TECHNICAL DATA SHEET

MEAT LIVER GLUCOSE AGAR

ENUMERATION OF SPORES OF ANAEROBIC SULFUR REDUCING BACTERIA

1 INTENDED USE

Meat-liver Glucose Agar is used to enumerate spores of sulfite-reducing anaerobic bacteria in water.

The typical composition corresponds to that defined in the standard NF T90-415.

2 PRINCIPLES

Meat-liver peptone assures the growth of most microorganisms, particularly that of anaerobic bacteria.

Glucose is the energy source for growth.

Starch favors spore germination.

Anaerobic bacteria reduce sulfite to sulfide, which in presence of ferric ions causes the blackening of the colonies due to the formation of iron sulfide.

3 TYPICAL COMPOSITION

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

For 1 liter of media :

- Meat-Liver peptone ..... 30,0 g
- Glucose ..... 2,0 g
- Soluble starch ..... 2,0 g
- Sodium sulfite..... 2,5 g
- Ferric ammonium citrate ..... 0,5 g
- Bacteriological agar..... 11,0 g

pH of the ready-to-use media at 25 °C : 7,6 ± 0,2.

4 PREPARATION

- Dissolve 48,0 g of dehydrated media (BK157) in 1 liter of distilled or demineralized water.
- Slowly bring to boiling, stirring with constant agitation until complete dissolution.
- Dispense 20 mL in appropriate tubes.
- Sterilize in an autoclave at 121°C for 15 minutes.
- Cool and maintain the media in a molten state at 44-47 °C.

✓ **Reconstitution : 48,0 g/L**

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

5 INSTRUCTIONS FOR USE

- Heat the product to analyze 10 minutes à (80 ± 2) °C in order to destroy vegetative cells and activate spores.
- Transfer 5 mL of the inoculum and its serial dilutions to a tube of agar.
- Homogenize thoroughly by inversion, avoiding the incorporation of air.
- Cool in an ice water bath.
- Incubate at 37 ± 1 °C for 24 hours.
- If the colonies are small or few in number, continue the incubation an additional 24 hours.

✓ **Inoculation : 5 mL in 20 mL**

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

6 RESULTS

Count colonies surrounded by a black halo at 24 hours.
The diffusion of halos may lead to a black coloration of the entire tube, making enumeration impossible after 48 hours of incubation.

7 QUALITY CONTROL

Dehydrated media : off-white powder, free-flowing and homogeneous.
Prepared media : amber agar.

Typical culture response after 24 hour incubation at 37 °C :

Microorganisms		Growth (Productivity ratio : P_R)
Clostridium perfringens	WDCM 00007	$P_R > 0,7$
Escherichia coli	WDCM 00179	Inhibited

8 STORAGE / SHELF LIFE

Dehydrated media : 2-30 °C.
The expiration date is indicated on the label.

Prepared media in tubes (*) : 180 days at 2-8 °C.
Re-generate at 100 °C for 20 minutes before inoculating the media.
Do not repeat this more than one time.
(*) Benchmark value determined under standard preparation conditions, following manufacturer's instructions.

9 PACKAGING

Dehydrated media :
500 g bottle BK157HA

10 BIBLIOGRAPHY

NF T90-415. Octobre 1985. Essais des eaux. Recherche et dénombrement des spores de bactéries anaérobies sulfito-réductrices et de *Clostridium* sulfito-réducteurs. Méthode générale par incorporation en gélose en tubes profonds.

11 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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