

TM 932 – NUTRIENT AGAR (OXIDASE)

INTENDED USE

For confirmation of oxidase production by microorganisms.

PRODUCT SUMMARY AND EXPLANATION

Nutrient Agar is recommended by APHA for differentiation of the coliform bacteria on the basis of presence of enzyme cytochrome oxidase. It is also recommended by ISO Committee for the same. Cytochrome oxidase is an iron-containing porphyrin enzyme that participates in the electron transfer mechanisms and in the nitrate metabolic pathways of some bacteria. Although the test can be performed by flooding the agar surface of an inoculated plate with the reagent after incubation or with the help of oxidase reagent impregnated filter paper.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	1.000
Meat extract	1.000
Agar	15.000
Sodium chloride	5.000

PRINCIPLE

The medium consists of Peptone and Meat extract that provide nitrogenous compounds, carbon, sulphur and trace ingredients. Sodium chloride maintains osmotic equilibrium.

INSTRUCTION FOR USE

- Dissolve 22.0 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 7.3 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Oxidase	Incubation Temperature	Incubation Period



<i>Escherichia coli</i>	25922	50-100	Luxuriant	>=70%	Negative reaction	35-37°C	18-24 Hours
<i>Enterobacter aerogenes</i>	13048	50-100	Luxuriant	>=70%	Negative reaction	35-37°C	18-24 Hours
<i>Vibrio cholerae</i>	15748	50-100	Luxuriant	>=70%	Positive reaction, deep purple blue colour develops within 10 seconds	35-37°C	18-24 Hours
<i>Aeromonas hydrophila</i>	7966	50-100	Luxuriant	>=70%	Positive reaction, deep purple blue colour develops within 10 seconds	35-37°C	18-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. 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.
2. International Organization for Standardization (ISO), 1990, Draft, ISO/DIS 9308-1.
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 of Clinical Microbiology, 11th Edition. Vol. 1.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only
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