LAB285

Baird-Parker Medium Base (ISO)

For the isolation of coagulase-positive staphylococci. Formulated to ISO 6888-1 and compliant to ISO 6888-2 and ISO 6888-3..

Description

Originally introduced in 1962, this medium was developed by Baird-Parker to overcome the problems of recovering damaged *Staphylococcus aureus* from foodstuffs. This version of the medium is formulated according to ISO 6888-1:1999+A1:2003 and is in compliance with ISO 6888-2:2003+A1:2003 and ISO 6888-3:2003.

Baird-Parker medium is highly selective by nature, due to the presence of potassium tellurite and lithium chloride. Tellurite inhibits most coliforms and is also reduced to telluride by *S. aureus*, giving the typical black colonies. Glycine and sodium pyruvate are both used as growth factors by staphylococci while the pyruvate also neutralises any toxic peroxides that may be formed.

As with Lab M's traditional Baird-Parker Medium, LAB085, and unlike some commercially available preparations, the new ISO formulated Baird-Parker medium can be used with either Egg Yolk Tellurite (X085) or Rabbit Plasma Fibrinogen (X086).

When Baird-Parker medium is used with Egg Yolk Tellurite X085, presumptive *S. aureus* appear as black colonies demonstrating lecithinase activity (an opaque zone around the colony) and lipase activity (a zone of clearing encircling the opaque zone). Suspected *S. aureus* colonies should be confirmed with RPF for coagulase or latex agglutination test.

Rabbit plasma fibrinogen (RPF X086) is a more specific alternative to egg yolk tellurite and allows the direct detection of coagulase-positive *S. aureus*. Typical *S. aureus* appear as black colonies surrounded by a zone of precipitation (demonstrating coagulase activity). This is recognised as the gold standard method for the identification of *S.aureus*. RPF overcomes any issues with atypical colony forms and its use means further confirmatory tests are not necessary.

Formulation

	g / litre
Pancreatic digest of casein	10.0
Yeast extract	1.0
Meat extract	5.0
Sodium pyruvate	10.0
L-Glycine	12.0
Lithium chloride	5.0
Agar	20.5

Appearance

Powder:	fine, free-flowing, homogeneous, buff
Final medium:	opaque cream yellow gel (with X085)
	clear, straw gel (with X086)

pH: 7.2 ± 0.2

Method for reconstitution

For Baird-Parker Medium LAB285 with Egg Yolk Tellurite X085

Weigh 63.5 grams of powder and disperse in 1 litre of deionised water. Allow to soak for 10 minutes, swirl to mix and sterilise at 121°C for 15 minutes. Cool to 48°C and add 5% (50mL) X085. Mix well before aseptically pouring into sterile Petri dishes. Dry the agar surface prior to use. Sulphamezathine may be added at 0.05g/L to suppress the swarming of *Proteus* spp.

For Baird-Parker Medium LAB285 with Rabbit Plasma Fibrinogen(RPF) Supplement X086

Weigh 6.35 grams of powder and disperse in 90mL of deionised water. Allow to soak for 10 minutes, swirl to mix and sterilise at 121°C for 15 minutes. Cool to 48°C and add 1 vial of reconstituted X086. Mix well before aseptically pouring into sterile Petri dishes. Dry the agar surface prior to use.

Inoculation
LAB285+X085: surface inoculation as per user's validated methods.
LAB285+X086: surface inoculation or pour plate as per user's validated methods.

Incubation
LAB285+X085: 37 °C aerobically for 48 hours.
LAB285+X086: 37 °C aerobically for 24-48 hours.

Storage
Dehydrated culture media: 10-25°C
Poured plates: LAB285+X085 upto 3 days at 2-8°C in the dark; LAB285+X086 use on day of preparation.

Minimum Q.C. organisms

Staphylococcus aureus ATCC 6538	>50% recovery, typical colonies
Staphylococcus aureus ATCC 25923	>50% recovery, typical colonies
Staphylococcus aureus ATCC 6538P	>50% recovery, typical colonies
Staphylococcus epidermidis ATCC 12228	Growth, typical colonies
Escherichia coli ATCC 25922	Inhibited
Escherichia coli ATCC 8739	Inhibited

Interpretation
LAB285+X085: Presumptive *S. aureus* colonies appear as black colonies demonstrating lecithinase activity and lipase activity. All black colonies (suspected *S. aureus)* should be confirmed with a coagulase test (RPF) or a latex agglutination kit.
LAB285+X086: Typical *S. aureus* appear as black colonies surrounded by a zone of coagulase activity.

References
ISO 6888-1:1999+A1:2003 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 (includes amendment A1:2003).

ISO 6888-2:1999+A1:2003 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 rabbit plasma fibrinogen agar medium (includes amendment A1:2003).

ISO 6888-3:2003 Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (*Staphylococcus aureus* and other species) - Part 3: Detection & MPN technique for low numbers.

ISO/TS 11133-2:2003 Microbiology of food and animal feeding stuffs - Guidelines on preparation and production of culture media - Part 2: Practical guidelines on performance testing of culture media (ISO/TS 11133-2:2003).

Baird-Parker, A.C. (1962). An improved diagnostic and selective medium for isolating coagulase-positive staphylococci. *J. Appl. Bact.* 25(1):12-19.

Smith, B.A. and Baird-Parker, A.C. (1964). The use of sulphamezathine for inhibiting *Proteus* spp. on Baird-Parker's isolation medium for *Staphylococcus aureus*. *J. Appl. Bact.* 27(1):78-82