



## Cronobacter Screening Broth

M1786

### Intended use

Cronobacter Screening Broth is recommended for screening *Cronobacter* (formerly *Enterobacter sakazakii*) from food and environmental samples.

### Composition\*\*

Ingredients	Gms / Litre
Peptone	10.000
HM extract #	3.000
Sodium chloride	5.000
Bromocresol purple	0.004
Sucrose	10.000
Final pH ( at 25°C)	7.4±0.2

\*\*Formula adjusted, standardized to suit performance parameters

# Equivalent to Meat extract

### Directions

Suspend 28.0 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Aseptically add the contents of 1 vial of Vancomycin supplement (FD233). Mix well and dispense into sterile test tubes or flasks as desired.

### Principle And Interpretation

*Cronobacter* (formerly *Enterobacter sakazakii*) are gram-negative rod-shaped *Enterobacteriaceae* that have been implicated in outbreaks of disease causing sepsis, meningitis and necrotising enterocolitis(1). *Cronobacter* species have also been isolated from powdered infant formula as high tolerance to desiccation provides a competitive advantage in dry environments increasing the risk of contamination (2). Cronobacter Screening Broth was specifically designed by Iversen *et. al.* (3).

Peptone and HM extract provide carbonaceous, nitrogenous compounds, long chain amino acids and other essential nutrients. Sodium chloride maintains osmotic equilibrium. Sucrose present is fermented by *Cronobacter*. Consequently the broth turns yellow after incubation.

### Type of specimen

Food and dairy samples ; Environmental samples

### Specimen Collection and Handling

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (6,7,8). After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets

### Limitations :

1.Biochemical test must be carried out for confirmation.

### Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

**Colour and Clarity of prepared medium**

Purple coloured clear solution forms in tubes.

**Reaction**

Reaction of 2.8% w/v aqueous solution at 25°C. pH : 7.4±0.2

**pH**

7.20-7.60

**Cultural Response**

Cultural characteristics observed with added Vancomycin Supplement (FD233), after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Colour of medium
<b>Cultural Response</b> <i>Cronobacter sakazakii</i> ATCC 12868	50-100	luxuriant	yellow colour
<i>Staphylococcus aureus</i> ATCC 25923 (00034*)	>=10 <sup>3</sup>	inhibited	-
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	luxuriant	purple colour
<i>Enterococcus faecalis</i> ATCC 29212 (00087*)	>=10 <sup>3</sup>	inhibited	-

Key : \*Corresponding WDCM numbers.

**Storage and Shelf Life**

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Use before expiry date on the label.

Product performance is best if used within stated expiry period.

**Disposal**

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

**Reference**

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- Iversen et al. 2008. *Appl. Environ. Microbiol.* 74, 2550-2552.
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- American Public Health Association, *Standard Methods for the Examination of Dairy Products*, 1978, 14th Ed., Washington D.C.
- Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2001, *Compendium of Methods for the Microbiological Examination of Foods*, 5th Ed., American Public Health Association, Washington, D.C.
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