

Pfizer Selective Enterococcus Agar (i23266)

Pfizer Selective Enterococcus Agar is used for selective isolation and cultivation of *Enterococci*.

Industry: Food

Principles & Uses

Pfizer Selective Enterococcus Agar, crafted following the formulation of Isenberg, Goldberg, and Sampson, is a selective medium designed for the isolation and cultivation of *Enterococci*. Its components, including peptones and yeast extract, provide essential nitrogen and nutrients for bacterial growth. Bile salts inhibits Gram-positive bacteria, excluding *enterococci*, while sodium chloride maintains osmotic balance. Sodium azide selectively hinders bacterial flora, except for *enterococci*. The buffer system consists of sodium citrate, and agar acts as the solidifying agent.

This medium's specificity lies in its capacity to discern *enterococci* from *streptococci* through the hydrolysis of esculin, where *enterococci* produce a dark brown to black complex when esculin is broken down. Recognizing the importance of esculin hydrolysis, Pfizer Selective Enterococcus Agar offers a valuable tool in microbiological practices. The medium is particularly suitable for selective primary applications. Given its balanced formulation, it proves advantageous in the isolation and identification of *enterococci* in diverse samples, including those from animal-derived food products.

Composition (gr/L)

Casein enzymatic Hydrolysate 17 g, Peptic digest of Animal Tissue 3 g, Yeast Extract 5 g, Bile Salts 10 g, Sodium Chloride 5 g, Sodium Citrate 1 g, Esculin 1 g, Ferric Ammonium Citrate 0.5 g, Sodium Azide 0.25 g, Agar 15 g.

Final pH at 25°C 7.1 ± 0.2

Preparation from dehydrated Powder

Suspend 57.75 grams in 1 L distilled water. Sterilize by autoclaving at 121°C for 15 minutes. Mix well and pour into Petri plates.

Quality Control

Dehydrated Appearance: Homogeneous, light to medium beige

Prepared Appearance: Slightly opalescent, medium amber.

Reaction of 5.77% Solution at 25°C: pH 7.1 ± 0.2

Cultural Response

Cultural response was observed after 18 - 24 hours of incubation at 35 ± 2°C.

Organism (ATCC*)	Recovery	Esculin Hydrolysis
<i>Escherichia coli</i> (25922)	Inhibited	-
<i>Enterococcus faecalis</i> (19433)	Good	Positive, zone of black color forms around the colony
<i>Staphylococcus aureus</i> (25923)	Fair to good	-
<i>Streptococcus pyogenes</i> (19615)	Good	-

*ATCC is a registered trade mark of the American Type Culture Collection.

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.