HiCrome™ Bifidobacterium Agar

M1960

Intended use

Recommended for the differentiation of *Bifidobacterium* and *Lactobacillus* species from clinical and non-clinical samples.

Composition**

Ingredients	g / L
Peptone special	23.000
Sodium chloride	5.000
M-Protein powder #	5.000
Chromogenic mixture	10.480
Agar	16.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

- Equivalent to Milk powder

Directions

Suspend 59.48 grams in 1000 ml purified / 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. Mix well and pour into sterile Petri plates.

Principle And Interpretation

The genus *Bifidobacterium* is the third most numerous bacterial populations found in the human intestine after *Bacteroides* and *Eubacterium*. It is an anaerobic bacteria that makes up the gut microbial flora. It resides in the colon and have health benefits for their hosts. Bifidobacteria are also associated with lower incidences of allergies (1,2). Bifidobacterium Agar is used for the cultivation and maintenance of *Bifidobacterium* species (3).

Peptone special provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other essential growth nutrients. Sodium chloride maintains osmotic balance. M-protein powder aids in detecting casein hydrolysis activity which is exhibited by *Bifidobacterioum breve*. A halo zone is observed around the colony in case of casein hydrolysis. The indicator system in the chromogenic mixture helps in distinguishing between *Lactobacillus* and *Bifidobacterium* species. *Lactobacillus* species usually produce green colonies with opaque zone. *Bifidobacterium infantis* produces dark blue to bluish green colonies. Agar serves as a solidifying agent.

Type of specimen

Clinical samples - Faeces, gut swab, etc.; Food and dairy samples.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5). For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (6,7,8). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate
3. the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
4. Slight colour variation may be observed depending upon the utilization of the substrate by the organism.
5. *Bifidobacterium* species are strict anaerobes, hence condition must be appropriately maintained.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.6% Agar gel

Colour and Clarity of prepared medium

Reddish orange coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 5.95% w/v aqueous solution at 25°C. pH :7.2±0.2

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 48 hours under anaerobic conditions.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Bifidobacterium infantis ATCC 25962	50-100	good-luxuriant	>=50%	Dark blue-bluish green
Bifidobacterium breve ATCC 15698	50-100	good-luxuriant	>=50%	Red-Pink with halo zone
Lactobacillus plantarum ATCC 8014	50-100	good-luxuriant	>=50%	Green colonies w/hazy background
Lactobacillus fermentum ATCC 9338	50-100	good-luxuriant	>=50%	Pink without halo zone

Storage and Shelf Life

Store between 15-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

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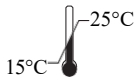
IVD *In vitro* diagnostic medical device



Storage temperature

EC REP

CEpartner4U, Esdoornlaan 13,
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CE Marking

Do not use if package is damaged

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