
# CRITERION™ STARCH AGAR

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| Cat. no. C7010 | CRITERION™ Starch Agar | 50gm |
| Cat. no. C7011 | CRITERION™ Starch Agar | 500gm |
| Cat. no. C7012 | CRITERION™ Starch Agar | 2kg |
| Cat. no. C7013 | CRITERION™ Starch Agar | 10kg |
| Cat. no. C7014 | CRITERION™ Starch Agar | 50kg |

## INTENDED USE

Hardy Diagnostics CRITERION™ Starch Agar is used for cultivating microorganisms being tested for starch hydrolysis.

This dehydrated culture medium is a raw material intended to be used in the making of prepared media products, which will require further processing, additional ingredients, or supplements.

## SUMMARY

Starch Agar was originally formulated in order to cultivate *Neisseria* . Superior media have been developed for the isolation of *Neisseria* spp. since the original Starch Agar formulation was created in 1915. Currently, Starch Agar Medium for *Pseudomonas* and Starch Agar with Bromcresol Purple are modifications of Starch Agar used for maintenance of *Pseudomonas* cultures.

Beef extract provides the nitrogen, vitamins, carbon and amino acids in Starch Agar. Starch Agar reacts with Gram's Iodine to give a blue color. Organisms hydrolyzing starch through amylase production will produce a clearing around the isolate while the remaining medium is blue. Agar is a solidifying agent.

## FORMULA

| Gram weight per liter: | 25.0gm/L |
|---|---|
| | |
| Soluble Starch | 10.0gm |
| Beef Extract | 3.0gm |
| Agar | 12.0gm |

Final pH 7.5 +/- 0.2 at 25ºC.

* Adjusted and/or supplemented as required to meet performance criteria.

## STORAGE AND SHELF LIFE

Store the sealed bottle(s) containing dehydrated culture medium at 2-30ºC. Dehydrated culture medium is very hygroscopic. Keep lid tightly sealed. Protect dehydrated culture media from moisture and light. The dehydrated culture media should be discarded if it is not free-flowing or if the color has changed from its original light beige.

Store the prepared culture media at 2-8ºC.

The expiration dating on the product label applies to the product in its intact packaging when stored as directed. The product may be used and tested up to the expiration date on the product label and incubated for the recommended quality control incubation times.

Refer to the document "Storage" for more information.

## PRECAUTIONS

This product may contain components of animal origin. Certified knowledge of the origin and/or sanitary state of the animals does not guarantee the absence of transmissible pathogenic agents. Therefore, it is recommended that these products be treated as potentially infectious, and handle observing the usual universal blood precautions. Do not ingest, inhale, or allow to come into contact with skin.

This product is for laboratory use only. It is to be used only by adequately trained and qualified laboratory personnel. Observe approved biohazard precautions and aseptic techniques. All laboratory specimens should be considered infectious and handled according to "standard precautions." The "Guidelines for Isolation Precautions" is available from the Centers for Disease Control and Prevention at www.cdc.gov/ncidod/dhqp/gl_isolation.html.

For additional information regarding specific precautions for the prevention of the transmission of all infectious agents from laboratory instruments and materials, and for recommendations for the management of exposure to infectious disease, refer to CLSI document M-29: *Protection of Laboratory Workers from Occupationally Acquired Infections: Approved Guideline.*

Sterilize all biohazard waste before disposal.

Refer to the document "Precautions When Using Media" for more information.

Refer to the document SDS Search instructions on the Hardy Diagnostics' website for more information.

## METHOD OF PREPARATION FOR DEHYDRATED CULTURE MEDIA

1. Suspend 25.0gm of the dehydrated culture media in 1 liter of distilled or deionized water.

2. Heat to boiling and mix to dissolve completely.

3. Sterilize in the autoclave at 121ºC. for 15 minutes.

4. Cool to 45-50ºC.

5. Dispense into sterile petri dishes as desired.

## PROCEDURE AND INTERPRETATION OF RESULTS

For information on procedures and interpretation of results, consult listed references or refer to the prepared media Instructions for Use (IFU) for Cat. No. G294.

## LIMITATIONS

It is recommended that biochemical, immunological, molecular, or mass spectrometry testing be performed on

colonies from pure culture for complete identification.

Some formulations may require a settling period before pH testing of the prepared medium. If the pH is tested immediately after preparation and is out of specification, retest the medium after 24 hours to obtain final pH results.

Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.

Refer to the document "Limitations of Procedures and Warranty" for more information.

## MATERIALS REQUIRED BUT NOT PROVIDED

Standard microbiological supplies and equipment such as autoclaves, incinerators, and incubators, etc., are not provided.

## QUALITY CONTROL

Hardy Diagnostics tests each lot of commercially manufactured media using appropriate quality control microorganisms and quality specifications as outlined on the Certificates of Analysis (CofA). The following organisms are routinely used for testing at Hardy Diagnostics:

| Test Organisms | Inoculation Method* | Incubation | | | Results |
|---|---|---|---|---|---|
| | | Time | Temperature | Atmosphere | |
| *Bacillus subtilis* ATCC ® 6633 | A | 40-48hr | 35°C | Aerobic | Growth; positive starch hydrolysis |
| *Escherichia coli* ATCC ® 25922 | A | 40-48hr | 35°C | Aerobic | Growth; negative starch hydrolysis |
| *Staphylococcus aureus* ATCC ® 25923 | B | 40-48hr | 35°C | Aerobic | Growth; negative starch hydrolysis |

* Refer to the document "Inoculation Procedures for Media QC" for more information.

### USER QUALITY CONTROL

Users of dehydrated culture media should perform QC testing in accordance with applicable government regulatory agencies, and in compliance with accreditation requirements. Hardy Diagnostics recommends end users check for signs of contamination and deterioration and, if dictated by laboratory quality control procedures or regulation, perform quality control testing to demonstrate growth or a positive reaction and to demonstrate inhibition or a negative reaction, if applicable. Hardy Diagnostics quality control testing is documented on the certificates of analysis (CofA) available from Hardy Diagnostics Certificates of Analysis website. In addition, refer to the following document "Finished Product Quality Control Procedures," for more information on QC or see reference(s) for more specific information.

## PHYSICAL APPEARANCE

CRITERION™ Starch Agar powder should appear homogeneous, free-flowing, and light beige in color. The prepared media should appear slightly opalescent without significant precipitate, and light amber in color.

## REFERENCES

1. Jorgensen., et al. *Manual of Clinical Microbiology*, American Society for Microbiology, Washington, D.C.

2. Tille, P., et al. *Bailey and Scott's Diagnostic Microbiology*, C.V. Mosby Company, St. Louis, MO.

3. Isenberg, H.D. *Clinical Microbiology Procedures Handbook*, Vol. I, II & III. American Society for Microbiology, Washington, D.C.

4. Vedder. 1915. *J. Infect. Dis.* ; 16:385.

5. MacFaddin, J.F. 1985. *Media for Isolation, Cultivation, Identification, Maintenance of Bacteria*, Vol. I. Williams & Wilkins, Baltimore, MD.

6. Atlas, R. 1993. *Handbook of Microbiological Media*, CRC Press, Boca Raton, FL.



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California · Washington · Utah · Arizona · Texas · Ohio · New York · Florida · North Carolina

The Hardy Diagnostics manufacturing facility and quality management system is certified to ISO 13485.



HDQA 2207B [C]