PRODUCT DATA SHEET



TM 730 – ESCULIN AGAR

INTENDED USE

For cultivation and differentiation of bacteria hydrolysing esculin and producing H₂S.

PRODUCT SUMMARY AND EXPLANATION

Esculin is a glycoside incorporated as a differential agent to facilitate the identification of various organisms, including *Enterobacteriaceae*, Enterococci and anaerobes. Esculin Agar is based on the formula recommended, for the cultivation and differentiation of bacteria based on their ability to hydrolyze esculin and produce H₂S. The unhydrolyzed esculin can be detected using long wave UV light at 360 nm since they will remain unchanged and fluorescence under UV light. Hydrolyzed esculin will not fluoresce and medium turns black.

COMPOSITION

Ingredients	Gms / Ltr		
Tryptone	13.000		
Sodium chloride	5.000		
Yeast extract	5.000		
Beef heart infusion (solids)	2.000		
Esculin	1.000		
Ferric citrate	0.500		
Agar	15.000		

PRINCIPLE

The medium consists of Tryptone and Beef heart infusion (solids) which provide amino acids and other nitrogenous substances that support bacterial growth. Esculin is a differentiating agent, which helps in identification of esculin-positive organism. Esculin is hydrolyzed to dextrose and esculetin, which forms a brown black complex in the presence of iron salt (ferric citrate).

INSTRUCTION FOR USE

- Dissolve 41.50 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Distribute into screw-capped tubes in 3 ml volumes or as desired. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool tubes in a slanted position.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.		
Appearance of prepared medium	: Amber coloured, clear to slightly opalescent gel forms in tubes as slants.		
рН (at 25°С)	: 7.3 ± 0.2		

INTERPRETATION

Cultural characteristics observed after incubation.

A- 902A, RIICO Industrial Area, Phase III, Bhiwadi-301019.



PRODUCT DATA SHEET



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Esculin hydrolysis	Incubation Temperature	Incubation Period
Enterococcus faecalis	29212	50-100	Good	Positive reaction, blackening of medium	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Luxuriant	Negative reaction	35-37°C	18-24 Hours
Streptococcus pyogenes	19615	50-100	Luxuriant	Negative reaction	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

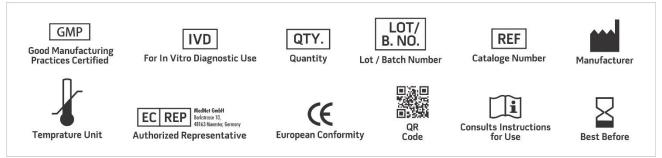
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Atlas R. M., 1996, Handbook of Microbiological Media, 2nd Ed., CRC Press.

2. Koneman E. W., Allen S. D., Janda W. M., Schreckenberger P. C., Winn W. C. Jr., 1997, Colour Atlas and Textbook of Diagnostic Microbiology, 5th Ed., J. B. Lippinccott- Raven Publishers, Philadelphia, Pa.

3. Shigei, 1992, In Isenberg (Ed.), Clinical Microbiology Procedures Handbook, Vol. 1, American Society for Microbiology, Washington, D.C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices. *For Lab Use Only

Revision: 08 Nov., 2019

2

f (0) in 1

A- 902A, RIICO Industrial Area, Phase III, Bhiwadi-301019.



PRODUCT DATA SHEET

