

# PRODUCT INFORMATION

**Product Type:** PD133 - PETRI DISHES 90mm

DD092 - 90 mm divided Petri dishes

**Cat No. PD133 - STREPTOCOCCI SELECTIVE MEDIUM**

**DD092 - STREP. SELECTIVE / STREP. SELECTIVE + BACITRACIN**

## Intended Use:

A selective enriched medium for the isolation of haemolytic *Streptococcus* from throat swabs and other clinical specimens.

## Principles and uses:

**Streptococci Selective Medium** favors growth of  $\beta$  haemolytic Streptococci ensuring luxuriant growth of the most fastidious microorganisms within 24 hours at 37°C (anaerobically) while the absolutely unique combination of microbial agents contained in the medium inhibits Gram-negative and Gram-positive bacteria except for  $\beta$  haemolytic Streptococci which are not affected, and can be differentiated by their typical haemolytic reaction. Beta-hemolytic streptococci are a group of bacteria that can cause complete hemolysis of red blood cells, creating a clear zone around bacterial colonies on blood agar plates. To specifically isolate these bacteria, bacitracin is added to the medium.

**DD092 - Strep. Selective /Strep. Selective + Bacitracin** are divided plates: one part contains only **Strep. Selective media** and the other part contain **Strep. Selective + Bacitracin**. The addition of bacitracin helps in differentiating between Group A streptococci (susceptible to bacitracin) and Group B streptococci (resistant to bacitracin). Group A streptococci, such as *Streptococcus pyogenes*, are sensitive to bacitracin. Therefore, on a selective medium with bacitracin, colonies of Group A streptococci will be inhibited, and the zone around them will be clear (no hemolysis). A zone of growth inhibition around a bacitracin (0.04 units) disc allows the specific differentiation of group  $\beta$  haemolytic Streptococci. Non-Group A beta-hemolytic streptococci, including Group B streptococci, are resistant to bacitracin. On the selective medium, colonies of these bacteria will exhibit beta-hemolysis with no inhibition by bacitracin.

This selective medium is particularly useful in clinical microbiology for the identification of *Streptococcus pyogenes*, which is a significant human pathogen causing various infections, including pharyngitis (strep throat) and skin infections.

## Limitations of the Procedure

The nature of specimen's collection and handling can affect the recovery of the desired species; therefore, some strains of group A  $\beta$  haemolytic may be poor on this medium.

## Composition

Formula (Gram/Liter):

Select. strep agar modified 40gr:

Enzymatic digest of casein, Type H 15 gr

Enzymatic digest of soybean meal 5gr

NaCl 5gr

Agar 15gr

Selective agent 0.0028gr

Donor sheep blood 5%

Bacitracin only in DD092 – 300U

**Storage:** 2°-8°C

**pH:** 7.1 - 7.5

**Appearance:** cherry-red, opaque, firmly solid

**Package contents:** 10 plates in a package

**Shelf life:**

**Exp. Date:** Printed on label and on the item.

**Required materials not supplied:** Laboratory equipment as required.

**Warning and Precautions** - For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Petri dishes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Petri Dishes may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.

If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation. Storage Instructions: On receipt, store plates in the dark at 2–8 °C. Avoid freezing and overheating. Do not open until ready to use.

#### Performance Testing Results:

GPT: Inoculum 10-100 cfu

Inhibitory properties: inoculum 10000 cfu

Test	ATCC No.	Incubation Temp. (°C)	Incubation Cond.	Reaction 1	
<i>Streptococcus pyogenes</i> group A	19615	33-37 °C	Anaerobic, 24 hours	Pass	Beta haemol. reaction, sensit.to bacitracin, inhib. zone > 14 mm
<i>Staphylococcus aureus</i>	29213	33-37 °C	Anaerobic, 24 hours	Inhibited	
<i>Staphylococcus aureus</i>	25923	33-37 °C	Anaerobic, 24 hours	Inhibited	
<i>Proteus mirabilis</i>	4630	33-37 °C	Anaerobic, 24 hours	Inhibited	
<i>Escherichia coli</i>	25922	33-37 °C	Anaerobic, 24 hours	Inhibited	