



PRODUCT SPECIFICATION SHEET

Starch Agar (DM365)

Intended Use

Starch Agar (DM365) is recommended for detection of starch hydrolyzing microorganisms.

Product Summary and Explanation

Starch Agar was formulated by Vedden⁽¹⁾ in 1915, for the cultivation of *Neisseria*. Since then, other media have been developed that are superior to Starch Agar for the isolation of *Neisseria* species, including enriched GC Medium Base. Starch Agar is recommended for the detection of microorganisms from foods⁽²⁾ and clinical samples which are capable of hydrolyzing starch.⁽³⁾ Although, originally the medium was formulated to perform the test for the identification of *Bacillus cereus*, it can also be applied to any kind of microorganism where starch hydrolysis activity is required to be analyzed.

Principles of the Procedure

Starch Agar contains peptic digest of animal tissue, yeast extract and beef extract which provides nitrogenous compounds, carbon, sulphur, trace elements etc. to the microorganisms. Sodium chloride maintains osmotic equilibrium. Flood the surface of 48 hours old culture on Starch reacts with Gram Iodine (SI016) to give a blue color. Organisms hydrolyzing starch through amylase production will produce a clearing around the isolate. A blue or purple zone indicates that starch is not hydrolyzed. Size of the clear zone is directly proportional to the starch hydrolyzing activity of the strain under study.

Formula / Liter

Ingredients	Gms / Liter
Peptic digest of animal tissue	5.00
Sodium chloride	5.00
Yeast extract	1.50
Beef extract	1.50
Starch, soluble	2.0
Agar	15.00
Final pH: 7.4 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 30 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile Petri plates.



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Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Yellow coloured slightly opalescent gel forms in Petri plates
Reaction of 3.00% Solution	pH : 7.4 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 30-35°C for 24-48 hours. {* - on addition of Grams Iodine (SI016)}

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	*Starch Hydrolysis
1.	<i>Bacillus subtilis ATCC 6633</i>	50 -100	good- luxuriant	positive reaction, clearing around the colony
2.	<i>Escherichia coli ATCC 25922</i>	50 -100	good- luxuriant	negative reaction
3.	<i>Staphylococcus aureus ATCC 25923</i>	50 -100	good- luxuriant	negative reaction
4.	<i>Streptococcus pyogenes ATCC 19615</i>	50 -100	good- luxuriant	negative reaction

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Starch Hydrolysis Test

1. Flood the surface of a 48-hour culture on Starch Agar with Gram Iodine (SI016).
2. Refer to appropriate references for a complete discussion of the collection, isolation and identification of microorganisms.

Results

1. Starch hydrolysis is indicated by a colorless zone surrounding colonies.
2. A blue or purple zone indicates that starch has not been hydrolyzed.

Storage

Store the sealed bottle containing the dehydrated medium at 10- 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.





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Packaging

Product Name : Starch Agar

Product Code : DM365

Available Pack sizes : 100gm/ 500gm

References

1. Vedder E. B., 1915, J. Infect. Dis., 16:385.
2. Harrigan W. and McCance M., 1976, Laboratory Methods in Food and Dairy Microbiology, Academic Press Inc. (London) Ltd.
3. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.

Further Information

For further information please contact your local MICROMASTER Representative.

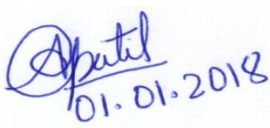
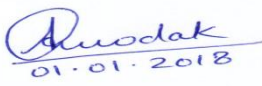



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