Salmonella Agar, ONOZ

M573

Intended Use:

Recommended for selective isolation and identification of *Salmonellae* from clinical specimens.

Composition**

Ingredients	Gms / Litre
Peptone	6.800
Yeast extract	3.000
HM extract #	6.000
Lactose	11.500
Sucrose	13.000
Bile salts mixture	3.825
Trisodium citrate, pentahydrate	9.300
Sodium thiosulphate pentahydrate	4.250
L-Phenylalanine	5.000
Disodium hydrogen phosphate dihydrate	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
Equivalent to Meat extract

Directions

Suspend 76.15 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE**. Cool to 45-50°C.Mix well and pour into sterile Petri plates.

Principle And Interpretation

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

Peptone, yeast extract and HM extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients. Lactose and sucrose are the fermentable carbohydrates. Bile salts mixture, brilliant green and sodium citrate inhibit 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 -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 aids in the detection of *Salmonella* from patients under treatment.

Type of specimen

Clinical: faeces, urine; Water samples and Food samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3).
For food samples, follow appropriate techniques for sample collection and processing as per guidelines (4).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (5).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional 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. The medium is selective for *Salmonella* and may not support the growth of other microorganisms.
2. Due to nutritional variations, some strains may show poor growth.
3. Final confirmation of suspected colonies must be carried out by serological and biochemical tests.

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

Beige to light brown homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Greenish brown 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

6.90-7.30

Cultural Response

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
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	good-luxuriant	>=50%	bluish or yellowish	yellow
Escherichia coli ATCC 25922 (00013*)	50-100	good	40-50%	blue with bile precipitation	blue
Klebsiella pneumoniae ATCC 13883 (00097*)	50-100	poor-fair	20-30%	bluish-purple, may have slight precipitation ring around colony	bluish green
Proteus mirabilis ATCC 25933	50-100	good-luxuriant	>=50%	dark brown to black	dark yellow
Pseudomonas aeruginosa ATCC 27853(00025*)	50-100	good-luxuriant	>=50%	yellow to brown	yellow
*Salmonella*Typhi ATCC 6539	50-100	good-luxuriant	>=50%	yellow with or without black centres	yellow
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	good-luxuriant	>=50%	yellow with black centres	yellow
Shigella flexneri ATCC 12022 (00126*)	50-100	good-luxuriant	>=50%	yellow to brown	dark brown
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	>=10^4	inhibited	0%		

Key : (*) Corresponding WDCM numbers.
(#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

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 (2,3).

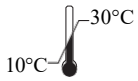
Reference

1. öNöZ E., Hoffmann K., 1978, Zbl. Bakt. Hyg., I. Abt. Orig., A240:16.
2. Isenberg, H.D. Clinical MicrobiologyProcedures Handbook 2nd Edition.
3. 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.
4. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
5. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.

Revision : 03/2022

HiMedia Laboratories Pvt. Limited,
Plot No.C-40, Road No.21Y,
MIDC, Wagle Industrial Area,
Thane (W) -400604, MS, India

IVD *In vitro* diagnostic medical device



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory,diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.