

79893 Baird Parker agar base, RPF (Baird Parker Rabbit Plasma Fibrinogen Agar; BPA, RPF)

Baird Parker Agar Base is recommended for the isolation and enumeration of coagulase positive Staphylococci from food and other materials using RPF Supplement (Cat. No. 05939).

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	10.0
Meat extract	5.0
Yeast extract	1.0
Glycine	12.0
Sodium pyruvate	10.0
Lithium chloride	5.0
Agar	20.0
Final pH 7.2 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-8°C.

Appearance: Faint beige to yellow coloured, homogeneous, free flowing powder.
 Gelling: Firm
 Color and Clarity: Basal medium yields light brown to yellow coloured, clear to slightly opalescent gel forms in petri plates. With addition of RPF Supplement yellow coloured, opaque gel forms in petri plates.

Directions:

Suspend 6.3 grams in 90 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add rehydrated content of 1 vial RPF Supplement (Cat. No. 05939). Mix well and pour into sterile petri plates.

Warning: Lithium Chloride is harmful. Avoid all bodily contact and inhalation of vapours. On contact with skin wash with plenty of water immediately.

Principle and Interpretation:

Baird Parker Agar is used for the isolation and differentiation of coagulase-positive staphylococci in food and pharmaceuticals according to Baird Parker.

As nitrogen source for the organism casein peptone and meat extract are added to the medium. Yeast extract provides as well nitrogen but also other important nutrients like e.g. vitamin B₁₂ complex. The medium contains lithium and tellurite which inhibits most of the contaminating microflora, while glycine and pyruvate enhance Staphylococci growth. Staphylococci can reduce tellurite to telluride which results in grey to black coloration of the colonies.

Rabbit Plasma Fibrinogen is used for the detection of coagulase activity. Coagulase positive organisms appear as grey to black colonies because of the tellurite reduction and an opaque halo, due to the conversion by coagulase from fibrinogen to fibrin. Only plates with less than 100 characteristic colonies should be counted. Use this media eliminates the need of an additional coagulase test.



Cultural characteristics after 24-48 hours at 35-37°C.

Organisms (ATCC)	Growth	Color of Colony	Coagulase
<i>Proteus mirabilis</i> (25933)	+++	brown - black	-
<i>Staphylococcus aureus</i> (25923)	+++	grey-black shiny	+
<i>Micrococcus luteus</i> (10240)	+ / ++	shades of brown-black*	-
<i>Staphylococcus epidermis</i> (12228)	+ / ++	black	-
<i>Bacillus subtilis</i> (6633)	- / +	dark brown matt	-
<i>Escherichia coli</i> (25922)	-	-	-

* = very small

References:

1. ISO 6888-2:1999 Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of coagulase-positive staphylococci (*Staphylococcus aureus* and other species) -- Part 2: Technique using rabbit plasma fibrinogen agar medium
2. Baird Parker, A.C. (1962). An improved diagnostic and selective medium for isolating coagulase-positive staphylococci. J. Appl. Bact. 25 (1): 12-19. Beckers N.J. et al (1984). Cannad J. microbiol. 30: 470-474.

Precautions and Disclaimer

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