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## Standards for packaging of drinking water

\* Introduction :- Consumption of packaging water for drinking purposes has been increasing in the country. After the shortage of water at time, a real and important need to safeguard public health. These requirement increases the trade of drinking water at national or international level.

The focus of packaging water is all related to public health. The ISI code for packaging natural mineral water is 13428 and for packaging drinking water is 10500.

\* Framework :- Includes two level :-

a) Global :- Standard derives set to WHO (World Health Organization) and ISO (International Standard Organization)

b) National :- It belongs to a specific country like Food and Drug Administration (FDA) and BIS (Bureau of Indian Standard)

\* Scope :- These standards help in testing and sampling drinking water for meant of human consumption.

The standard also give the clause "Marking On Water Meant for Human Consumption" for preventing the usage of drinking water for other use rather than human consumption.

\* Properties of packaged drinking water :-

1) Physical :- It involves pH value, turbidity and colour.

2) Chemical :- It includes heavy metal.

3) Microbiological :- It involves bacteria, viruses or protozoa.

4) Sampling & Swelling :- The quality of water majorly depends on sampling, the water is taken from the sea water, underground water, civic level etc. and then process for filtration, demineralization, remineralization, reverse osmosis for the cleaning of water.

\* Packing of drinking water :- The packaging involves plastic should be clean, hygienic, transparent. The material used for packing are polyethylene (IS 10146), Polyvinylchloride (IS 10151), Polyalkylene terephthalate (IS 2242), Polypropylene (IS 10140), Polystyrene (IS 10142), Polycarbonate (IS 9971)

Before packaging of drinking water, it is very essential to check that there is no leakage of water in any batch or lot.



\* Marking :- Marking of drinking water involves -

1) Name of the product.

2) Name of the process.

3) Name of brand (if any)

4) Batch number or Code number

5) Date of packaging

6) Before use

7) Storage (not in the direct contact with sunlight)

8) ISI number & CMC number

9) Price & Net quantity

\* Requirement :- Packaged Drinking water needs to be clean, without any sediments. 1) The pH value of packaged drinking water is between 6.5 to 8.5.

2) Turbidity should not be greater than 500 mg/litre.

3) Barium should not be greater than 0.5.

6) The pesticides individually should not be greater than 0.001 mg/ltr.

7) The pesticides total in water should not be greater than 0.005 mg/ltr.

\* Marking of water not used for Human consumption :- The water which are not used for drinking purposes have the mark with bold red colour. And also have the clause "Water is not mean for Human Consumption".

\* BIS Standard Certification :- These standards are given by BIS in 1986, they only give the license to those manufacturing industries which are capable to verify all the rules and regulations and parameters.

\* Challenges & Issues :- Sometimes the environmental authority raises issues in contrast to pollution the bottles and pouches used for the packaging are not recycled in the proper way and causes various types of pollution mainly soil pollution.

\* Production :- The quantity of bottles of drinking water depend on the batches, if the same type of drinking water is manufactured then it process in one batch.

no. of bottles	batches
0 - 500	5
501 - 1201	8
1201 - 3200	13
> 3200	20

Conclusion :- It is imperative to ensure that the drinking water offered to sell is free of harmful bacteria and do not affect the human health. The BIS plays an important role to set the standards for the purified drinking water.

R.S.T

~~Amma~~  
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