

# Instructions for Use

## BAIRD-PARKER AGAR

<a href="#">Cat. no. G96</a>	Baird-Parker Agar, 15x100mm Plate, 18ml	10 plates/bag
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### INTENDED USE

Hardy Diagnostics Baird-Parker Agar is a selective medium for the detection and enumeration of coagulase-positive staphylococci from food samples.<sup>(1)</sup>

### SUMMARY

Baird-Parker medium was developed by Baird-Parker to isolate and enumerate coagulase-positive staphylococci from foods.<sup>(3)</sup> The present formulation, by Baird-Parker, is a modification from a previous formula developed by Zebovitz, Evan, and Niven.<sup>(4)</sup> Sodium pyruvate was added as a selective growth stimulant, and egg yolk emulsion as a differentiation agent. The medium allows growth of *Staphylococcus aureus* and selectively inhibits growth of most other bacteria.

Selective inhibition is thought to be caused by the combination of the selective agents tellurite and lithium. Glycine and pyruvate are added to enhance the growth of staphylococci.

After 24 to 48 hours of incubation at 35-37°C., colonies of *S. aureus* will appear black, convex, shiny, and 1-1.5mm in diameter. The very distinct black colonies formed by *S. aureus* are a result of the reduction of tellurite in the medium. These colonies will normally be surrounded by clear zones, a result of proteolysis or lipolysis. Occasionally, opaque zones will form within this clear zone, a result of lipase or lecithinase activity. Other bacteria which may grow on this medium are easily distinguished from *S. aureus*, as they do not form black colonies.

### FORMULA

Ingredients per 940ml of deionized water:\*

Glycine	12.0gm
Pancreatic Digest of Casein	10.0gm
Sodium Pyruvate	10.0gm
Beef Extract	5.0gm
Lithium Chloride	5.0gm
Yeast Extract	1.0gm
Egg Yolk Tellurite Enrichment	60.0ml
Agar	20.0gm

Final pH 7.0 +/- 0.2 at 25°C.

\* Adjusted and/or supplemented as required to meet performance criteria.

## STORAGE AND SHELF LIFE

Storage: Upon receipt store at 2-8°C. away from direct light. Media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), hemolysis, contamination, or if the expiration date has passed. Product is light and temperature sensitive; protect from light, excessive heat and freezing.

The expiration date on the product label applies to the product in its intact packaging when stored as directed. The product may be used and tested up to the expiration date on the product label and incubated for the recommended incubation times as stated below.

Refer to the document "[Storage](#)" for more information.

## PRECAUTIONS

This product may contain components of animal origin. Certified knowledge of the origin and/or sanitary state of the animals does not guarantee the absence of transmissible pathogenic agents. Therefore, it is recommended that these products be treated as potentially infectious, and handle observing the usual Universal Precautions for blood. Do not ingest, inhale, or allow to come into contact with skin.

This product is for *in vitro* diagnostic use only. It is to be used only by adequately trained and qualified laboratory personnel. Observe approved biohazard precautions and aseptic techniques. All laboratory specimens should be considered infectious and handled according to "standard precautions." Refer to the document "[Guidelines for Isolation Precautions](#)" from the Centers for Disease Control and Prevention.

For additional information regarding specific precautions for the prevention of the transmission of all infectious agents from laboratory instruments and materials, and for recommendations for the management of exposure to infectious disease, refer to CLSI document M29: *Protection of Laboratory Workers from Occupationally Acquired Infections*.

Sterilize all biohazard waste before disposal.

Refer to the document "[Precautions When Using Media](#)" for more information.

## PROCEDURE

Specimen Collection: Infectious material should be submitted directly to the laboratory without delay and protected from excessive heat and cold. If there is to be a delay in processing, the specimen should be inoculated onto an appropriate transport media and refrigerated until inoculation. Consult listed references for information on specimen collection.<sup>(1-4)</sup>

Method of Use: The plates should be warmed to room temperature and the agar surface should be dry before inoculating. Inoculate the specimen onto the media as soon as possible after it is received in the laboratory. If the material is being cultured from a swab, roll the swab over a small area of the agar surface and streak for isolation. Incubate plates aerobically at 35-37°C. for 24 to 48 hours. Observe plates for characteristic colonial morphology and color at 24 hours. If negative for staphylococci, reincubate for an additional 24 hours and read again.

## INTERPRETATION OF RESULTS

The presence of black, convex, shiny colonies 1-1.5mm in diameter is a presumptive positive test for the presence of *S. aureus*. Colonies which do not form the black pigmentation should be interpreted as negative.

## LIMITATIONS

It is recommended that biochemical, immunological, molecular, or mass spectrometry testing be performed on colonies from pure culture for complete identification of bacteria and/or fungi.

Coagulase-negative staphylococci generally do not grow well on Baird-Parker Agar; if some growth occurs, the typical clear zones are absent. *Proteus* or *Bacillus* species may also grow but appear as brown colonies.

Refer to the document "[Limitations of Procedures and Warranty](#)" for more information.

