Reference: 100063UA **Technical Data Sheet**

Product: **Baird Parker Agar**

Specification

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

Presentation

	Packaging Details	Shelf Life	Storage
20 Prepared Plates 90 mm with: 21 ± 2 ml	1 box with 2 packs of 10 plates/pack. Single cellophane.	3 months	2-14 ºC

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 ±1ºC, select the colonies which are black, shiny and convex with regular margins surrounded by a clear zone. These can be presumptly 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.

Precautions

For in vitro diagnostic use. Do not reuse. For professional use only.

Do not use the product if it shows evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

Quality control

Physical/Chemical control

Color : yellow pH: 7.2 ± 0.2 at 25ºC

Microbiological control

Inoculate: Practical range 100 ± 20 CFU. min. 50 CFU (productivity)/ 10^4-10^6 (selectivity) and <100 UFC (specificity-PhEur) and ≥10^3 UFC (specificity-ISO).
Microbiological control according to ISO 11133:2014/A1:2018.

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020.

Aerobiosis. Incubation at 37 ºC ± 1, reading after 24-48 ± 2h

S. aureus and *E. coli* double incubation temp. 30-35 °C / 37°C

Microorganism	Growth
Escherichia coli ATCC® 8739, WDCM 00012	Inhibited
Staphylococcus aureus ATCC® 6538, WDCM 00032	Good. Black/grey colonies with halo. Lecithinase (+)
Stph. epidermidis ATCC® 12228, WDCM 00036	Black/grey colonies w/o halo. Lecitinase (-)
Stph. saprophyticus ATCC® 15305, WDCM 00159	Black/grey colonies w/o halo. Lecitinase (-)
Stph. aureus ATCC® 25923, WDCM 00034 (37ºC)	Good. Black/grey colonies with halo. Lecithinase (+)
Stph. aureus ATCC® 6538, WDCM 00033 (32,5ºC)	Good. Black/grey colonies with halo. Lecithinase (+)
Escherichia coli ATCC® 8739, WDCM 00012 (32,5ºC)	Inhibited

Sterility Control

Incubation 48 h at 30-35 ºC and 48 h at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

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· FIL-IDF 60:2001 Standard. Lait et produits à base de lait - Detection des staphylocoques à coagulase positive - Technique du nombre le plus probable. Brussels.
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· ISO 6888-1:2021. Standard. Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (*Staphylococcus aureus* and other species)- Part 1 Technique using Baird-Parker Agar medium. Adment 2: Inclusion of an alternative confirmation test using RPFA stab method.
· ISO 6888-2:2021 Standard. Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci - Part 1 Technique using rabbit plasma fibrinogen agar medium. Geneva.
. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
· ISO 22718 Standard (2015) . Cosmetics - Microbiology - Detection of Staphylococcus aureus.
· USP 31 - NF 26 (2008) <61> Microbial Limit Tests. US Phamacopoeial Conv. Inc. Rockville. MD. USA.
· ZANGERL, P. & H. ASPERGER (2003) Media used in the detection and enumeration of *Staphylococcus aureus*. In Handbook.

Storage

Storage conditions: 2-14ºC
Avoid direct contact with surfaces that can freeze product.

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