ARENA BioScien

Block 5, Street 9 inside The Ismailia free zone. Ismailia- Egypt
Post Code-41511
Tel.-Fax: +202 21813500/ +202 21813600
Mob.: +2 01211550941/ +2 01119225860
E-mail: sales@arenabioscientific.com
Website: www.arenabioscien.com

Hoyel Medium base

Hoyle Medium Base is a highly selective medium used for the isolation and differentiation of *Corynebacterium diphtheriae* types.

REF: BS.1/HM01.100.0100	100 Gram	REF: BS.1/HM01.250.0250	250 Gram
REF: BS.1/ HM01.500.0500	500 Gram		

CLINICAL SIGNIFICANCE

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 (6). 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.

METHOD PRINCIPLE

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 nonselective media such as Loeffler Serum Medium and Blood Agar Base 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 (1) method.

MEDIA COMPOSITION

Item	Formula per liter of medium
- Peptone	10.00 gm.
- Beef extract	10.00 gm.
- Sodium chloride	5.000 gm.
- Agar	15.00 gm.

Final pH 7.8 ± 0.2 at 25°C

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person.Do not ingest or inhale.

Good Laboratories practices using appropriate precautions shouldbe followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plentyof soap and water. In case of severe injuries; seek medical adviceimmediately.
- Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.
S57: use appropriate container to avoid environmental contamination.
S61: avoid release in environment.

For further information, refer to the Hoyel Medium Base

Material safety datasheet.

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile plates
- Incubator
- Autoclave

STORAGE AND STABILITY

BioScien Hoyel medium base should be stored between 10-30°C in a firmlyclosed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature andsources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

PREPARATION

- Suspend 40.0 grams in 940 ml purified/distilled water.
- Adjust pH to 7.8 ± 0.2 at 25°C
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add 50 ml of laked blood and 10 ml of 3.5% Potassium Tellurite Solution.
- Mix well and pour into sterile Petri plates.

Deterioration

The color of ***BioScien*** Hoyel medium base is Cream to yellow homogeneous free flowing powder. Prepared Basal Medium is Amber coloured, clear to slightly opalescent gel. After Addition of blood & Tellurite Brownish red coloured opaque gel forms in Petri plates. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN

Clinical samples - Blood;

Food and dairy samples;

Water samples

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact ***BioScien*** technical support.

PERFORMANCE CHARACTERISTICS

Oranism	Growth	Colony Characteristics
Bacillus subtilis subsp. spizizenii ATCC 6633	Inhibited	-
C. diphtheriae type intermedius 14779	luxuriant	grey colonies with darker centers
Corynebacterium diphtheriae type mitis	luxuriant	grey colonies with shining surface
Escherichia coli ATCC 25922	Inhibited	-
Enterococcus faecalis ATCC 29212	luxuriant	black minute colonies

REFERENCES

1. Elek S. D., 1948, Brit. Med. A1:493. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
2. Hoyle I., 1941, Lancet., 1:175. Thom and Church, 1926, The Aspergilli, 39.
3. Isenberg, H.D. Clinical Microbiology Procedures Handb0ook. 2 nd 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.
5. .MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
6. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., 8th Ed., American Society for Microbiology, Washington, D.C. (Ed.), 2003, Manual of Clinical Microbiology.

SYMBOLS IN PRODUCT LABELLING			
IVD	For in-vitro diagnostic use	Σ	Number of <n> test in the pack
LOT	Batch Code/Lot number		Caution
REF	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		