Chromocult® Enterobacter Sakazakii Agar

Selective medium for the detection of *Enterobacter sakazakii* in milk powder and powdered infant formula.

Mode of Action

The base in Chromocult Enterobacter sakazakii Agar allows good growth and strong color formation of *E. sakazakii* colonies.

The addition of inhibitors and the incubation temperature of 44°C largely reduce the growth of the majority of Gram-positive and Gram-negative accompanying flora.

By adding 5-bromo-4-chloro-3-indolyl-α-D-glucopyranoside a differentiation of α-D-glucosidase-positive and -negative bacteria is possible.

E. sakazakii is α-D-glucosidase positive and grows as blue-green, colonies on this medium.

Typical Composition (g/liter)

Peptone 6.0; sodium chloride 5.0; bile salt mixture 1.5; 5-bromo-4-chloro-3-indolyl-α-D-glucopyranoside 0.1; agar agar 12.0.

Preparation

Suspend 24.6 g in 1 litre of demin. water by heating in a boiling water bath or in flowing steam until the medium is completely dissolved. Autoclave at 121°C for 15 min. Cool to 45-50°C in a water bath, mix gently and pour about 15 ml in sterile Petri dishes.

pH: 7.0 ± 0.2 at 25°C.

The prepared medium is clear and slightly yellow.

The prepared plates can be stored for up to 2 weeks at +2°C to +8°C (protect from light and dehydration).

Experimental Procedure and Evaluation

The agar plates must be dry. In the case of visible water dry them before use (e.g. 20 min. at 55°C).

Inoculate the medium with a loopful of enrichment broth, streaking for isolation.

Incubation:

24 ± 2 hours at 44 ± 1°C.

Note: Incubation temperature has a strong influence on sensitivity and selectivity of this method. Temperatures higher than 45°C will inhibit the growth of *E. sakazakii*. Temperatures below 43°C will reduce inhibition of accompanying bacteria.

Pre-heat the incubator to 44°C.

Do not overload the incubator.

Do not stack dishes more than three high.

Results:

E. sakazakii: blue green, colonies.

Accompanying bacteria: colourless colonies.

Literature

ASM Meeting 2005, Atlanta, USA
Comparison of three chromogenic media for detection of *Enterobacter sakazakii*; a preliminary study.
M. Manafi and Kerstin Lang, Hygiene Institute, Medical University of Vienna, 10950 Vienna/Austria, 2005

Anti-bacteria & Anti-fungi Association academic meeting, Japan 2006
Evaluation of simple and rapid detection of *E. sakazakii* by using chromogenic substrate media.
Fumi Suzuki, Ken Noguchi, Rolf Ossmer, Merck Japan, 2006

Ordering Information

Product	Merck Cat. No.	Pack size
Chromocult® Enterobacter sakazakii	1.00873.0001	100 g
Chromocult® Enterobacter sakazakii	1.00873.0500	500 g
Buffered Peptone Water	1.07228.0500	500 g
Lauryl Sulfate Broth (LST)	1.10266.0500	500 g
Sodium Chloride	1.06404.0500	500 g

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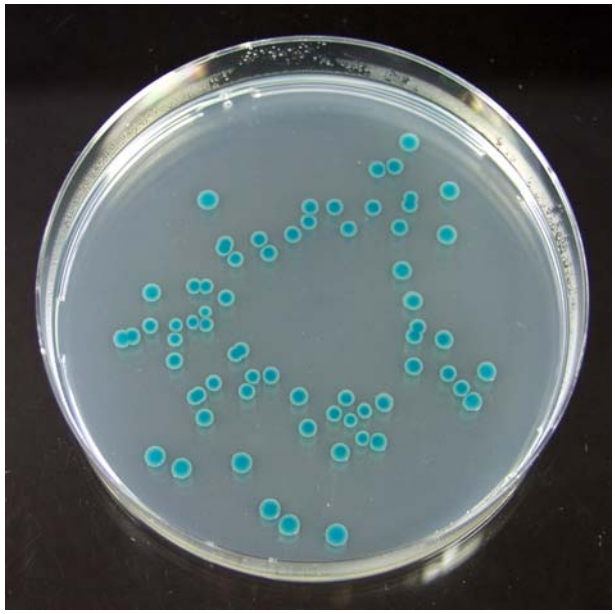
Quality Control

Test strains	Recovery rate	Color of colony
Enterobacter sakazakii ATCC 29544	> 70 %	blue-green
Enterobacter sakazakii ATCC 29004	> 70 %	blue-green
Enterobacter cloacae ATCC 29941	not limited	white
Proteus mirabilis ATCC 29906	not limited	white
Escherichia coli ATCC 11775	not limited	white
Enterococcus faecalis ATCC 11700	< 0,001 %	-
Staphylococcus saprophyticus ATCC 15305	< 0,001 %	-

E. coli 11775



Enterobacter sakazakii 29004