



LAB085

Baird-Parker Medium Base

For the isolation of coagulase-positive staphylococci.

Description

Originally introduced in 1962, this medium was developed by Baird-Parker to overcome the problems of recovering damaged *Staphylococcus aureus* from foodstuffs.

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.

Unlike some commercially available preparations, Lab M 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
Tryptone	10.0
Beef extract	7.5
Yeast extract	1.0
Lithium chloride	5.0
Glycine	12.0
Sodium pyruvate	10.0
Agar No. 2	20.0

Appearance

Powder:	fine, free-flowing, homogeneous, buff
Final medium:	opaque cream/pale fawn gel (with X085) translucent, pale straw gel (with X086)

pH: 6.8 ± 0.2

Method for reconstitution

For Baird-Parker Medium LAB085 with Egg Yolk Tellurite X085

Weigh 65.5 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 47°C and add 5% (50mL) X085. Mix well before aseptically pouring into sterile Petri dishes. Dry the agar surface prior to use.

For Baird-Parker Medium LAB085 with Rabbit Plasma Fibrinogen (RPF) Supplement X086

Weigh 6.55 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 47°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

LAB085+X085: surface inoculation as per user's validated methods.

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Incubation

LAB085+X085: 37 °C aerobically for 48 hours.

LAB085+X086: 37 °C aerobically for 24-48 hours.

Storage

Dehydrated culture media: 10-25°C

Poured plates: LAB085+X085 upto 3 days at 2-8°C in the dark; LAB085+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

Interpretation

LAB085+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.

LAB085+X086: Typical *S. aureus* appear as black colonies surrounded by a zone of coagulase activity.

Growth characteristics(with X085)				
Organism	Colony size (mm)	Shape & surface	Colour	Other
<i>S. aureus</i>	1.0-3.0	CV.E.G.	Black	Narrow opaque margin surrounded by a zone of clearing
<i>S. saprophyticus</i>	0.5-2.0	CV.E.G.	Black	(poor growth)
Other coagulase-negative staphylococci	0.5-1.0	CV.E.G.	Black	(no growth)
<i>Proteus</i> spp.	0.5-2.0	F.Rz.G	Brown Black	(no growth)
<i>Bacillus</i> spp.	0.5-1.0	F.Rz.D.	Brown	(no growth)
<i>Enterobacteriaceae</i>	no growth			
Growth characteristics(with X086)				
Coagulase-positive <i>S. aureus</i>	1.0-3.0	CV.E.G.	White, Grey, Black	Narrow opaque zone of coagulase activity
Coagulase-negative staphylococci	0.5-2.0	CV.E.G.	White, Grey	(poor growth)
<i>Proteus</i> spp	0.5-2.0	F.Rz.G	Black, Brown-Black	(no growth)
<i>Bacillus</i> spp.	0.5-1.0	F.Rz.D.	Brown	(no growth)
<i>Enterobacteriaceae</i>	no growth			



References

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