# BAIRD-PARKER AGAR BASE

## INTENDED USE
Remel Baird-Parker Agar Base is a solid medium recommended for use in qualitative procedures for the isolation and presumptive identification of coagulase-positive staphylococci.

## SUMMARY AND EXPLANATION
Baird-Parker developed Baird-Parker Agar for isolation and enumeration of coagulase-positive staphylococci from foods and other sources.[1] It is a modification of a medium of tellurite glycine medium developed by Zebovitz, Evan and Nivan.[2] Baird-Parker Agar is recommended for use in the examination of foods and other materials by the Food and Drug Administration (FDA), the American Public Health Association (APHA), and the United States Pharmacopeia (USP).[3-7]

## PRINCIPLE
Beef extract, peptone, and yeast extract supply nitrogen, carbon, sulfur, vitamins, and trace minerals. Sodium pyruvate and glycine enhance the growth of *Staphylococcus aureus*. Lithium chloride is a selective agent which inhibits most bacteria other than *S. aureus*. Egg Yolk Tellurite supplies the differential agents, potassium tellurite and egg yolk emulsion. Potassium tellurite is reduced to metallic tellurium by *S. aureus* resulting in black colonies. Egg yolk emulsion serves to demonstrate the proteolytic action of coagulase-positive staphylococci which form clear zones in the medium around the colonies. On further incubation, many strains of *S. aureus* form opaque zones within the clear zones as a result of lecithinase or lipase activity.

## REAGENTS (CLASSICAL FORMULA)*

| | | | | | |
|---|---|---|---|---|---|
| Glycine | 12.0 | g | Lithium Chloride | 5.0 | g |
| Casein Peptone | 10.0 | g | Yeast Extract | 1.0 | g |
| Sodium Pyruvate | 10.0 | g | Agar | 20.0 | g |
| Beef Extract | 5.0 | g | Demineralized Water | 1000.0 | ml |

pH 7.0 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

## PRECAUTIONS
This product is For Laboratory Use only. It is not intended for use in the diagnosis of disease or other conditions.

## PREPARATION OF DEHYDRATED CULTURE MEDIUM
1. Suspend 63 g of medium in 950 ml of demineralized water.
2. Heat to boiling with agitation to completely dissolve.
3. Sterilize by autoclaving at 121°C for 15 minutes or following established laboratory procedures.
4. Cool to 45-50°C and aseptically add 50 ml of Egg Yolk Tellurite (REF R450330).
5. Mix thoroughly and dispense into appropriate containers.

## PROCEDURE
1. Consult current editions of appropriate references for the recommended procedure for sample preparation, inoculation, testing, and interpretation.[3-7]

## QUALITY CONTROL
Each lot number of Baird-Parker Agar Base has been manufactured, packaged, and processed in accordance with current Good Manufacturing Practice regulations. All lot numbers have been tested using the following quality control organisms and found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, sample results should not be reported.

| CONTROL | INCUBATION | RESULTS |
|---|---|---|
| *Staphylococcus aureus* ATCC® 25923 | Aerobic, 18-24 h @ 33-37°C | Black colonies with clear to opaque zones |
| *Staphylococcus epidermidis* ATCC® 12228 | Aerobic, 18-24 h @ 33-37°C | Inhibition (partial to complete) |
| *Escherichia coli* ATCC® 25922 | Aerobic, 18-24 h @ 33-37°C | Inhibition (partial to complete) |
| *Enterococcus faecalis* ATCC® 29212 | Aerobic, 18-24 h @ 33-37°C | Inhibition (partial to complete) |

## LIMITATIONS
1. Other organisms may grow on Baird-Parker Agar, e.g., *S. saprophyticus*; however, the colonial morphology is easily distinguishable from *S. aureus*.[8]

## BIBLIOGRAPHY

1. Baird-Parker, A.C. 1962. J. Appl. Bacteriol. 25:12-19.
2. Zebovitz E., J.B. Evans, and C.F. Niven. 1955. J. Bacteriol. 70:686-690.
3. Food and Drug Administration. 2000. Bacteriological Analytical Manual Online. AOAC International, Gaithersburg, MD.
4. Wehr, H.M. and J.F. Frank. 2004. Standard Methods for the Examination of Dairy Products. 17th ed. APHA, Washington, D.C.
5. Eaton, A.D., L.S. Clesceri, E.W. Rice, and A.E. Greenberg. 2005. Standard Methods for the Examination of Water and Wastewater. 21st ed. APHA, Washington, D.C.
6. Downes, F.P. and K. Ito. 2001. Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA, Washington, D.C.
7. The United States Pharmacopeia. 2009. 32nd ed. United States Pharmacopeial Convention, Rockville, MD.
8. MacFaddin, J.F. 1985. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria. Vol. 1. Williams & Wilkins, Baltimore, MD.


Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, sample collection, storage and transportation, materials required, quality control, and limitations.




IFU 452341, Revised May 12, 2010

Printed in U.S.A.



remel

**12076 Santa Fe Drive, Lenexa, KS 66215, USA**
**General Information: (800) 255-6730 Website: www.remel.com Email: remel@remel.com**
**Local/International Phone: (913) 888-0939 International Fax: (913) 895-4128**