

## Specification

Selective culture medium for the screening of Staphylococci from a variety of samples, acc. to Pharmacopoeias, ISO and DIN standards.

## Presentation

20 Prepared Plates  
90 mm  
with: 21 ± 2 ml

### Packaging Details

1 box with 2 packs of 10 plates/pack. Single cellophane.

### Shelf Life

3 months

### Storage

2-14°C

## Composition

Composition (g/l):

Casein Peptone.....	10.0
Sodium pyruvate.....	10.0
Glycine.....	12.0
Meat extract.....	5.0
Lithium chloride.....	5.0
Yeast extract.....	1.0
Agar .....	15.0
Egg Yolk Emulsion.....	50.0 ml
Potassium Tellurite 1%.....	10.0 ml

## Description /Technique

### Description

Baird Parker Agar is recommended for the detection and enumeration of staphylococci in food and other material, since it allows a good differentiation of coagulase-positive strains. The growth of the accompanying bacteria is usually suppressed by the high concentration in lithium, glycine and pyruvate. Lithium and glycine enhances the growth of staphylococci. Occasionally the medium may grow some *Bacillus* species, yeast and very rarely, *Proteus*.

The presence of tellurite and egg yolk allows the differentiation of presumptive pathogenic staphylococcal colonies. There is a high correlation between the coagulase test and the presence of clear zones of lypolysis in this medium, which is due to the staphylococcal lecithinase. Studies show that almost 100% of coagulase-positive staphylococci are capable of reducing tellurite, which produces black colonies, whereas other staphylococci can not always do so.

### Technique

The inoculation is carried out by spreading 0,5 mL of sample over each plate with a Drigalsky loop. After 24-48 hours of incubation at 37±1°C, select the colonies which are black, shiny and convex with regular margins surrounded by a clear zone. These can be presumptively identified as coagulase-positive *Staphylococcus aureus*.

Colonial appearance after 24-48 hours at 37+1 °C ±2,0:

- *Staphylococcus aureus*: Black, shiny, convex, regular margins, 1,0-1,5 mm diameter, surrounded by a clear zone of lipolysis (egg yolk clearing reaction) 2-5 mm in width. Wide opaque zones of precipitate extending into the cleared medium may occur after 48 hours.
- Other species of *Staphylococcus*: Black, usually dull, with regular margins. Sometimes brown with zones of clearing but these present as wide opaque zones.
- *Micrococcus* spp: Brown, very small and without clearing zones.
- *Bacillus* spp: Various shades of brown, big. May produce clearing zones after 48 hours.
- Yeasts: White, big and smooth.

## Quality control

### Physical/Chemical control

Color : yellow

pH: 7.2 ± 0.2 at 25°C

### Microbiological control

Spiral Spreading: Practical range 100±20 CFU; Min. 50 CFU (Productivity) / 10<sup>4</sup>-10<sup>6</sup> CFU (Selectivity).

Aerobiosis. Incubation at 37 ± 1°C, reading after 24/44 ± 4h

### Microorganism

*Staph. aureus* ATCC® 25923, WDCM 00034*Escherichia coli* ATCC® 8739, WDCM 00012*Staphylococcus aureus* ATCC® 6538, WDCM 00032*Staph. epidermidis* ATCC® 12228, WDCM 00036*Staph. saprophyticus* ATCC® 15305, WDCM 00159

### Growth

Good. Black/grey colonies with halo. Lecithinase (+)

Inhibited

Good. Black/grey colonies with halo. Lecithinase (+)

Black/grey colonies w/o halo. Lecithinase (-)

Black/grey colonies w/o halo. Lecithinase (-)

### Sterility Control

Incubation 48 hours at 30-35°C and 48 hours at 20-25°C: NO GROWTH

Check at 7 days after incubation in same conditions

## Bibliography

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