

Instructions for Use

CRITERION™ SALMONELLA SHIGELLA (SS) AGAR

Cat. no. C6840	CRITERION™ Salmonella Shigella (SS) Agar	110.8gm
Cat. no. C6841	CRITERION™ Salmonella Shigella (SS) Agar	500gm
Cat. no. C6842	CRITERION™ Salmonella Shigella (SS) Agar	2kg
Cat. no. C6843	CRITERION™ Salmonella Shigella (SS) Agar	10kg
Cat. no. C6844	CRITERION™ Salmonella Shigella (SS) Agar	50kg

INTENDED USE

Hardy Diagnostics CRITERION™ Salmonella Shigella (SS) Agar is a highly selective agar used for the isolation of *Salmonella* and some *Shigella*.

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

Salmonella Shigella (SS) Agar is a selective differential agar medium used for isolation of pathogenic Enterobacteriaceae, specifically *Salmonella* spp. and *Shigella* spp. from foods, other sanitary materials and clinical specimens. Early studies indicated that SS Agar was superior to other media in the isolation of *Salmonella* and *Shigella* from specimens.⁽¹⁻³⁾ Later investigators determined that SS agar was inferior to Hektoen Enteric (HE) Agar and XLD Agar in the recovery of *Shigella*.⁽⁴⁻⁷⁾ Inhibitory action on coliforms and gram-positive bacteria is obtained by the bile salts mixture and brilliant green in the medium. Sodium citrate inhibits gram-positive bacteria. Neutral red is a pH indicator and those bacteria which ferment lactose produce pink colonies. Some *Salmonella* and *Proteus* spp. produce black-centered (precipitated ferrous sulfate) colonies as a result of H₂S production.

FORMULA

Gram weight per liter:	60.0gm/L
Lactose	10.0gm
Bile Salts Mixture	8.5gm
Sodium Citrate	8.5gm
Sodium Thiosulfate	8.5gm
Beef Extract	5.0gm
Pancreatic Digest of Casein	2.5gm

Peptic Digest of Animal Tissue	2.5gm
Ferric Citrate	1.0gm
Brilliant Green	0.3mg
Neutral Red	25.0mg
Agar	3.5gm

Final pH 7.0 +/- 0.2 at 25°C.

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

STORAGE AND SHELF LIFE

Store the sealed bottle containing culture medium at 2-30°C. 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 pinkish-beige.

Store the prepared culture media at 2-8°C.

The expiration date 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 incubation times as stated below.

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." Refer to the document "[Guidelines for Isolation Precautions](#)" from the Centers for Disease Control and Prevention.

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 M29: *Protection of Laboratory Workers from Occupationally Acquired Infections*.

Sterilize all biohazard waste before disposal.

Refer to the document "[Precautions When Using Media](#)" for more information.

METHOD OF PREPARATION FOR DEHYDRATED CULTURE MEDIA

1. Suspend 55.4gm of the dehydrated culture media in 1 liter of distilled or deionized water.
2. Heat to boiling and mix to dissolve completely. **Do not autoclave.**
3. Cool to 45-50°C.
4. Dispense into sterile containers as desired.

PROCEDURE

Specimen Collection: Consult listed references for information on specimen collection.^(1,2,5) Infectious material should be submitted directly to the laboratory without delay and protected from excessive heat and cold. If there is to be a delay in processing, the specimen should be inoculated onto an appropriate transport media and refrigerated until inoculation.

Method of Use: Plates should be warmed to room temperature and agar surface should be dry prior to inoculating. Inoculate and streak the specimen as soon as possible after collection. If the specimen to be cultured is on a swab, roll the swab over a small area of the agar surface. Streak for isolation with a sterile loop. Incubate plates aerobically at 35-37°C. for 18-24 hours (some organisms may take longer than 24 hours for visible growth to appear). Examine colonial morphology.

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. G50.

MATERIALS REQUIRED BUT NOT PROVIDED

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

QUALITY CONTROL

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. Always take pH reading at room temperature.

Test Organisms	Inoculation Method*	Incubation			Results
		Time	Temperature	Atmosphere	
<i>Salmonella enterica</i> ATCC® 14028	A	18-24hr	35°C	Aerobic	Good growth; colorless colonies with black center
<i>Shigella flexneri</i> ATCC® 12022	A	18-24hr	35°C	Aerobic	Good growth; colorless colonies
<i>Escherichia coli</i> ATCC® 25922	B	18-24hr	35°C	Aerobic	Partial to complete inhibition; red colonies

Refer to the document "[Limitations of Procedures and Warranty](#)" for more information.

USER QUALITY CONTROL

Hardy Diagnostics tests each lot of commercially manufactured media using appropriate quality control microorganisms and quality specifications as outlined on the Certificate of Analysis (CofA) and the CLSI document M22-A3 *Quality Assurance for Commercially Prepared Microbiological Culture Media*. The following microorganisms are routinely used for testing at Hardy Diagnostics:

PHYSICAL APPEARANCE

CRITERION™ Salmonella Shigella (SS) Agar powder should appear homogeneous, free-flowing, and light pinkish-

beige in color. The prepared media should appear clear to trace hazy, and reddish-orange in color.

REFERENCES

1. Anderson, N.L., et al. *Cumitech 3B; Quality Systems in the Clinical Microbiology Laboratory*, Coordinating ed., A.S. Weissfeld. American Society for Microbiology, Washington, D.C.
2. Jorgensen., et al. *Manual of Clinical Microbiology*, American Society for Microbiology, Washington, D.C.
3. Tille, P., et al. *Bailey and Scott's Diagnostic Microbiology*, C.V. Mosby Company, St. Louis, MO.
4. American Public Health Association. *Standard Methods for the Examination of Water and Wastewater*, APHA, Washington, D.C.
5. Isenberg, H.D. *Clinical Microbiology Procedures Handbook*, Vol. I, II & III. American Society for Microbiology, Washington, D.C.
6. *Pub Health Ref.*; 57:521, 1942.
7. *J. Lab. Clin. Med.*; 1081, 1942.
8. *Am. J. Pub. Health*; 31:363, 1941.
9. *Am. J. Clin. Path.*; 35:476, 1965.
10. *Appl. Micro.*; 15:656, 1969.
11. *Appl. Micro.*; 21:32, 1971.
12. *Appl. Micro.*

ATCC is a registered trademark of the American Type Culture Collection.

IFU-10254[B]



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[Ordering Information](#)

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

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