

TECHNICAL DATA SHEET

BRILLIANT GREEN AGAR (KRISTENSEN)

DETECTION OF *SALMONELLA*

1 INTENDED USE

Brilliant Green Agar of Kristensen is a highly selective medium used to isolate salmonella, except for *Salmonella* Typhi, in biological samples of animal origin and food products.
The agar can also be used as the second media of choice in the normalized standards for the research and detection of *Salmonella*.

2 HISTORY

In 1925, Kristensen, Lester and Jurgens described this medium, later modified by Kauffmann and then used by Broh-Kahn and Edwards with satisfaction.

4 TYPICAL COMPOSITION

The composition can be adjusted in order to obtain optimal performance.

For 1 liter of media :

- Tryptone	5,0 g
- Peptic digest of meat.....	5,0 g
- Yeast extract	3,0 g
- Lactose.....	10,0 g
- Sucrose	10,0 g
- Sodium chloride	5,0 g
- Phenol red.....	80,0 mg
- Brilliant green	12,5 mg
- Bacteriological agar.....	13,5 g

pH of the ready-to-use media at 25 °C : 6,9 ± 0,2.

5 PREPARATION

- Dissolve 51,6 g of dehydrated media (BK071) in 1 liter of distilled or demineralized water.
- Slowly bring to boiling, stirring with constant agitation until complete dissolution.
- Dispense in tubes of vials at 100 mL per vial.
- Sterilize in an autoclave at 121°C for 15 minutes.
- Cool and maintain the media in a molten state at 44-47 °C.
- Pour into sterile Petri plates.
- Let cool on a cold, flat surface.
- Dry the plates in an incubator with the covers partially removed.

✓ **Reconstitution :**
51,6 g/L

✓ **Sterilization :**
15 min at 121 °C

6 INSTRUCTIONS FOR USE

- Inoculate by streaking on plates, using the enrichment media as inoculum.
- Incubate at 37 °C for 24 to 48 hours.

✓ **Inoculation :**
Surface streaking

✓ **Incubation :**
24 to 48 h at 37 °C

NOTE

The medium, normally red-brown, becomes bright red after incubation and assumes its original color after returning to room temperature.

7 RESULTS

The colonies have the following appearance :

Characteristics	Microorganisms
Colorless to pink colonies, smooth, surrounded by red zones in the media	<i>Salmonella</i> lactose/sucrose-negative with the exception of <i>Salmonella</i> Typhi & Paratyphi.
No or very weak growth	<i>Shigella</i>
Yellow to green colonies, surrounded by yellow green zones in the media	<i>Escherichia coli</i> , <i>Citrobacter</i> , <i>Klebsiella</i> , <i>Enterobacter</i> (lactose/sucrose positive)
Totally or almost totally inhibited	Gram positive bacteria

8 QUALITY CONTROL

Dehydrated media : pinkish powder, free-flowing and homogeneous.

Prepared media : orange-brown agar.

Typical culture response after 48 hours of incubation at 37 °C, qualitative method of inoculation :

Microorganisms	Growth	Characteristics
<i>Salmonella</i> Typhimurium WDCM 00031	Good, score 2	Pink colonies
<i>Salmonella</i> Enteritidis WDCM 00030	Good, score 2	Pink colonies
<i>Enterococcus faecalis</i> WDCM 00087	Inhibited, score 0	-
<i>Staphylococcus aureus</i> WDCM 00034	Inhibited, score 0	-

9 STORAGE / SHELF LIFE

Dehydrated media : 2-30 °C.

The expiration date is indicated on the label.

Prepared media in vials (*) : Not recommended, do not re-melt the media.

Prepared media in plates (*) : 30 days at 2-8 °C.

(*) Benchmark value determined under standard preparation conditions, following manufacturer's instructions.

10 PACKAGING

Dehydrated media :

500 g bottle BK071HA

11 BIBLIOGRAPHY

Kristensen, M., Lester, V., and Jurgens, A.. 1925. On the use of trypsinized casein, brom-thymol-blue, brom-cresol-purple, phenol-red and brilliant-green for bacteriological nutrient media. British Journal of Experimental Pathology, 6 : 291-299.

12 ADDITIONAL INFORMATION

The information provided on the labels take precedence over the formulations or instructions described in this document and are susceptible to modification at any time, without warning.

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