



Universal Indicator

Intended Use:

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

Composition**

Ingredients

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

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

**Formula adjusted, standardized to suit performance parameters

Directions

Use 0.2ml of indicator for every 10ml 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 (1). 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 (2). 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.

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.

Performance and Evaluation

Performance of the product 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

Add 0.2 ml of indicator in 10ml of liquid having different pH range, and observe colour variation as per standard chart.

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 established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

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

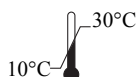
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In vitro diagnostic medical device



CE Marking



Storage temperature



Do not use if package is damaged



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