, disinfested and fumigated?	Yes/No
s) Are there separate areas earmarked for glass bottles, caps, labels, etc?	Yes/No
t) Is the merchandise being stored in the area earmarked for them?	Yes/No
u) Are finishing cases being properly stacked on pallets?	Yes/No

**A-9 SAFETY**

a) Are fire extinguishers available at suitable places and are in proper working condition?	Yes/No
b) Is training being conducted in firefighting once every six months?	Yes/No
c) Are pressure vessels, hoists, lifts, etc, being regularly checked for proper functioning?	Yes/No
d) Are the personnel operating fork lift wearing head gear always?	Yes/No
e) Are the personnel handling caustic soda, acid, etc, wearing protective glasses, gloves, aprons and rubber boots?	Yes/No
f) Is first aid equipment available in every division?	Yes/No

g) Is first aid training being given to employees periodically?	Yes/No
h) Does an 'In-House Safety Committee' exist?	Yes/No
j) Does the committee carry out inspection of various safety aspects once in a month?	Yes/No
k) Are all the electrical lines properly earthed?	Yes/No