



University Institute of Technology

(Rajiv Gandhi Pradyogiki Vishwavidyalaya)
Airport By Pass Road, Gandhi Nagar, Bhopal-462033
Mid-Semester / Practical Exam Answer Book

48353

Standard Club

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HOD

Petrochemical Department
UIT, RGPV BhopalSignature of examiner
Name & Deptt.

17-05-2024

PACKAGED DRINKING WATER

STANDARDS :- Standards are required to establish methods and safety procedures to ensure proper health of consumers.

There are certain requirements which are set by the Bureau of Indian Standards, the requirements are as follows :-

① GENERAL REQUIREMENT :-

→ ~~the~~ water can be obtained from civic source, sea or

any other consistent source, which are subjected to filtration, activated carbon filtration, cartridge filtration, reverse osmosis etc.

→ Sea water shall be undergone desalination process before the above given processes.

→ The packaged water shall be packed in a clean, transparent and in different compositions.

MICROBIAL REQUIREMENT : Microbial requirements are necessary to ensure absence of any harmful bacteria present in water. Requirements are as follows :-

- ① Escherichia coli or thermobacteria shall not be present in the sample of 250 ml under the IS 15185.
- ② Coliform bacteria shall not be present in the sample of 250 ml under IS 15185.
- ③ Sulphite reducing bacteria shall not be present in 50ml sample under IS 13428.

- (155403)
- ④ Yeast and mould shall not be present in the water.
 - ⑤ Aerobic microbial count should be 100/ml for 72 hours at 20 to 22°C. ~~or~~

PACKING : There are certain requirements set by IS for packaging. These are as follows :-

- ① The drinking water bottles / pouches should be made of polypropylene, polyethylene, polyvinyl chloride, PET, or sterile glass.
- ② Packaging should be kept safe and sound from the surroundings.
- ③ The above materials should ~~only~~ be used as for preventing adulteration and contamination.

MARKING : For marking, the following particulars should be marked on the bottle / pouch,

- (a) Name of the product.
- (b) Name and address of the processor,
- (c) Brand name
- (d) Batch or code no.
- (e) Date of processing/packing
- (f) Best Before or Best before within
- (g) Net quantity
- (h) Direction for storage
- (i) Keep the container away from direct sunlight.

→ The may also be marked with the Standard mark.

→ If water is not meant for humans, then it should be written on the product.

SAMPLING : Sampling should be done as it is a sign of confidence of the product, that it can be consumed.

HYGIENIC PRACTICES

The hygienic practices cover the appropriate general technique for collecting drinking water, its treatment, bottling, packaging, storage, transport and sale, so as to ~~guarantee~~ guarantee a safe and healthy product.

HYGIENE PRESCRIPTIONS FOR COLLECTION OF DRINKING WATER

EXTRACTION :- In the case of extraction or collection of water for packaging from the surface water, ground water, sea water or any other constituents of water, it should be ensured that it is pollution free.

MATERIALS :- The pipes, pumps or other possible devices coming into contact with water and used for its collection should be made of such material which do not change the quality of water.

PROTECTIVE MEASURES :- All possible precautions should be taken while the protection perimeter to avoid any pollution on the quality of ground water, surface water, sea water or any other constituent source of water. Preventive measures should be taken from disposal of liquid, solid or gaseous waste that could pollute the ground water or surface water. Drinking water sources should not be in the path of potential source of underground contaminants.

TRANSPORT OF DRINKING WATER :- Any vehicle or piping used in the processing of water from its source to the bottling process. It should be made of inert materials such as ceramic and stainless steel which prevent ~~for~~ from infections. Its cleaning is easy.

ESTABLISHMENT FOR PROCESSING OF PACKED DRINKING WATER

LOCATION :- Establishment should be located in the areas which are free from smoke, dust, pollution in the way and are not subjected to flooding.

BUILDING AND FACILITIES

Rooms for recreation, for storing and packaging of water and cleaning containers areas should be different from the packaging areas to prevent from that any raw material do not come in the contact of packed drinking water.

→ The building and facilities should be designed to provide separation by partition.

DRINKING WATER HANDLING, STORING AND BOTTLING AREAS
WALLS :- Walls should be waterproof, washable and made of non-toxic material

and should be light coloured, it is easy to be clean and disinfected.

FLOORS :- Floors also should be water proof, made of non-toxic materials, washable easy to be clean and disinfected.

WINDOWS :- Windows and other openings should be so constructed to avoid from dirt, smoke and good repair.

DOORS :- Should have smooth, non-absorbent surfaces and be self closing and close fitting type.

R.S.T

Amir
17-05-2024