



Serving Scientific Community
Since 1985



TECHNO PHARMCHEM

An ISO 9001 : 2008 Certified Company

Registered Off. : 101-A, Deep Enclave, Pocket "D", Ashok Vihar, Phase-III, Delhi-110 052 (India)
Corporate Off. : 152, Vardhman City Centre, Near Shakti Nagar Underbridge, Delhi-110052 (India)
Works : Plot No.1022, Modern Industrial Estate, Bahadurgarh-124507, Haryana (India)
Telephone : 0091 - 11 - 23646422 E-mail : tecpharm@gmail.com
Website : www.technopharmchem.com

Baird Parker Agar Base

Product Code : CM0130

Baird Parker Agar Base is recommended for the isolation and enumeration of coagulase positive Staphylococci from food and other materials.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	10.000
Meat extract	5.000
Yeast extract	1.000
Glycine	12.000
Sodium pyruvate	10.000
Lithium chloride	5.000
Agar	20.000

Final pH (at 25°C) 7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 63 grams in 950 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 50 ml concentrated Egg Yolk Emulsion and 3 ml sterile 3.5% Potassium Tellurite solution or 50 ml Egg Yolk Tellurite Emulsion. If desired add rehydrated contents of 1 vial of BP Sulpha Supplement. Alternatively 1 vial of Fibrinogen Plasma Trypsin Inhibitor Supplement may be used per 90 ml medium in place of Egg yolk Tellurite Emulsion for identification of coagulase, positive Staphylococci. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Baird Parker Agar was developed by Baird-Parker from the Tellurite - glycine formulation of Zebowitz et al for isolation of Staphylococcus aureus from foods.

This medium was found to be less inhibitory to Staphylococcus aureus than other media, and at the same time being more selective. Subsequently it was officially adapted by the AOAC and is also recommended in USP for use in Microbial limit test. However, identity of Staphylococcus aureus isolated on Baird-Parker Agar must be confirmed with a coagulase reaction. Smith and Baird-Parker found that the addition of 50 mg/l Sulphamethazine in the medium, suppresses the growth and swarming of Proteus species. Sodium pyruvate protects injured cells and helps in their recovery. Lithium chloride and potassium tellurite inhibit most of the contaminating microflora except Staphylococcus aureus. Glycine, pyruvate enhances growth of Staphylococcus. With the addition of egg yolk, the medium becomes yellow, opaque.

Proteolytic bacteria produce a clear zone around colony in egg yolk containing media. 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. Baird-Parker Agar Base can also be used to detect coagulase activity by adding plasma fibrinogen mixture in place of egg yolk emulsion. 375 mg bovine fibrinogen, 2.5 ml rabbit plasma, 2.5 mg trypsin inhibitor and 2.5 mg potassium tellurite dissolved in 10 ml sterile distilled water and added to 90 ml sterile molten medium kept at 45-50°C. Mix well and pour into plates. On this medium Staphylococcal coagulase positive colonies are white to grey-black surrounded by an opaque zone of coagulase activity, within



Serving Scientific Community
Since 1985



TECHNO PHARMCHEM

An ISO 9001 : 2008 Certified Company

Registered Off. : 101-A, Deep Enclave, Pocket "D", Ashok Vihar, Phase-III, Delhi-110 052 (India)
Corporate Off. : 152, Vardhman City Centre, Near Shakti Nagar Underbridge, Delhi-110052 (India)
Works : Plot No.1022, Modern Industrial Estate, Bahadurgarh-124507, Haryana (India)
Telephone : 0091 - 11 - 23646422 E-mail : tecpharm@gmail.com
Website : www.technopharmchem.com

24-48 hours incubation at 35°C. Reduction in tellurite is necessary because of absence of egg yolk emulsion. This results in translucent agar and white to grey coloured colonies of Staphylococci. For quantitative results, select 20 – 200 colonies. Count Staphylococcus aureus like colonies and test them for coagulase reaction. Report Staphylococcus aureus per gram of food. Regardless of the negative reactions, consider all doubtful colonies as Staphylococcus aureus and carry out further tests for confirmation. Colonies of some contaminating organisms may digest the coagulase halo reaction.

Quality Control

Appearance : Cream to yellow homogeneous free flowing powder
Gelling : Firm, comparable with 2.0% agar gel
Colour and Clarity of prepared medium : Yellow coloured clear to slightly opalescent gel. After addition of Egg Yolk Emulsion and Tellurite Emulsion: Yellow colored opaque gel forms in Petri plates.
Basal medium :
Reaction ; Reaction of 6.3% w/v aqueous solution at 25°C. pH : 7.0±0.2
pH : 6.80-7.20

Cultural Response

Cultural response was observed after an incubation at 35-37°C for 24-48 hours. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar.

Cultural Response

Organism	Inoculum (CFU)	Growth	Lot value (CFU)	Recovery	Colour of Colony	Lecithinase
Staphylococcus aureus ATCC 6538	50 -100	luxuriant	25 -100	>=50%	grey-black Shiny	Positive, opaque zone around the colony.
Staphylococcus aureus ATCC 25923	50 -100	luxuriant	25 -100	>=50%	grey-black shiny	Positive, opaque zone around the colony
Proteus mirabilis ATCC 25933	50 -100	none - poor	0 -10	0 -10%	brown - black	Negative
Staphylococcus epidermidis ATCC 12228	50 -100	poor - good	15 -40	30 -40%	black	Negative
Bacillus subtilis ATCC 6633	50 -100	none - poor	0 -10	0 -10 %	dark brown	Negative
Escherichia coli ATCC 25922	50 -100	none- poor	0 -10	0 -10 %	large brown black	Negative

Storage and Shelf Life

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