

# CHROMagar™ **B.cereus**

CHROMagar™ B.cereus plate



# CHROMagar™ B.cereus

## MEDIUM PURPOSE

Chromogenic medium for detection and enumeration of *Bacillus cereus* group in environmental and food samples.

*Bacillus cereus* is a spore-forming bacterium that can be frequently isolated from soil and some food which produces toxins. These toxins can cause two types of illness: one type characterized by diarrhea (long incubation, 8-16 hours) and the other by nausea and vomiting (short incubation, 1-6 hours).

The short-incubation form is most often associated with rice dishes that have been cooked and then held at warm temperatures for several hours. The long-incubation form of *B. cereus* is frequently associated with meat or vegetable containing foods, after cooking. The bacterium has been isolated from dried beans and cereals, and from dried foods such as spices, seasoning mixes and potatoes.

## COMPOSITION

The product is composed of a powder base (B) and 1 supplement (S).

Product	=	Base (B)	+	Supplement (S)
Total g/L		33.3 g/L		3,0 g/L
Composition g/L		Agar 15.0 Peptone and yeast extract 8.0 NaCl 10.0 Chromogenic mix 0.3		Selective mix 3.0
Aspect		Powder Form		Powder Form
STORAGE		15/30°C		2/8°C
FINAL MEDIA pH		6.8 +/- 0.2		

## PREPARATION (Calculation for 1L)

<b>Step 1</b> Preparation of the base CHROMagar B.cereus (B)	<ul style="list-style-type: none"><li>• Disperse slowly 33.3g of powder base in 1L of purified water.</li><li>• Stir until agar is well thickened.</li><li>• Heat to 121°C +/- 1°C during 15 min.</li><li>• Cool in a water bath to 47°C +/- 2°C.</li></ul>							
<b>Step 2</b> Preparation of the Supplement (S)	<ul style="list-style-type: none"><li>• Add 3g of CHROMagar B.cereus supplement to 40ml of purified water.</li><li>• Agitate by magnetic stirring and homogenize during at least 30 minutes at high speed (~1200 rpm) until obtaining a <b>creamy homogeneous suspension</b>.</li><li>• Heat to 121°C +/- 1°C during 15 min.</li><li>• Cool in a water bath to 47°C +/- 2°C.</li></ul>	<table><tr><th>Final Media</th><th>HELPING CALCULATION</th></tr><tr><td>1 L</td><td>3g into 40 ml of purified water</td></tr><tr><td>5 L</td><td>15g into 200 ml of purified water</td></tr></table>	Final Media	HELPING CALCULATION	1 L	3g into 40 ml of purified water	5 L	15g into 200 ml of purified water
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<b>Step 3</b> Mixing of the prepared mix (B) and the prepared supplement (S)  Pouring	<ul style="list-style-type: none"><li>• Place the melted 47°C cooled CHROMagar B.cereus base under gentle stirring.</li><li>• Add aseptically the 40ml of the homogeneous reconstituted supplement, keeping the gently stirring during 1 or 2 minutes until complete homogenisation.</li><li>• Pour IMMEDIATELY into sterile Petri dishes.</li><li>• Let it solidify and dry.</li></ul>	<table><tr><th>Final Media</th><th>HELPING CALCULATION</th></tr><tr><td>1 L</td><td>Add 40ml of supplement to the prepared base</td></tr><tr><td>5 L</td><td>Add 200ml of supplement to the prepared base</td></tr></table>	Final Media	HELPING CALCULATION	1 L	Add 40ml of supplement to the prepared base	5 L	Add 200ml of supplement to the prepared base
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<b>Storage</b>	<ul style="list-style-type: none"><li>• Store in the dark before use.</li><li>• Prepared media plates can be kept for one day at room temperature.</li><li>• Plates can be stored for up to two months under refrigeration (2/8°C) if properly prepared and protected from light and dehydration.</li></ul>							

## INOCULATION

Related samples can be processed by direct streaking on the plate, as well as prior appropriate enrichment step.

- If the agar plate has been refrigerated, allow to warm to room temperature before inoculation.
- Streak or spread sample onto plate.
- Incubate aerobically at 30°C for 18-24 hours.

### Typical Samples

Food and environmental samples  
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Direct streaking or spreading technique

## INTERPRETATION

Microorganism	Typical colony appearance
<i>Bacillus of cereus</i> group	→ blue, with white halo
Other <i>Bacillus</i>	→ blue, colourless, or inhibited
Gram negative bacteria	→ inhibited
Yeast and moulds	→ inhibited

### Typical colony appearance



The pictures shown are not contractual.

## PERFORMANCE & LIMITATIONS

- Depending on the strains, morphology of the colonies of *Bacillus cereus* group could vary. As an example, *B.mycoïdes* typically displays rhizoid form colonies.
- Definite identification may require additional testing, as those described in the ISO 7932 norm.

## QUALITY CONTROL

Please perform Quality Control according to the use of the medium and the local QC regulations and norms.  
Good preparation of the medium can be tested, isolating the ATCC strains below:

Microorganism	Typical colony appearance
<i>B.cereus</i> ATCC® 14579 CIP6624	→ blue with halo
<i>B.subtilis</i> ATCC® 23857	→ inhibited
<i>E.coli</i> ATCC® 25922	→ inhibited

## REFERENCES

Please refer to our website page «Publications» for scientific publications about this particular product.

Web link: <http://www.chromagar.com/publication.php>

## WARNINGS

- Do not use plates if they show any evidence of contamination or any sign of deterioration.
- Do not use the product beyond its expiry date or if product shows any evidence of contamination or any sign of deterioration.
- For Laboratory use. This laboratory product should be used only by trained personnel in compliance with good laboratory practices.
- Any change or modification in the procedure may affect the results.
- Any change or modification of the required storage temperature may affect the performance of the product.
- Unappropriate storage may affect the shelf life of the product.
- Recap the bottles/vials tightly after each preparation and keep them in a low humidity environment, protected from moisture and light.
- For a good microbial detection: collection and transport of specimen should be well handled and adapted to the particular specimen according to good laboratory practices.

## DISPOSAL OF WASTE

After use, all plates and any other contaminated materials must be sterilized or disposed of by appropriate internal procedures and in accordance with local legislations. Plates can be destroyed by autoclaving at 121°C for at least 20 minutes.

## IFU/LABEL INDEX

- Quantity of powder sufficient for X liters of media
- Expiry date
- Required storage temperature
- Store away from humidity

Pack Size	Ordering References	Base	Supplement
5000 ml  250 Tests of 20ml	<b>BC732</b>	<b>BC732(B)</b> Weight: 166.5gr	<b>BC732(S)</b> Weight: 15gr

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### Need some Technical Documents?

Available for download on [www.CHROMagar.com](http://www.CHROMagar.com)

- Certificate of Analysis (CoA) --> One per Lot
- Material Safety Data Sheet (MSDS)