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**Cronobacter selective broth**

Recommended for screening Cronobacter (formerly Enterobacter sakazakii) from food.

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| REF: V.1/CSB01.100 100 Gram  REF: V.1/CSB01.500 500 Gram | REF: V.1/CSB01.250 250 Gram |

**CLINICAL SIGNIFICANCE**

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 Iversenetal (3). Cronobacter Selective Broth is recommended by ISO Committee for the isolation of Cronobacter species from food samples (4).

**METHOD PRINCIPLE**

Peptone and beef extract provide carbonaceous, nitrogenous and growth nutrients. Sodium chloride maintains osmotic equilibrium. Sucrose is the fermentable carbohydrate and bromocresol purple is the indicator. Sucrose is fermented by Cronobacter. Consequently the broth turns yellow after incubation.

**MEDIA COMPOSITION**

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| Item | Formula per  liter of medium |
| Peptone  Beef extract  Sucrose  Sodium chloride  Bromocresol purple | 10.00 gm.  3.000 gm.  10.00 gm.  5.000 gm.  0.040 gm. |

**PRECAUTIONS AND WARNINGS**

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

Wearing personnel protective equipment (overall, gloves, glasses,).

Do not pipette by mouth.

In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.

Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental Contamination.

S61: avoid release in environment.

For further information, refer to the Cronobacter selective Broth material safety data sheet.

**STORAGE AND STABILITY**

**Lab.Vie**. Cronobacter selective broth dehydrated media are stable until expiration date stated on label when properly stored 10-30°C. The prepared medium should be stored 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 avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

***Final pH 7.4 ± 0.2 at 25°C***

**MEDIA PREPARATION**

Suspend 28.04 grams in 1000 ml purified / distilled water.

Adjust pH to 7.4 ± 0.2 at 25°C

Heat if necessary to dissolve the medium completely.

Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 minutes.

Cool to 45-50°C. Aseptically add the contents of 1 vial of Van10 Selective Supplement.

Mix well and dispense 10ml into sterile test tubes.

**Deterioration**

The color of **Lab.Vie**. Cronobacter selective broth is Cream to yellow homogeneous free flowing powder. If there are any physical changes, discard the medium.

The hydrated medium Purple coloured clear solution forms in tubes, media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations.

**SPECIMEN COLLECTION AND PRESERVATION**

Clinical samples ,Food samples

**EQUIPMENT REQUIRED NOT PROVIDED**

Sterile cups

Sterile test tubes

Sterile loops

Incubator

**PERFORMANCE CHARACTERISTICS**

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

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| **Test Organisms** | **Growth** | **Color of medium** |
| *Cronobacter sakazakii ATCC 29544* | luxuriant | Yellow |
| *Cronobacter muytjensii ATCC 51329* | luxuriant | Yellow |
| *Staphylococcus aureus subsp. aureus ATCC 25923* | None-poor | Purple |
| *Staphylococcus aureus subsp. aureus ATCC 6538* | None-poor | Purple |
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**QUALITY CONTROL**

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **Lab.Vie**. technical support.

**REFERENCES**

1. Mullane et al. 2007. Minerva Pediatr. 59.137-148.

2. Lai.2001.Medicine.80.113-122.

3. Iversen et al.2008.Appl.Environ.Microbiol.74, 2550-2552.

4. International Organization for Standardization. Microbiology of the food chain- Horizontal method for the detection of Cronobacter spp. Draft ISO/ TS 22964, 2017 (E).

5. Salfinger Y., and Tortorello M.L. , 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

6. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

7. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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| SYMBOLS IN PRODUCT LABELLING | | |
| **IVD** | For in-vitro diagnostic use | Number of <n> test in the pack |
| **LOT** | Batch Code/Lot number | Caution |
| **REF** | Catalogue Number | Do not use if package is  damaged |
|  | Temperature Limitation | Consult Instruction for use |
|  | Expiration Date |  |
|  | Manufactured by |  |