



## Methyl Orange Indicator

I006

### Intended use

Methyl Orange Indicator is used as a pH indicator. And also used frequently in titrations because of its clear and distinct colour change.

### Composition\*\*

#### Ingredients

Methyl orange	0.05 gm
Distilled water	100.0 ml

Note: Filter the solution if a precipitation forms

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

1. Methyl Orange Indicator has wide range of application so follow appropriate direction as per application protocol.

### Principle And Interpretation

Methyl orange is a pH indicator frequently used in titrations because of its clear and distinct colour change. Unlike a universal indicator, methyl orange does not have a full spectrum of colour change, but has a sharper end point. In a solution becoming less acidic, methyl orange moves from red to orange and finally to yellow with the reverse occurring for a solution increasing in acidity. The entire colour change occurs in acidic conditions. Methyl orange shows red colour in acidic medium and yellow colour in basic medium.

### 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. An indicator is not functional above its pH range because the indicator does not change color at these pH values.
2. If the substance or sample is contaminated, the color may be wrong.
3. Acid-base indicators show just one- or two-color changes.
4. Indicators measure pH at low accuracy, they only indicate sample acidity or alkalinity and not exact 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** : Orange coloured solution. (Note : On storage of the indicator, precipitate may develop. This will not affect the performance criteria of the indicator.)
- **Clarity** : Clear solution without any particles.
- **Reaction** : Reaction of 0.1% aqueous solution is red at pH 3.1 and yellow at pH 4.4 at 25°C.

## 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.

## Reference

1. Horobin R. W. and Kiernan J. A., 2002, 10th ed., CONN'S Biological Stains, A Handbook of Dyes, Stains and Flurochromes for for Use in Biology and Medicine: 10(214).
2. INDIAN PHARMACOPOEIA 2018, VOL-I, 4.3(960)



Storage temperature



Do not use if package is damaged



In vitro diagnostic medical device



CE Marking



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