



Chromogenic Cronobacter Isolation Agar

RDM-CCI-01

Principle

Chromogenic Cronobacter Isolation Agar (CCI) is a selective medium for the detection of *Cronobacter* species in food products and ingredients intended for human consumption and the feeding of animals, and environmental samples in the area of food production and food handling. The medium is composed of tryptic digest of casein, yeast extract provides nitrogen, vitamins, minerals and amino acids essential for growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Sodium deoxycholate inhibits the accompanying gram-positive bacteria. Sodium thiosulfate increase provide selectivity and helps in the recovery of *Cronobacter* and *Enterobacter* species. Chromogenic mixture contains chromogens hydrolyzed by the *Cronobacter* and form blue green colored colonies.

Use: Recommended for isolation of presumptive *Cronobacter* spp. in food products (as per ISO 22964: 2017) and environmental samples.

Contents*

Ingredients	Gram/Litre
Tryptic digest of casein	7.000
Yeast extract	3.000
Sodium thiosulfate	1.000
Sodium deoxycholate	0.250
Sodium chloride	5.000
Ferric ammonium citrate	1.000
Chromogenic mixture	0.150
Agar	15.000
pH at 25°C	7.3 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 32.40 grams in 1000 ml distilled water. Sterilize the media by autoclaving at 15lbs pressure and 121°C for 15 minutes. Cool to 45-50°C and distribute aseptically in petri plates, allow to solidify. Ensure complete solidification and inoculate test sample aseptically.

Specimens' types analyzed

Food samples and environment monitoring in food industry.

Precautions to be taken

All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored, free-flowing, homogeneous
Reaction of 3.24% solution	7.3 ±0.2 at 25 °C
pH	7.10- 7.50
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Light amber, clear opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after an incubation at 41.5±1°C for 24±2 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth	Recovery	Colony color
<i>Cronobacter sakazakii</i>	29544	Luxuriant	≥ 60%	Blue to green colored small colonies
<i>Staphylococcus aureus</i>	25923	Inhibited	--	--

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Guillaume-Gentil O, Sonnard V, Kandhai MC, Marugg JD, Joosten H. (2005) A simple and rapid cultural method for detection of *Enterobacter sakazakii* in environmental samples. J Food Prot. 2005 Jan;68(1):64-9. doi: 10.4315/0362-028x-68.1.64. PMID: 15690805.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. ISO 22964:2017 Microbiology of the food chain — Horizontal method for the detection of *Cronobacter* spp.

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