

Product Data Sheet

ESCULIN IRON AGAR

Product No. GB-DCM-00205-1A

INTENDED USE

For cultivation and identification of Enterococci based on their ability to hydrolyze esculin.

PRODUCT SUMMARY

Enterococci are indicators of the sanitary quality of recreational waters, since they occur in faeces of humans and warmblooded animals. Detection and quantitation of Enterococci is necessary because gastroenteritis is associated with swimming in recreational water, which is dependant of enterococcal densities. Esculin Iron Agar is used in conjunction with M-Enterococcus Agar, Modified, for verification of enterococcal colonies in fresh and marine recreational water, as recommended by APH. Esculin in the medium is hydrolyzed by Enterococci to form esculetin and dextrose. Esculetin reacts with the iron salt (ferric ammonium citrate) and produces a dark brown to black complex, which appears around the colonies.

Product Specifications

Ingredients	Gms / Ltr
Esculin	1.000
Ferric ammonium citrate	0.500
Agar	15.000

PRINCIPLE

The medium consists of Esculin and Ferric ammonium citrate that forms dark brown to black complex, imparting dark brown colour to the medium. Agar act as a solidifying medium.

INSTRUCTION FOR USE

- Dissolve 16.5 grams in 1000 ml purified / distilled water.
- Heat to boiling with frequent stirring. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and pour into sterile Petri plates to a depth of 4-5 mm.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of Colony	Esculin hydrolysis
Enterococcus faecalis	29212	50-100	Good - luxuriant	$\geq 50\%$	Pink to red	positive reaction, brown to black precipitate around colonies
Escherichia coli	25922	50-100	None - poor	0-10%	-	Negative reaction

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Cream to yellow homogeneous free flowing powder.
 Appearance of prepared medium: Medium amber coloured, clear to slightly opalescent gel forms in petri plates.
 pH (at 25°C) : 7.1±0.2

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.