TECHNICAL DATA SHEET

MEAT-YEAST AGAR

ENUMERATION OF SPORES FROM SULFUR-REDUCING ANAEROBIC MICROORGANISMS

1 INTENDED USE

Meat-Yeast Agar is used to enumerate spores of sulfite-reducing anaerobic bacteria in gelatin and other food products.

The typical composition corresponds to that defined in the standard NF V59-106.

2 PRINCIPLES

Tryptone and extracts of meat and yeast favor the development of cultures.

Glucose is the energy source for growth.

Starch favors spore germination.

Anaerobic bacteria reduce sulfite to sulfide, which in presence of ferric citrate 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 :

- Tryptone ..... 10,0 g
- Meat extract..... 3,0 g
- Yeast extract ..... 6,0 g
- Glucose ..... 2,0 g
- Sodium chloride ..... 5,0 g
- Cysteine chlorhydrate ..... 0,3 g
- Soluble starch ..... 5,0 g
- Sodium metabisulfite..... 1,0 g
- Ferric ammonium citrate ..... 1,0 g
- Bacteriological agar..... 12,0 g

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

4 PREPARATION

- Dissolve 45,3 g of dehydrated media (BK006) in 1 liter of distilled or demineralized water.
- Slowly bring to boiling, stirring with constant agitation until complete dissolution.
- Dispense 20 mL in 20 x 200 mm tubes.
- Sterilize in an autoclave at 115°C for 20 minutes.
- Cool and maintain the media in a molten state at 44-47 °C.

✓ **Reconstitution : 45,3 g/L**

✓ **Sterilization : 20 min at 115 °C**

5 INSTRUCTIONS FOR USE

- Heat the product to analyze in order to destroy vegetative cells and activate spores for 10 minutes at (80 ± 1) °C.
- Transfer 5 mL of the inoculum or its serial dilutions to the media tubes.
- Homogenize by inverting the tubes, taking care to avoid incorporation of air.
- Cool in an ice-water bath.
- Incubate at (37 ± 1) °C for (72 ± 3) hours.

✓ **Inoculation :**
5 mL per tube of agar

✓ **Incubation :**
72 h at 37 °C

6 RESULTS

Count the colonies surrounded by a black halo.
An intermediary count may be performed if necessary.

7 QUALITY CONTROL

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

Typical culture response after 24 hours of incubation at 37 °C :

Microorganisms		Growth (Productivity Ratio : P_R)	Characteristics
Clostridium perfringens	WDCM 00007	$P_R \geq 70$ %	Black colonies
Clostridium perfringens	WDCM 00080	$P_R \geq 70$ %	Black colonies
Clostridium sporogenes	WDCM 00008	$P_R \geq 70$ %	Black colonies
Escherichia coli	WDCM 00013	Not inhibited	White colonies

8 STORAGE / SHELF LIFE

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

Prepared media in tubes : not recommended, use immediately after preparation.

9 PACKAGING

Dehydrated media :
500 g bottle BK006HA

10 BIBLIOGRAPHY

NF V 59-106. Octobre 1982. Gélatine alimentaire. Dénombrement des spores de micro-organismes anaérobies sulfito-réducteurs. Méthode par comptage des colonies obtenues en anaérobiose à 37 °C.

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.

Document code : MEAT YEAST AGAR_ENv8
Creation date : 05-2003
Updated : 06-2016
Origin of revision : General update.