

92324 *Cronobacter* spp. *ChromoSelect* Agar (*Enterobacter sakazakii* *ChromoSelect* Agar; Druggan-Forsythe-Iversen Agar; DFI Agar)

Cronobacter spp. *ChromoSelect* Agar is recommended for isolation and identification of *Cronobacter* spp. (formerly *Enterobacter sakazakii*) from food, water, sewage, urine and faeces samples.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	15.0
Papaic digest of soyabean meal	5.0
Chromogenic mixture	10.17
Sodium chloride	5.0
Sodium deoxycholate	0.5
Sodium thiosulfate	1.0
Agar	15.0
Final pH 7.3 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-8°C.

Appearance: Faintly pinkish-beige coloured, homogeneous, free flowing powder.

Gelling: Firm

Color and Clarity: Purple coloured clear to slightly opalescent gel forms in petri plates.

Directions:

Suspend 51.67 g in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and pour into sterile petri plates.

Principle and Interpretation:

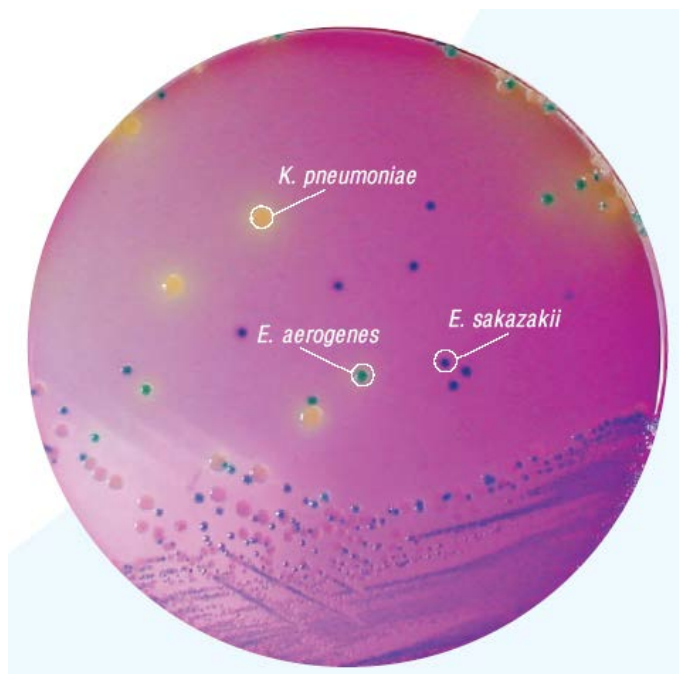
Cronobacter species are ubiquitous and frequently found on vegetable, meat, fermented bread, dairy products and especially in baby food. *Cronobacter* species has been closely associated with neonatal meningitis and sepsis (1). The chromogenic substrate is cleaved specifically (2) by glucosidase possessed by *Enterobacter* species resulting in blue green colonies. Other organisms which do not cleave this substrate produces yellow coloured colonies. Incorporation of the chromogenic mixture in the media renders an intense blue colour to *Cronobacter* spp. colonies where as light blue-green colour to *Enterobacter* species.

Casein enzymic hydrolysate and papaic digest of soyabean meal provide the essential growth nutrients along with nitrogenous and carbonaceous compounds. Sodium chloride helps in maintaining the osmotic equilibrium of the medium. Sodium deoxycholate inhibits the accompanying gram-positive flora. Sodium thiosulfate increase the selectivity and the recovery of *Cronobacter* and *Enterobacter* species.



Cultural characteristics after 18-24 hours at 35-37°C.

Organisms (ATCC)	Growth	Color of Colony
<i>Escherichia coli</i> (25922)	+++	yellow
<i>Enterobacter aerogenes</i> (13048)	+++	bluish-green
<i>Enterococcus faecalis</i> (29212)	-	-
<i>Cronobacter sakazakii</i> (12868)	+++	blue
<i>Staphylococcus aureus</i> (25923)	-	-



References:

1. H.L. Muytjens, H.C. Zanen, H.J. Sonderkamp et. al, Analysis of eight cases of neonatal meningitis and sepsis due to *Enterobacter sakazakii*, J. Clin Microbiol 18:115-120, (1983)
2. Isenberg (ed.), Clinical microbiology procedures handbook, vol. 1, American Society for Microbiology, Washington, DC (1992)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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