

TECHNICAL DATA SHEET

Starch Casein Agar

Principle

Starch casein agar is used for the detection of saccharolytic marine bacteria and mostly actinomycetes. Actinomycetes are a fungi-like bacteria forming long filaments that stretch through the soil. They are large group of grams-positive filamentous or branching bacilli. It is composed of starch, casein, potassium nitrate, sodium chloride, dipotassium hydrogen phosphate, magnesium sulphate, ferrous sulphate, calcium carbonate and agar. Starch is the complex source of carbohydrate. The media contain special type of casein as source of nitrogen, which lacks vitamins. The salts provide complex ionic sources that makes the medium suitable for actinomycetes growth and also buffers the medium.

Use: For detection of saccharolytic marine bacteria.

Contents*

Ingredients	Gram/Litre
Starch	10.000
Casein	0.300
Potassium Nitrate	2.000
Sodium Chloride	2.000
Dipotassium Hydrogen Phosphate	2.000
Magnesium Sulphate	0.050
Ferrous Sulphate	0.010
Calcium Carbonate	0.020
Agar	15.00

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 31.35 grams in 1000 ml distilled water, boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically. **Note:** The media can be fortified with 0.5% glycerol for better results.

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ISO 9001-2008 Certified Company

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Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Beige colored free flowing, homogeneous powder
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Light amber colored opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 26-30°C for 6-7 days
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after incubation at 26-30°C for 6-7 days.

Organism	ATCC	Inoculum (CFU)	Growth	Recovery
<i>Streptomyces lavendulae</i>	19247	50-100	Luxuriant	$\geq 70\%$
<i>Nocardia asteroides</i>	19427	50-100	Luxuriant	$\geq 70\%$

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

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Reference

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