

Technical Information

Salmonella Agar, öNÖZ

Product Code: DM 1573

Application:- Salmonella Agar, öNÖZ is used for the selective isolation and identification of *Salmonellae* from clinical specimens

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	6.800
Yeast extract	3.000
Meat extract	6.000
Lactose	11.500
Sucrose	13.000
Bile salts mixture	3.825
Trisodium citrate, 5H ₂ O	9.300
Sodium thiosulphate, 5H ₂ O	4.250
L-Phenylalanine	5.000
Disodium phosphate, 2H ₂ O	1.000
Ferric citrate	0.500
Magnesium sulphate	0.400
Brilliant green	0.00166
Neutral red	0.022
Aniline blue	0.250
Metachrome yellow	0.470
Agar	15.000
Final pH (at 25°C)	7.1±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Salmonella and *Shigella* are gram-negative, facultatively anaerobic, non-sporulating rods belonging to the family *Enterobacteriaceae*. They are widely distributed in animals. Salmonella Agar öNÖZ was developed by ö NÖZ ⁽¹⁾ for rapid detection of *Salmonella* and *Shigella* species from clinical specimens.

Peptic digest of animal tissue, yeast extract and meat extract provide nitrogenous compounds, vitamin B complex and other essential the growth of growth nutrients. Lactose and sucrose are the fermentable carbohydrates. Bile salts mixture, brilliant green and sodium citrate inhibit the growth of gram-positive organisms. Sodium thiosulphate and ferric citrate enable the detection of hydrogen sulphide production indicated by colonies with black centers. Lactose and sucrose fermenting members of *Enterobacteriaceae* are partially inhibited, and their colonies can be differentiated by means of the colour produced in the presence of the indicators - namely neutral red and aniline blue. *Proteus* species deaminate phenylalanine to give phenylpyruvate, which forms a dark brown complex with iron ions. Phenylalanine also neutralizes chloramphenicol, which helps in the detection of *Salmonellae* from patients under treatment.

Methodology

Suspend 80.32 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. DO NOT AUTOCLAVE. Mix well before pouring into sterile Petri plates.

Quality Control

Physical Appearance

Beige to light brown homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Yellow coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 8.03% w/v aqueous solution at 25°C. pH : 7.1±0.2

pH Range

6.90-7.30

Cultural Response/Characteristics

DM 1573: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony	Colour change of medium
<i>Enterobacter aerogenes</i> ATCC 13048	50-100	good-luxuriant	≥50%	Bluish or yellowish	Yellow
<i>Escherichia coli</i> ATCC 25922	50-100	good	≥50%	blue with bile precipitation	Blue
<i>Klebsiella pneumoniae</i> ATCC 13883	50-100	Poor-fair	≥50%	Bluish –purple, may have slight precipitation ring around colony	Bluish green
<i>Proteus mirabilis</i> ATCC 25933	50-100	good-luxuriant	≥50%	Dark brown to dark yellow black	Dark yellow
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	good-luxuriant	≥50%	Yellow to brown	yellow
<i>Salmonella Typhi</i> ATCC 6539	50-100	good-luxuriant	≥50%	Yellow with or without black centres	yellow
<i>Salmonella Typhimurium</i> ATCC 14028	50-100	good-luxuriant	≥50%	Yellow with black centres	yellow
<i>Shigella flexneri</i> ATCC 12022	50-100	good-luxuriant	≥50%	Yellow to brown	Dark yellow
<i>Staphylococcus aureus</i> ATCC 25923	≥10 ³	Inhibited	0%		

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8^o in sealable plastic bags for 2-5 days.

Further Reading

1. öNöz E., Hoffmann K., 1978, Zbl. Bakt. Hyg., I. Abt. Orig., A240:16.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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