

Product Data Sheet

CALCIUM CASEINATE AGAR

Product No. GB-DCM-00151-1A

INTENDED USE

For detection and enumeration of proteolytic microorganism in food.

Product Description

Protein hydrolysis by microorganisms in foods may produce a variety of odour and flavour defects. On the other hand, microbial proteolytic activity may be desirable in certain foods such as in the ripening of cheese, where it contributes to the development of flavour, body and texture. In some foods the level of proteolytic microorganisms may be of value to predict refrigerated storage life and to assess processing methods. Calcium M-Protein Agar is a modification of the original formulation of Frazier and Rupp and is used for the detection and enumeration of proteolytic microorganisms in foodstuffs and other materials.

Product Specifications

Ingredients	Gms / Ltr
Peptone	4.000
Meat extract	2.000
Tryptone	2.000
Calcium caseinate	3.500
Calcium chloride, 2H ₂ O	0.200
Tri-potassium citrate, H ₂ O	0.350
Disodium hydrogen phosphate	0.105
Potassium dihydrogen phosphate	0.035
Sodium chloride	5.000
Agar	20.000

PRINCIPLE

Tryptone, Peptone and meat extract provides nitrogenous, carbonaceous nutrients along with vitamins and amino acids. Phosphates are added to buffer the medium. Sodium chloride maintains the osmotic equilibrium. Calculate Protein in the medium is degraded by the proteolytic organisms. This results in formation of clear zones around the proteolytic colonies, in the otherwise opaque medium.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Cream to yellow homogeneous free flowing powder

Appearance of prepared medium: Whitish coloured, turbid gel forms in Petri plates.

PH (at 25°C): 7.0±0.2

Microorganism	ATCC	Inoculum (CFU)	Growth	Recovery	Proteolytic activity	Incubation Temperature	Incubation Period
Bacillus cereus	14579	10-100	Good-luxuriant	>=50%	Positive, clear zone surrounding colonies	35-37°C	18-24 Hours
Escherichia coli	25922	10-100	Good-luxuriant	>=50%	Negative, no clear zone surrounding colonies	35-37°C	18-24 Hours
Proteus vulgaris	13315	>103	Good-luxuriant	>=50%	Negative, no clear zone surrounding colonies	35-37°C	18-24 Hours
Pseudomonas aeruginosa	27853	>103	Good-luxuriant	>=50%	Positive, clear zone surrounding colonies	35-37°C	18-24 Hours

INSTRUCTION FOR USE

- Dissolve 30.19 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified/distilled water.
- Heat gently to boiling with frequent shaking for 10 minutes.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix thoroughly while pouring into sterile Petri plates to suspend the precipitate.
- If desired, to increase turbidity, add 5-10 grams of skim milk powder before heating.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

This product is for research use only.