



Universal Indicator

I013

Intended use

Universal indicator is used as pH indicator with wide range from 4-14. It is used determine pH of various solutions, substances.

Composition**

Ingredients

Thymol blue	0.026 gm
Methyl Red	0.060 gm
Bromothymol blue	0.30 gm
Phenolphthalein	0.50 gm
Ethanol	500 ml

Note: Add dilute NaOH until solution turns green(neutral pH).

**Formula adjusted, standardized to suit performance parameters

Directions

Use 0.2 ml of indicator for every 10 ml of the liquid under examination.

Principle And Interpretation

Universal indicator is a mixture of dyes that changes colour gradually over a range of pH from 4-14. The colour is used to indicate pH directly. The main components of a Universal indicator, in the form of a solution, are thymol blue, methyl red, bromothymol blue and phenolphthalein. This mixture is important because, each component, loses or gains electrons depending upon the acidity or basicity of the solution being tested. It is beneficial to use this type of a universal indicator in a colourless solution. This will increase the accuracy of indication. The indicator is used to determine acidity or alkalinity of various substances such as soil, sewage, sludge, food etc. Solutions and liquids such as water, waste water, etc. Universal indicator is used more than other indicators because it has a wide range of results.

Type of specimen

Biological sample

Specimen Collection and Handling

Follow appropriate techniques for handling specimens as per established guidelines

Warning and Precautions

In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/ eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. If the substance or sample is contaminated, the color may be wrong.
2. Universal indicator is not usually used for a titration because. it changes gradually giving different colours for a different pH.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Quality Control

- **Appearance** : Greenish brown coloured solution.
- **Clarity** : Clear, without any particles.
- **Test** : 0.2 ml solution is pipetted out in 12 tubes containing 10 ml liquid
- **Results** : At various pH levels different colours are seen which are compared with standard indicator chart.

Storage and Shelf Life

Store between 10- 30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow.

Reference

1. Jap. Pat. 99,664, Feb21,1933
2. Chemistry infolab reagents and resources; The preparation of titration indicators; Dhanal De Lloyd,chem.Dept.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
4. Jorgensen,J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual., of Clinical Microbiology, 11th Edition. Vol. 1.



Storage temperature



Do not use if package is damaged



In vitro diagnostic medical device



CE Marking



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