

BacterLab Division



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3-COMPARTMENT CULTURE MEDIUM

BacterPlate™ GNR/STAPH/STREP

3-compartment medium

Ready-to-use medium on 90mm plates for used to culture and test microorganisms.

Code: 05053



1. INTENDED USE

BacterPlate™ GNR/STAPH/STREP 3-compartment medium is recommended for culturing and examining pathogenic microorganisms in medical, clinical, food, and cosmetic applications.

The packaging with semi-permeable Cellophane film helps balance the humidity of the environment during storage.

2. PRINCIPLES

BacterPlate™ GNR/STAPH/STREP 3-compartment medium consists of three compartments with specific culture media:

- GNR Compartment: Contains chromogenic Mastitis (GN) medium for isolating and differentiating Gram-negative pathogens such as:
 - *K. pneumoniae*: Blue-gray colonies
 - *E. coli*: Pink to dark red colonies
 - *P. aeruginosa*: Transparent colonies
 - Other microorganisms are inhibited.
- STAPH Compartment: Contains chromogenic *Staphylococcus* medium for directly isolating and differentiating *Staphylococcus* spp.:
 - *S. aureus*: Pink to lavender colonies
 - *S. saprophyticus*: Turquoise colonies
 - Other microorganisms are inhibited.
- STREP Compartment: Contains chromogenic *Streptococcus* medium for isolating and differentiating *Streptococcus* spp.:
 - *S. agalactiae*: Blue colonies
 - *S. uberis*: Blue-gray colonies
 - *Enterococcus*: Light to dark purple colonies
 - Other microorganisms are inhibited.

3. TYPICAL COMPOSITION

- GNR Compartment (per liter, reference values)

Agar	15,0 g
Peptone and yeast extract	17,0 g
Chromogenic mix	1,2 g

pH of the ready-to-use medium at 25°C: 7,4 ± 0,2

- STAPH Compartment (per liter, reference values)

Agar	15,0 g
Peptone and yeast extract	40,0 g
Salts	30,0 g
Chromogenic and selective mix	2,4 g

pH of the ready-to-use medium at 25°C: 7,3 ± 0,2

- *STREP* Compartment (per liter, reference values)

Agar	15,0 g
Peptones and growth factors	20,0 g
Salts	7,5 g
Chromogenic and selective mix	2,4 g
Growth factors	8,0 mL

pH of the ready-to-use medium at 25°C: 7,3 ± 0,2

4. PREPARATION

The environmental plates are ready-to-use, no preparation required.

5. INSTRUCTIONS FOR USE

- Allow the culture plate to reach room temperature.
- Dry the plate in an incubator by slightly opening the lid.
- Inoculate the sample directly onto the medium surface for isolation.
- Incubate aerobically at 35 – 37°C for 18 – 24 hours (extend if necessary).
- Observe colony morphology and reactions (if any).

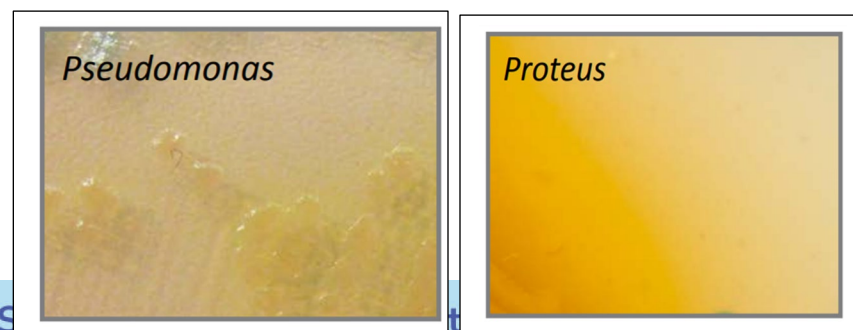
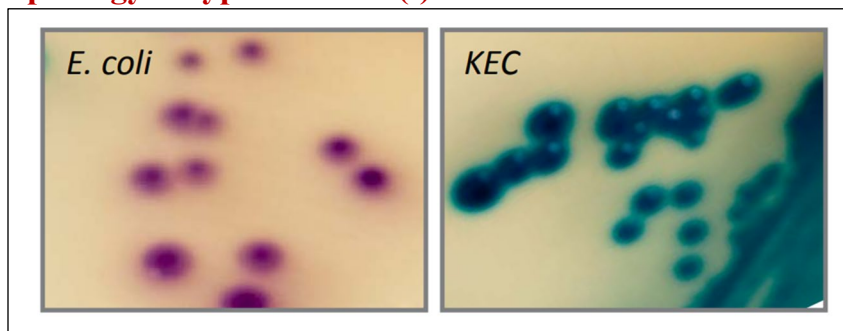
6. RESULTS

Observe growth characteristics such as colony morphology, color and size.

