

Hoyles Media Plate with supplements

MP015

Intended use

Recommended for the isolation and differentiation of *Corynebacterium diphtheriae* types.

Composition**

Ingredients	g / L
Peptone	10.000
HM peptone B#	10.000
Sodium chloride	5.000
Agar	15.000
Laked blood	50.000ml
3.5% Potassium Tellurite Solution (FD047).	10 ml
Final pH (at 25°C)	7.8±0.2

**Formula adjusted, standardized to suit performance parameters

- Equivalent to Beef extract

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Principle And Interpretation

The most common disease caused by *Corynebacterium diphtheriae* is diphtheria, an acute communicable disease manifested by both local infection of the upper respiratory tract and the systemic effects of the toxin, which are most notable in the heart and peripheral nerves (1). Hoyle Medium Base, formulated by Hoyle (2), is the modification of the original formulation of Neill, for the isolation and differentiation of *C. diphtheriae*. This medium is not inhibitory to some mitis types of *Corynebacterium*, as the original formulation.

Peptone and HM peptone B supply carbon, nitrogen substances, amino acids, vitamins and other essential growth nutrients. Potassium tellurite is a selective agent, which inhibits most of the normal flora of the upper respiratory tract except *Corynebacterium*. Hoyle's Medium is a highly selective medium and should be used in conjunction with a non-selective media such as Loeffler Serum Medium (M537) and Blood Agar Base (M089) with 10% horse blood (3). *C.diphtheriae* are usually present in small numbers permitting the formation of well isolated colonies. So, inoculation is done by directly rubbing the swab over the entire surface of the medium. Incubation should be carried out till 72 hours if the results are negative. To study the morphology, gentian violet staining is done. To demonstrate the characteristic morphology and staining reactions of *C.diphtheriae* by Neissers or Alberts method, it is advisable to use colonies from Loeffler Medium. The toxigenicity of *C.diphtheriae* strains can be determined by Eleks (4) method.

Type of specimen

Clinical samples - Nasal swab, Throat swab, wound swab

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,5). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional use only. Read the label before opening the pack. 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.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
- 2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
- 3.Further biochemical and serological tests must be carried out for confirmation.

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

Sterile Hoyles Media in 90 mm disposable plates with smooth surface and absence of black particles/cracks/bubbles

Colour of medium

Brownish red coloured medium

Quantity of medium

25 ml of medium in 90 mm disposable plates.

pH

7.60-8.00

Sterility Check

Passes release criteria

Cultural Response

Cultural characteristics observed, after an incubation at 35-37°C for 18-24 hours

Organism	Inoculum (CFU)	Growth	Recovery	Colony characteristics
<i>C. diphtheriae</i> type <i>intermedius</i> 14779	50-100	good-luxuriant	>=50%	grey colonies with darker centers
<i>Corynebacterium diphtheriae</i> type <i>mitis</i>	50-100	good-luxuriant	>=50%	grey colonies with shining surface
<i>Escherichia coli</i> ATCC 25922 (00013*)	>=10 ³	inhibited	0%	
<i>Enterococcus faecalis</i> ATCC 29212 (00087*)	50-100	good-luxuriant	>=50%	black minute colonies

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

On receipt store between 2-8°C. Use before expiry date on the label. 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 (3,5).

Reference

- Murray P. R., Baron J. H., Pfaller M. A., Tenover J. C. and Tenover F. C., 8th Ed., American Society for Microbiology, Washington, D.C. (Ed.), 2003, Manual of Clinical Microbiology.
- Hoyle I., 1941, Lancet., 1:175.
- Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
- Elek S. D., 1948, Brit. Med. A1:493. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
- 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.

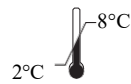
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In vitro diagnostic
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Storage temperature



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