

*Indian Standard***METHODS OF SAMPLING AND TEST ( PHYSICAL AND CHEMICAL ) FOR WATER AND WASTE WATER****PART 8 TASTE RATING***( First Revision )*

**1. Scope** — Prescribes a method for taste rating of water.

**1.1** This method is applicable only to water and not to waste water.

**2. Principle** — Each panelist ( tester ) is presented with a list of nine statements about the water, ranging from very favourable to very unfavourable. The tester selects a statement that best expresses his opinion. The scored rating is the scale number of the statement selected. The panel rating is the arithmetic mean of the scale numbers of all testers.

**3. Apparatus**

**3.1 Tasting** — Present each sample to the observer in a clean 50-ml beaker filled to the 30 ml level.

**3.2 Temperature Control** — Temperature of the samples shall be such that the observers find it pleasant for drinking. Maintain this temperature by a water-bath. A temperature of 15°C is recommended but in any case do not allow it to exceed 27°C.

**4. Reagents** — Taste and odour-free water and a 2 000 mg/l solution of sodium chloride prepared with taste and odour-free water as reference sample.

**5. Procedure**

**5.1** For test efficiency, a single rating session may contain up to 10 samples, including the reference samples given in 4.1. Observers should work alone after receiving thorough instructions and trial or orientation sessions followed by questions and discussion of procedures. Select panel members on the basis of performance in trial sessions.

**5.2** Rate the samples as follows:

- a) Initially taste about half of the sample by taking the water into the mouth, holding it for several seconds, and discharging it without swallowing;
- b) Form an initial judgement on the rating scale;
- c) Make a second tasting the same manner as the first;
- d) Make a final rating for the sample and record the results on the appropriate data form;
- e) Rinse the mouth with taste-and odour-free water; and
- f) Rest for one minute before repeating steps (a) to (e) on the next sample.

**5.3** Independently randomize sample order for each judge. Allow 30 minutes of rest between repeated rating sessions. The observers should not know the composition or source of specific samples. Use the scale given in 6 for rating and record ratings as integers ranging from one to nine, with one given the highest quality rating.

**6. Rating Scale**

**6.1 Action Tendency Scale**

- a) I would be very happy to accept this water as my everyday drinking water;
- b) I would be happy to accept this water as my everyday drinking water;
- c) I am sure that I could accept this water as my everyday drinking water;
- d) I could accept this water as my everyday drinking water;
- e) May be I could accept this water as my everyday drinking water;
- f) I do not think I could accept this water as my everyday drinking water;
- g) I can not accept this water as my everyday drinking water;
- h) I could never drink this water; and
- j) I can not stand this water in my mouth and I could never drink it.

**7. Precautions**

**7.1** Make taste tests only on samples known to be safe for ingestion.

**7.2** Do not use samples that may be contaminated with bacteria, virus, parasites or toxic chemicals such as arsenic, dichlorinating agents or that derived from an unesthetic source.

**7.3** Do not make taste tests on waste water or similar untreated effluents.

**7.4** Observe all sanitary and esthetic precautions with regard to apparatus and containers containing the sample. Practice hospital-level sanitation of these items.

**7.5** Make analysis in a laboratory, free from interfering background odours. If possible, provide carbon-filtered air at constant temperature and humidity because without such precautions the test measures flavour and not taste.

**8. Calculation** — Calculate the mean and standard deviation of all rating given to each sample. Report the temperature at which the sample is tested.

**EXPLANATORY NOTE**

When the purpose of the test is to estimate taste acceptability, the taste rating procedure should be followed. The test may be used with water samples from public sources, in laboratory research and consumer surveys in order to recommend standards governing mineral content in drinking water.