- **GNR** Compartment

Microorganism	Colony Appearance
<i>E. coli</i>	Pink to dark red
<i>Klebsiella, Enterobacter, Citrobacter</i>	Metallic blue (+/- red halo)
<i>Proteus, Morganella, Providencia</i>	Brown halo
<i>Pseudomonas</i>	Transparent (+/- blue to green)
<i>Candida albicans</i>	Cream-colored, pointed colonies
Gram (+) bacteria	Inhibited

Morphology of typical Gram (-) bacterial colonies

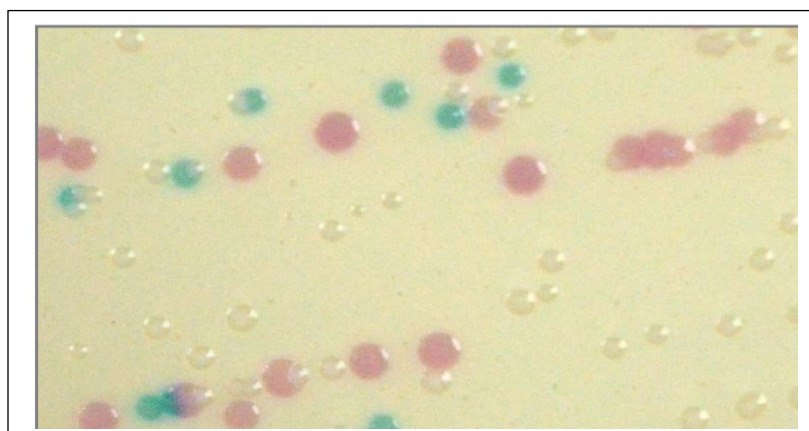


Additional biochemical tests (e.g., indole, ONPG, oxidase) may be used for confirmation.

– **STAPH** Compartment

Microorganism	Colony Appearance
<i>S. aureus</i>	Pink to lavender
<i>S. epidermidis</i>	Colorless to light pink
<i>S. saprophyticus</i>	Blue-gray
<i>Staphylococci</i> khác	Varying colors
<i>Streptococci</i>	Inhibited
Gram (-) bacteria	Inhibited

Morphology of typical *Staphylococcus* colonies

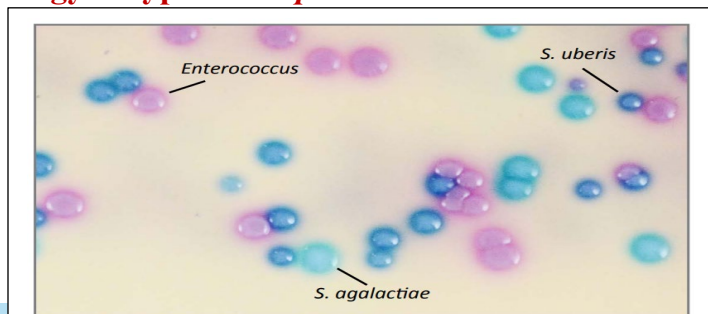


Additional tests such as latex agglutination, coagulase, and catalase may be performed.

– **STREP** Compartment

Microorganism	Colony Appearance
<i>S. agalactiae</i>	Blue
<i>S. uberis</i>	Blue to metallic blue
<i>Enterococcus</i>	Light to dark purple
Other <i>Streptococcus</i>	Varying colors
Other Gram (+) bacteria	Inhibited
Gram (-) bacteria	Inhibited

Morphology of typical *Streptococcus* colonies



In rare cases, *Staphylococcus* may grow on this medium; differentiation can be confirmed using a catalase test.

7. QUALITY CONTROL

BacterLab ensures the quality of each product batch by testing with ATCC reference strains.

Reference strains	Incubation Conditions	Expected results
GNR Compartment		
<i>K. pneumoniae</i> NCTC 13442	35 – 37 ⁰ C, 18 – 24 hours	Good growth, blue-gray colonies
<i>E. coli</i> ATCC 35218		Good growth, light red colonies
<i>P. aeruginosa</i> ATCC 9027		Good growth, transparent colonies
<i>S. aureus</i> ATCC 25923		No growth, inhibited
<i>E. faecalis</i> ATCC 29212		No growth, inhibited
STAPH Compartment		
<i>S. aureus</i> ATCC 25923	35 – 37 ⁰ C, 18 – 24 hours	Good growth, lavender colonies
<i>E. coli</i> ATCC 35218		No growth, inhibited
<i>C. albicans</i> ATCC 10231		No growth, inhibited
<i>E. faecalis</i> ATCC 29212		No growth, inhibited
STREP Compartment		
<i>S. agalactiae</i> ATCC 12386	35 – 37 ⁰ C, 18 – 24 hours	Good growth, blue colonies
<i>E. faecalis</i> ATCC 29212		Good growth, purple colonies
<i>E. coli</i> ATCC 35218		No growth, inhibited
<i>C. albicans</i> ATCC 10231		No growth, inhibited
<i>S. aureus</i> ATCC 25923		No growth, inhibited

8. STORAGE AND TRANSPORT CONDITIONS

- Storage: 2 – 8°C.
- Transportation: Ambient temperature.

9. PACKAGING

- Packaging: 10 plates/ box or as per customer request.

10. SHELF LIFE

- Expiration Date: 03 months from the manufacturing date.

11. BIBLIOGRAPHY

- CHROMagar. 2021. Technical Data Sheet: CHROMagar™ Streptococcus. NT-EXT-084 V3.1 /Accessed May 07, 2024. <https://www.chromagar.com/wp-content/uploads/2021/12/NT-EXT-084-NOTICE-CQ.-V3.1.pdf>.
- CHROMagar. 2021. Technical Data Sheet: CHROMagar™ Staphylococcus. NT-EXT-083 V3.1 /Accessed May 07, 2024. <https://www.chromagar.com/wp-content/uploads/2021/11/NT-EXT-083-NOTICE-CQ-V3.1.pdf>.
- CHROMagar. 2021. Technical Data Sheet: CHROMagar™ Mastitis (GN). NT-EXT-097 V4.2 / Accessed May 06, 2024. <https://www.chromagar.com/wp-content/uploads/2021/11/NT-EXT-097-NOTICE-CQ-V4.2.pdf>.

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