

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.
pH (at 25°C) : 7.3 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Esculin hydrolysis	Incubation Temperature	Incubation Period
<i>Enterococcus faecalis</i>	29212	50-100	Good	Positive reaction, blackening of medium	35-37°C	18-24 Hours
<i>Escherichia coli</i>	25922	50-100	Luxuriant	Negative reaction	35-37°C	18-24 Hours
<i>Streptococcus pyogenes</i>	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. Lippincott- Raven Publishers, Philadelphia, Pa.
3. Shigei, 1992, In Isenberg (Ed.), Clinical Microbiology Procedures Handbook, Vol. 1, American Society for Microbiology, Washington, D.C.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Barkstrasse 10 48163 Münster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

*For Lab Use Only
Revision: 08 Nov., 2019

