# Endo Agar Base

Cat. 1118

For the detection of coliforms and other enteric microorganisms in water, dairy products and food in general

## Practical information

| Aplications | Categories |
|---|---|
| Detection | Coliforms |

Industry: Clinical

CE
IVD

## Principles and uses

Endo Agar Base is a differential and moderately selective culture medium for the detection and confirmation of coliforms and other enteric microorganisms in waters, milk, dairy and other food products.

It uses fuchsin to differentiate between positive lactose-fermenting and lactose non-fermenting bacteria. Acetaldehyde production by lactose-fermenting organisms such as E. coli produce characteristic red colonies and a red surrounding area, marked by its reaction with Sodium sulphite in the presence of fuchsin. Lactose non-fermenters form colorless, transparent colonies.

Peptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Lactose is the fermentable carbohydrate providing carbon and energy. Dipotassium phosphate acts as a buffer system. Bacteriological agar is the solidifying agent.

## Formula in g/L

| | | | |
|---|---|---|---|
| Bacteriological agar | 10 | Bacteriological peptone | 10 |
| Dipotassium phosphate | 3,5 | Lactose | 10 |
| Sodium sulfite | 2,5 | | |

## Preparation

Suspend 36 grams of the medium in one liter of distilled water. Add 5 ml of an alcoholic solution at 10% (w/v) of basic fuchsin in 95% ethyl alcohol. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121 ºC for 15 minutes. Cool to 50 ºC, mix well and dispense into plates.

## Instructions for use

For clinical diagnosis, the type of sample is bacteria isolated from any clinical sample.
- Inoculate on the surface making parallel striae with the handle or swab.
- Incubate the plates protected from light, at 35±2 °C for 18-24 hours. If after 24 hours it is negative, re-incubate for an additional 24 hours. To confirm the presence of possible coliforms, inoculate the tubes with the Endo Agar Base and incubate at 35±2 ºC for 18-24 hours. Examine to determine the production of acid and gas.
- Reading and interpretation of the results.

Rapid lactose fermentors produce red colonies with a metallic luster. Slow lactose fermentors produce red colonies. Non lactose fermentors produce colorless colonies.

## Quality control

| Solubility | Appareance | Color of the dehydrated medium | Color of the prepared medium | Final pH (25ºC) |
|---|---|---|---|---|
| w/o rests | Fine powder | Beige | Amber with a pink tint | 7,5±0,2 |

## Microbiological test

Incubation conditions: (35±2 ºC / 18-48 h)

| Microrganisms | Specification | Characteristic reaction |
|---|---|---|
| Enterobacter aerogenes ATCC 13048 | Good growth | Red colony |
| Escherichia coli ATCC 25922 | Good growth | Red with metallic sheen colony |
| Shigella sonnei ATCC 25931 | Good growth | Colorless colony |
| Salmonella typhi ATCC 6539 | Good growth | Colorless colony |

## Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

## Bibliography

Endo S. 1904 uber ein verfahren Zum Nachweiss der Typhusbacillen
A.P.H.A. 1975 Standard methods for the examination of water and wastewater. 14th edition.
Standard Methods for the Examination of Water and Wastewater" (1992).