

BRYANT AND BURKEY MEDIUM

Medium for the enumeration of lactate-fermenting spore-forming anaerobes.

TYPICAL FORMULA (g/L)

| | |
|-----------------------------|-------|
| Tryptone | 15.0 |
| Yeast Extract | 5.0 |
| Meat Extract | 7.5 |
| Sodium Acetate | 5.0 |
| L- Cysteine | 0.5 |
| Resazurin | 0.002 |
| Calcium Lactate | 5.0 |
| Final pH =5.9 ± 0.2 at 25°C | |

DESCRIPTION

BRYANT AND BURKEY MEDIUM is a medium for the enumeration of lactate-fermenting spore-forming anaerobes in milk and dairy products.

PRINCIPLE

Tryptone, meat extract and L-cysteine provide nutrients and cofactors required for good growth of clostridia. Yeast extract supplies B-complex vitamins which stimulate bacterial growth. Selectivity of this medium is achieved through the addition of sodium acetate which is also the principal promoter of spores germination.

PREPARATION

Suspend 38.0 g of powder in 1 litre of distilled or deionized water. Heat until completely dissolved. Dispense 10 mL amounts into tubes. Sterilize in the autoclave at 121 °C for 15 minutes.

TECHNIQUE

1. Prepare tenfold dilutions of the sample and inoculate triplicate tubes of **BRYANT AND BURKEY MEDIUM** with 1 mL of each sample dilution.
2. Pour approximately 2 mL of melted paraffin (60-65°C), previously autoclaved at 121°C for 20 minutes, into each tube.
3. Heat the tubes to 75°C to kill vegetative cells and activate spores; allow to cool to room temperature.
4. Incubate tubes at 35°C for 6 days.
5. Examine tubes for growth and gas production after 48 hours incubation and daily for up to 6 days.

INTERPRETATION OF RESULTS

Tubes showing both growth and gas production (indicated by upward movement of the paraffin more than 1 cm) are considered positive for the presence of lactate-fermenting clostridial spores. Determine the spore count using the Most Probable Number (MPN) method.

STORAGE

The powder is very hygroscopic: store the powder at 10-30 °C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident.
Store prepared media at 2-8°C.

WARNING and PRECAUTIONS

The product is not classified as hazardous by current legislation and does not contain harmful substances in concentrations of ≥1%. It is nevertheless recommended that the Safety Data Sheet be consulted on its correct use. The product must be used only by properly trained operators.

DISPOSAL of WASTE

Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

1. Rosenberger, K.F. 1951. The development of methods for the study of obligate anaerobes in silage. Proc. Soc. Appl. Bacteriol. 14: 161-164.
2. Bryant, M.P., and L.A. Burkey. 1956. The characteristics of lactate-fermenting spore-forming anaerobes from silage. J. Bacteriol. 71: 43-46.



PRODUCT SPECIFICATIONS

NAME
BRYANT AND BURKEY MEDIUM

PRESENTATION
Dehydrated culture medium

STORAGE
10-30°C

PACKAGING

| Code | Content | Packaging |
|--------|---------|-----------------------------------|
| 610142 | 500 g | 500 g of powder in plastic bottle |
| 620142 | 100 g | 100 g of powder in plastic bottle |

pH OF THE MEDIUM
5.9 ± 0.2

USE
BRYANT AND BURKEY MEDIUM is a medium for the enumeration of lactate-fermenting spore-forming anaerobes in milk and dairy products.

TECHNIQUE
Refer to technical sheet of the product.










APPEARANCE of the MEDIUM
Dehydrated medium
Appearance: free-flowing, homogeneous.
Colour: tan.
Prepared medium
Appearance: clear.
Colour: light amber to red.

SHELF LIFE
4 years

- QUALITY CONTROL**
- Control of general characteristics, label and print
 - Sterility control
7 days at 25 ± 1°C, in aerobiosis
7 days at 36 ± 1°C, in aerobiosis
 - Microbiological control
Inoculum for productivity: 100-1000 UFC/ml
Inoculate and incubate plates at 55 ± 1°C for 18-48 hours.

| Microorganism | | Growth |
|----------------------------------|------------|-----------|
| <i>Clostridium perfringens</i> | ATCC 10543 | good |
| <i>Clostridium tyrobutyricum</i> | DSM 663 | good |
| <i>Escherichia coli</i> | ATCC 25922 | inhibited |
| <i>Staphylococcus aureus</i> | ATCC 25923 | inhibited |
| <i>Pseudomonas aeruginosa</i> | ATCC 27853 | inhibited |

TABLE OF SYMBOLS

| | | | | |
|--|---|--|---|--|
|  LOT Batch code |  Do not reuse |  Manufacturer |  Contains sufficient for <n> tests |  Temperature limitation |
|  REF Catalogue number |  Fragile, handle with care |  Use by |  Caution, consult accompanying documents | |



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