



PRODUCT DATA SHEET

CHROMOGENIC ENTEROBACTER SAKAZAKII AGAR MODIFIED (ISO 22964: 2017; ISO 22964: 2006) TM 1853

INTENDED USE

For isolation and identification of *Cronobacter sakazakii* from milk and milk products

COMPOSITION

Ingredients	Gms/Ltr.
Agar	15.000
Casein enzymatic hydrolysate	7.000
Yeast extract	3.000
Sodium chloride	5.000
Sodium deoxycholate	0.600
5-Bromo-4-chloro-3-indolyl α -D-glucopyranoside	0.150
Crystal violet	0.002

PRODUCT SUMMARY AND EXPLANATION

ENTEROBACTER SAKAZAKII ISOLATION CHROMOGENIC AGAR (ESIA) is a selective medium for the detection of *Enterobacter sakazakii* in milk powder and powered infant formula. The ISO normative 22964 recommends this medium for the isolation of *Enterobacter sakazakii*

ENTEROBACTER *sakazakii* has been closely associated with neonatal meningitis and sepsis. *Enterobacter sakazakii* is currently considered an emerging pathogen responsible for, un-weaned babies, risking severe meningitis and necrotic enterocolitis that can be the cause of mortality rate between 40-80%.

PRINCIPLE

The chromogenic substrate (5-Bromo-4-chloro-3-indolyl α -D-glucopyranoside) is cleaved specifically by *E. sakazakii* resulting in the formation of blue green colonies. Other organisms, which do not cleave this substrate, produce colourless to slightly violet coloured colonies. Casein enzymatic hydrolysate and yeast extract provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other essential growth nutrients. Sodium chloride helps in maintaining the osmotic equilibrium of the medium. Sodium deoxycholate and crystal violet inhibits the accompanying gram-positive flora.



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INSTRUCTIONS FOR USE

1. Dissolve 30.75 gms in 1000 ml of distilled water.
2. Gently heat to boiling with gentle swirling and dissolve the medium completely.
3. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
4. Cool to 45-50°C.
5. Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Light yellow to pink colour, homogenous free flowing powder.

Appearance of prepared medium: Light Purple colour, clear to slightly opalescent gel

pH (at 25°C): 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation period of 22 - 26 hours at 44° ± 2 °C.

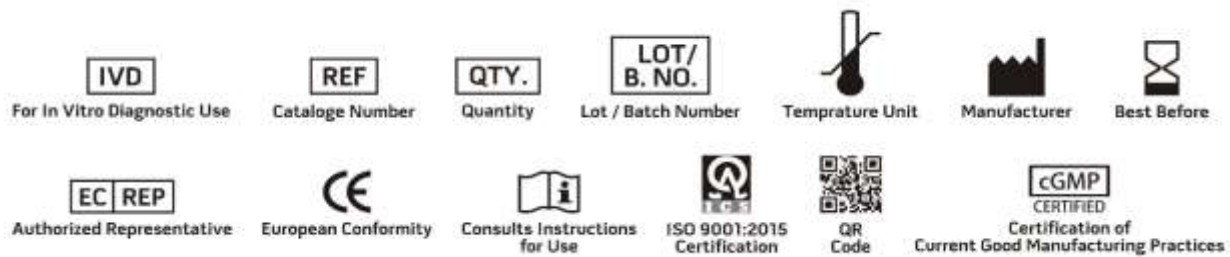
Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Colour of colony
<i>Cronobacter sakazakii</i>	12868	50-100	Good-Luxuriant	Blue-Green
<i>Escherichia coli</i>	25922	50-100	Good-Luxuriant	Colourless with blue centre
<i>Enterococcus faecalis</i>	29212	≥ 1000	Inhibited	----
<i>Staphylococcus aureus</i>	27853	≥ 1000	Inhibited	----

REFERENCES

1. Muytjens, H.L., Zanen, H.C., Sonderkamp, H.J., Kollee, L.A., Wachsmuth, I.K. and Farmer, J.J. 3rd. 1983. J. Clin. Microbiol. **18**: 115-120.
2. International Organization for Standardization. Milk and Milk products- Detection of *Enterobacter sakazakii* Draft ISO/ TS 22964, 2006 (E).



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NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.