

## Product Data Sheet

### ESCULIN AGAR

**Product No.** GB-DCM-00203-1A

### INTENDED USE

For cultivation and differentiation of bacteria hydrolyzing esculin and producing H<sub>2</sub>S.

### PRODUCT SUMMARY

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 H<sub>2</sub>S. 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.

### Product Specifications

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 esculinpositive organism. Esculin is hydrolyzed to dextrose and esculetin, which forms a brown black complex in the presence of iron salt (ferric citrate).

### 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

### 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.

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

### 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.

**This product is for research use only.**