## MATERIALS REQUIRED BUT NOT PROVIDED

Standard microbiological supplies and equipment such as loops, other culture media, swabs, applicator sticks, incinerators, and incubators, etc., as well as serological and biochemical reagents, are not provided.

## QUALITY CONTROL

Hardy Diagnostics tests each lot of commercially manufactured media using appropriate quality control microorganisms and quality specifications as outlined on the Certificate of Analysis (CofA) and the CLSI document M22-A3 *Quality Assurance for Commercially Prepared Microbiological Culture Media*. The following microorganisms are routinely used for testing at Hardy Diagnostics:

Test Organisms	Inoculation Method*	Incubation			Results
		Time	Temperature	Atmosphere	
<i>Staphylococcus aureus</i> ATCC® 25923	A	24hr	35°C	Aerobic	Growth; black shiny colonies with clear halo
<i>Proteus mirabilis</i> ATCC® 12453	A	24hr	35°C	Aerobic	Growth; brown colonies
<i>Escherichia coli</i> ATCC® 25922	B	24hr	35°C	Aerobic	Partial to complete inhibition

\* Refer to the document "[Inoculation Procedures for Media QC](#)" for more information.

## USER QUALITY CONTROL

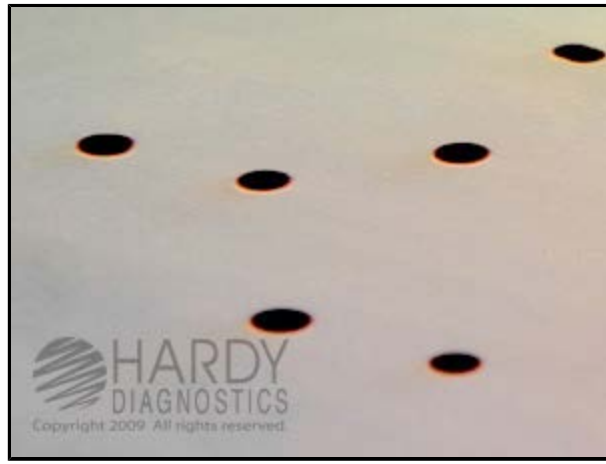
End users of commercially prepared culture media should perform QC testing in accordance with applicable government regulatory agencies, and in compliance with accreditation requirements. Hardy Diagnostics recommends end users check for signs of contamination and deterioration and, if dictated by laboratory quality control procedures or regulation, perform quality control testing to demonstrate growth or a positive reaction and to demonstrate inhibition or a negative reaction, if applicable. Hardy Diagnostics quality control testing is documented on the certificate of analysis (CofA) available from Hardy Diagnostics [Certificate of Analysis](#) website. Also refer to the document "[Finished Product Quality Control Procedures](#)," and the CLSI document M22-A3 *Quality Assurance for Commercially Prepared Microbiological Culture Media* for more information on the appropriate QC procedures. See the references below.

## PHYSICAL APPEARANCE

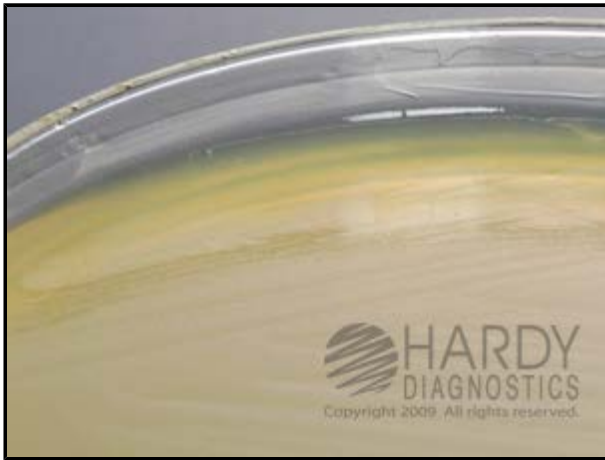
Baird-Parker Agar should appear opaque, and light yellow in color with no precipitate, chips or debris.



*Staphylococcus aureus* (ATCC® 25923) colonies growing on Baird-Parker Agar (Cat. no. G96). Incubated aerobically for 24 hours at 35°C.



*Proteus mirabilis* (ATCC® 12453) colonies growing on Baird-Parker Agar (Cat. no. G96). Incubated aerobically for 24 hours at 35°C.



*Escherichia coli* (ATCC® 25922) growth inhibited on Baird-Parker Agar (Cat. no. G96). Incubated aerobically for 24 hours at 35°C.

## REFERENCES

1. Association of Official Analytical Chemists. *Official Methods of Analysis*,. AOAC, Washington, D.C
2. Baird-Parker. 1962. *J. Appl. Bact.*; 25:12.
3. Jorgensen., et al. *Manual of Clinical Microbiology*, American Society for Microbiology, Washington, D.C.
4. Zebovitz, Evan, et al. 1955. *J. Bact.*; 70:686.

ATCC is a registered trademark of the American Type Culture Collection.

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