



Bifidobacterium Agar

M1396

Bifidobacterium Agar is used for the cultivation and maintenance of *Bifidobacterium* species.

Composition**

Ingredients	Gms / Litre
Special peptone	23.000
Sodium chloride	5.000
Glucose	5.000
Starch, soluble	1.000
L-Cysteine hydrochloride	0.300
Agar	15.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 49.3 grams in 1000 ml distilled water. Mix well and heat to boiling to dissolve the medium completely. Distribute in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. 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).

Special peptone provides essential growth nutrients. Starch acts as protective colloid and shields organisms from harmful substances present in the medium. Glucose is the energy source and sodium chloride maintains isotonic conditions. L-Cysteine hydrochloride helps in creating reduced conditions required for the growth of Bifidobacteria.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Amber coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 4.93% w/v aqueous solution at 25°C. pH : 6.8±0.2

pH

6.60-7.00

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery
Cultural Response			
<i>Bifidobacterium bifidum</i> ATCC 15696	50-100	good-luxuriant	>=50%
<i>Bifidobacterium breve</i> ATCC 5015698	50-100	good-luxuriant	>=50%

Bifidobacterium infantis 50-100 good-luxuriant $\geq 50\%$
ATCC 25962

Storage and Shelf Life

Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label.

Reference

1. Björkstén B., Sepp E., Julge K., Voor T., and Mikelsaar M., 2001, J. Allergy Clin. Microbiol., Volume 108, Issue 4, 516-520.
2. Guarner F., and Malagelada J. R., 2003, The Lancet, Vol. 361, Issue 9356, 8 February 2003, 512-519.
3. Atlas R. M. 2004, 3rd Edi. Handbook of Microbiological Media, Parks, L. C. (Ed.), CRC Press, Boca Raton.

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