

TECHNICAL DATA SHEET

BUTTIAUX-BROGNIART HYPERSALTED BROTH (DOUBLE CONCENTRATION)

ENRICHMENT MEDIA FOR *STAPHYLOCOCCUS AUREUS*

1 INTENDED USE

Buttiaux-Brogniart Hypersalted Broth is a double strength enrichment medium for the detection of *Staphylococcus aureus* in food products, particularly in gelatin used for food and other uses.

2 HISTORY

Following work by Koch, Chapman formulated a selective media which enabled the rapid development of *Staphylococcus aureus*, to the practically total exclusion of other microorganisms. The formulation of the hypersalted broth is derived from that developed by Buttiaux and Brogniart, who used it successfully for the detection of pathogenic staphylococci in suspected foods and in feces.

3 PRINCIPLES

Selectivity is based on the resistance of staphylococci to a sodium chloride concentration of 75 g per liter. Other bacteria are strongly inhibited in this hypertonic medium.

Nutrients which favor growth are supplied by the peptones and lactose.

4 TYPICAL COMPOSITION

The composition can be adjusted to obtain optimal results.

For 1 liter of media :

- Tryptone 20,0 g
- Meat extract..... 6,0 g
- Lactose..... 15,0 g
- Sodium chloride 150,0 g
- Bacteriological agar..... 1,0 g

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

5 PREPARATION

- Suspend 192.0 g of dehydrated medium (BK081) in 1 liter of distilled or deionized water.
- Slowly bring to boiling, stirring until complete dissolution.
- Dispense into 20 x 200 mm tubes ; 10 mL per tube.
- Sterilize in an autoclave at 121°C for 15 minutes.
- Cool to room temperature.

✓ **Reconstitution :**
192,0 g/L

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

6 INSTRUCTIONS FOR USE

- Transfer 10 mL of inoculum to each tube.
- Homogenize the sample with the medium, avoiding the formation of air bubbles.
- Incubate the tubes 24 to 48 hours at 37°C.

✓ **Inoculation**
10 mL

✓ **Incubation :**
48 h at 37°C

7 RESULTS

Growth is characterized by the appearance of turbidity in the broth.
Using the cultures obtained, inoculate by streaking onto Baird-Parker Agar with Egg Yolk Tellurite (BM018).

8 QUALITY CONTROL

Dehydrated media : cream-white powder, free-flowing and homogeneous.

Prepared media : semi-fluid medium, slightly amber.

Typical culture response after 48 hours of incubation at 37°C, followed by subculture on Baird-Parker agar.

Microorganisms		Growth on Baird-Parker agar
<i>Staphylococcus aureus</i>	WDCM 00032	> 10 characteristic colonies
+ <i>Enterococcus faecalis</i>	WDCM 00087	
+ <i>Escherichia coli</i>	WDCM 00013	
<i>Staphylococcus aureus</i>	WDCM 00034	> 10 characteristic colonies
+ <i>Enterococcus faecalis</i>	ATCC® 33186	
+ <i>Proteus vulgaris</i>	ATCC 13315	
<i>Escherichia coli</i>	WDCM 00013	Inhibited, score 0
<i>Pseudomonas aeruginosa</i>	WDCM 00024	Inhibited, score 0
<i>Proteus vulgaris</i>	ATCC 13315	Inhibited, score 0

9 STORAGE / SHELF LIFE

Dehydrated media : 2-30 °C.

The expiry date is mentioned on the label.

Prepared media in tubes (*) : 180 days at 2-8 °C.

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

10 PACKAGING

Dehydrated media :

500 g bottle BK081HA

11 BIBLIOGRAPHY

Buttiaux, R., et Brogniart, R.S. 1947. Techniques d'isolement des staphylocoques pathogènes. Identification des staphylocoques entérotoxiques. Annales de l'Institut Pasteur, **73** : 830-834.

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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