Carnobacterium Selective Agar Base (CTAS Agar Base)

M1892

Intended Use:

Recommended for the detection of *Carnobacterium* species.

Composition**

Ingredients	g / L
Casitose ▲	10.000
Yeast extract	10.000
Sucrose	20.000
Polysorbate 80 (Tween 80)	1.000
Trisodium citrate dihydrate	15.000
Manganese sulphate tetrahydrate	4.000
Dipotassium hydrogen phosphate	2.000
Thallium (I) acetate	1.000
Nalidixic acid, sodium salt	0.040
Cresol red	0.004
Agar	15.000
Final pH (at 25°C)	9.0±0.2

**Formula adjusted, standardized to suit performance parameters

▲ - Equivalent to Peptone from casein

Directions

Suspend 74.91 grams (the equivalent weight of dehydrated medium per litre) in 990 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 and add TTC Solution 1% (10 ml per vial) (FD057). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Carnobacterium species are Gram-positive rods belonging to the family Lactobacillaceae and are not considered as human pathogens. It comprises of 11 species, of which only two of these, *Carnobacterium divergens* and *Carnobacterium maltaromaticum*, are isolated frequently from the environment and food (1). *Carnobacterium* species are commonly isolated from a variety of foods like meats stored under anaerobic atmospheres at refrigeration temperatures, but the role of these organisms in the spoilage of meat and meat products is yet to be determined.

Casitose serves as a source of nitrogen and amino acids. Yeast extract is the vitamin source. Sucrose and citrate is the carbon source. Polysorbate 80 acts as an emulsifier. Dibasic potassium phosphate buffer the medium. Manganese sulfate helps to stimulate growth of carnobacteria whereas Thallium acetate and nalidixic acid are used as inhibitory substance for selective isolation of *Carnobacterium* spp.

Type of specimen

Clinical samples - Pus, Food and Dairy samples, Fish samples.

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (4,5,6).

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 the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3.Further biochemical testing is required for complete identification.

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

Light yellow to greenish yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Red to purple-red coloured clear to slightly opalescent gel with precipitate forms in Petri plates.

Reaction

Reaction of 7.5% w/v aqueous solution at 25°C. pH : 9.0±0.2

pH

8.80-9.20

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours or longer.(with 5% CO_2)

Organism	Inoculum (CFU)	Growth	Recovery
Carnobacterium maltaromaticum ATCC 35586	50-100	luxuriant	>=50%
Carnobacterium divergens ATCC 35677 (00075*)	50-100	luxuriant	>=50%
Lactobacillus sakei subsp.*sakei* ATCC 15521	>=10^4	inhibited	0%

(00015*)
Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°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 (2,3).

Reference

1. Leisner, J. J., Groth Laursen, B., Prevost, H., Drider, D. & Dalgaard, P. (2007). Carnobacterium: positive and negative effects in the environment and in foods. FEMS Microbiol Rev 31, 592–613.
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3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.

5.Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
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IVD ***In vitro* diagnostic medical device**

30°C
10°C **Storage temperature**

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