Baird Parker Agar Base (Agar Medium O) EP

Intended Use
Baird Parker Agar Base (Agar Medium O) EP is a medium with added supplements for selective isolation and enumeration of coagulase positive Staphylococci from clinical and non-clinical specimens in compliance with EP.

Summary
This medium was developed by Baird-Parker from the Tellurite-glycine formulation of Zebovitz *et al*., for isolation of *S. aureus* from foods. It is cited as Agar medium O in European Pharmacopoeia, 2008 and is recommended for isolation and enumeration of coagulase positive *Staphylococcus aureus*.
Staphylococcus species are common contaminants in food, dairy, pharmaceutical and cosmetics related products. This medium is recommended for sterility checking of materials to detect *S. aureus*. Baird Parker medium was reported to be the best medium for selective detection of coagulase positive and entero-toxigenic *Staphylococcus*. This medium was found to be less inhibitory to *S. aureus* than other media, at the same time being more selective.

Principle
Beef extract, yeast extract and pancreatic digest of casein provides essential mineral, vitamin and other growth requirements. Sodium pyruvate protects injured cells and helps recovery. Lithium chloride and potassium tellurite inhibit most of contaminating microflora except *S. aureus*. Glycine, pyruvate enhances growth of *Staphylococcus*. With the addition of egg yolk the medium becomes yellow and opaque. Glycine neutralizes aldehyde, while egg yolk neutralizes phenolic compounds, if present in the test samples. Proteolytic bacteria produce a clear zone around the colony in egg yolk containing media also known as Lecithinase reaction. A clear zone and grey-black colonies on this medium are diagnostic for coagulase positive Staphylococci. Upon further incubation, an opaque zone is developed around colonies, which can be due to lipolytic activity. Identity of *S. aureus* isolated on Baird-Parker Agar must be confirmed with a coagulase reaction and deoxyribonuclease test. The sterility of product is confirmed by absence of growth of *S. aureus* on this medium.

Formula*

Ingredients	**g/L**
Pancreatic Digest of Casein	10.0
Beef Extract	5.0
Yeast Extract	1.0
Glycine	12.0
Sodium Pyruvate	10.0
Lithium Chloride	5.0
Agar	20.0
Final pH (at 25°C)	6.8 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label.

Type of specimen
Food and Dairy samples
Pharmaceutical sample
Cosmetics sample

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 63.00 g of the powder in 950 mL of purified / distilled water. Mix thoroughly.
2. Boil with frequent agitation to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Cool to 45°C-50°C and aseptically add 50 mL of Egg Yolk Emulsion (204050370100) and 3 mL sterile 3.5% Potassium Tellurite Solution (204160720001), or 50 mL Egg Yolk Tellurite Emulsion (204050380100).
5. Mix thoroughly, but gently and pour into sterile petridishes.

Warning: Lithium chloride is harmful, bodily contact and inhalation of vapours must be avoided. On contact with skin, wash with plenty of water immediately.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Basal medium: Light amber coloured slightly opalescent gel, With addition of egg yolk Tellurite emulsion: Yellow coloured opaque gel forms in petridishes.
Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP and growth is observed after an incubation at 30°C-35°C for 24 to 48 hours.
Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤ 100 cfu of appropriate microorganism at 30°C-35°C for 24 hours.
Indicative Properties: The test results observed are within the specified temperature and time, inoculating ≤ 100 cfu of appropriate microorganism.

Organisms (ATCC)	Growth	Colour of Colony	Lecithinase Production
Bacillus spizizenii (6633)	Partial inhibition	Dark brown	-
Proteus mirabilis (25933)	Good	Brown to black	-
Staphylococcus aureus subsp. *aureus* (25923)	Good	Grey - black shiny	+
Staphylococcus aureus subsp. *aureus* (6538)	Good	Grey- black shiny	+
Staphylococcus epidermidis strain PCI 1200 (12228)	Good	Black	–

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Baird Parker AC and Davenport E; 1965 J. Appl. Bacteriology, 28:390.
2. Baird Parker AC; 1962, J. Appl. Bacteriology; 25:12.
3. Tardio and Baer, 1971; J. Assoc. Off. Analy. Chem. 54:728. European Pharmacopoeia, 2008, European Department for the quality of Medicines.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201020070100	Dehydrated Culture Media	100 g
201020070500	Dehydrated Culture Media	500 g