

Instructions for Use

POTATO DEXTROSE AGAR (PDA)

Cat. no. G94	Potato Dextrose Agar with TA (Tartaric Acid), 15x60mm Plate, 13ml	10 plates/bag
Cat. no. W93 *	Potato Dextrose Agar with Chlortetracycline, 15x100mm Plate, 26ml	10 plates/bag
Cat. no. W94BX	Potato Dextrose Agar with Chloramphenicol, 15x100mm Plate, 28ml	100 plates/box
Cat. no. W96 *	Potato Dextrose Agar with TA (Tartaric Acid), 15x100mm Plate, 28ml	10 plates/bag
Cat. no. W96R*	Potato Dextrose Agar with TA (Tartaric Acid), 15x100mm Red-Tinted Plate, 28ml	10 plates/bag

INTENDED USE

Hardy Diagnostics Potato Dextrose Agar with TA (Tartaric Acid) is recommended for the microbial examination of food and dairy products. Potato Dextrose Agar with Chlortetracycline is recommended for the microbial enumeration of yeast and mold from cosmetics.^(8,9,12) Potato Dextrose Agar with Chloramphenicol is recommended for the selective cultivation of fungi from mixed samples.

* Products are not intended to be used for the diagnosis of human disease.

SUMMARY

Potato Dextrose Agar consists of potato infusion and dextrose. Potato infusion provides a nutrient base for luxuriant growth of most fungi. Dextrose serves as a growth stimulant. The incorporation of tartaric acid (TA) in the medium lowers the pH to 3.5, thereby inhibiting bacterial growth. Chloramphenicol acts as a selective agent to inhibit bacterial overgrowth of competing microorganisms from mixed specimens, while permitting the selective isolation of fungi.

In *Standard Methods for the Examination of Dairy Products*, the American Public Health Association (APHA) recommends Potato Dextrose Agar with TA (Tartaric Acid) for determining yeast and mold counts from butter, margarine and related products.⁽⁸⁾

The U.S. Food & Drug Administration (FDA) recommends Potato Dextrose Agar with Chlortetracycline for the evaluation of yeast and mold from cosmetic products.⁽¹²⁾

FORMULA

Ingredients per liter of deionized water:*

Dextrose	20.0gm
Potato Extract	4.0gm*
Agar	15.0gm

*4.0gm of potato extract is equivalent to 200gm of potato infusion.

In addition, Potato Dextrose Agar with Chlortetracycline contains:

Chlortetracycline	40.0mg
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In addition, Potato Dextrose Agar with Chloramphenicol contains:

Chloramphenicol	25.0mg
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Final pH of 5.6 +/- 0.2 at 25°C.

In addition, Potato Dextrose Agar with TA contains:

Tartaric Acid	1.4gm
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Final pH of 3.5 +/- 0.3 at 25°C.

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

STORAGE AND SHELF LIFE

Storage: Upon receipt, store at 2-8°C away from direct light. Media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), contamination, or if the expiration date has passed. Product is light and temperature sensitive; protect from light, excessive heat, moisture, and freezing.

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

For cat. nos. G94 and W94BX

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 Precautions for blood. Do not ingest, inhale, or allow to come into contact with skin.

This product is for *in vitro* diagnostic 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.

For cat. nos. W93, W96 and W96R.

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.

PROCEDURE

Specimen Collection: Consult listed references for information on specimen collection.⁽¹⁻⁵⁾

When using Potato Dextrose Agar with TA (Tartaric Acid), Potato Dextrose Agar with Chlortetracycline or Potato Dextrose Agar with Chloramphenicol, refer to listed references for the appropriate method of use and interpretation.^(2,4,6-12)

INTERPRETATION OF RESULTS

Consult listed references for information regarding the interpretation of growth of fungal species.⁽²⁻¹²⁾

LIMITATIONS

It is recommended that biochemical, immunological, molecular, or mass spectrometry testing be performed on colonies from pure culture for complete identification of bacteria and/or fungi.

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

MATERIALS REQUIRED BUT NOT PROVIDED

Standard microbiological supplies and equipment such as loops, other culture media, swabs, applicator sticks, incinerators, and incubators, etc., as well as serological and biochemical reagents, 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 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:

Test Organisms	Inoculation Method*	Incubation			Results
		Time	Temperature	Atmosphere	
Potato Dextrose Agar with Chlortetracycline (Cat. no. W93)					
<i>Trichophyton mentagrophytes</i> ATCC® 9533	G	5-7 days	20-25°C	Aerobic	Growth; may take up to 7 days

<i>Candida albicans</i> ATCC® 10231	A	24-48 hrs	20-25°C	Aerobic	Growth; smooth white colonies
<i>Staphylococcus aureus</i> ATCC® 25923	B	24 hrs	35°C	Aerobic	Inhibited
<i>Escherichia coli</i> ATCC® 25922	B	24 hrs	35°C	Aerobic	Inhibited

Test Organisms	Inoculation Method*	Incubation			Results
		Time	Temperature	Atmosphere	
Potato Dextrose Agar with TA (Cat. nos. G94, W96, and W96R)					
<i>Trichophyton mentagrophytes</i> ATCC® 9533	G	5-7 days	20-25°C	Aerobic	Growth; may take up to 7 days
<i>Trichophyton rubrum</i> ATCC® 28188	G	3-4 wks	20-25°C	Aerobic	Growth seen in 7 days; may take 3-4 weeks for red color on reverse side of colony to be visible
<i>Aspergillus brasiliensis</i> ATCC® 16404	G	1-5 days	20-25°C	Aerobic	Growth; may take up to 7 days
<i>Candida albicans</i> ATCC® 10231	A	1-3 days	20-25°C	Aerobic	Growth; may take up to 7 days

Test Organisms	Inoculation Method*	Incubation			Results
		Time	Temperature	Atmosphere	
Potato Dextrose Agar with Chloramphenicol (Cat. no. W94BX)					
<i>Candida albicans</i> ATCC® 10231	A	24-48 hrs	20-25°C	Aerobic	Growth; may take up to 7 days
<i>Aspergillus brasiliensis</i> ATCC® 16404	G	1-5 days	20-25°C	Aerobic	Growth; may take up to 7 days
<i>Escherichia coli</i> ATCC® 25922	B	24hrs	35°C	Aerobic	Partial to complete inhibition

* Refer to the document "[Inoculation Procedures for Media QC](#)" for more information.

USER QUALITY CONTROL

End users of commercially prepared 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 certificate of analysis (CofA) available from Hardy Diagnostics [Certificate of Analysis](#) website. Also refer to the document "[Finished Product Quality Control Procedures](#)," and the CLSI document M22-A3 *Quality Assurance for Commercially Prepared Microbiological Culture Media* for more information on the appropriate QC procedures. See the references below.

PHYSICAL APPEARANCE

Potato Dextrose Agar with TA, Potato Dextrose Agar with Chlortetracycline and Potato Dextrose Agar with Chloramphenicol should appear slightly opalescent, and light amber in color, with no precipitate, chips, or debris.

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. Isenberg, H.D. *Clinical Microbiology Procedures Handbook*, Vol. I, II & III. American Society for Microbiology, Washington, D.C.
5. Koneman, E.W., et al. *Color Atlas and Textbook of Diagnostic Microbiology*. J.B. Lippincott Company, Philadelphia, PA.
6. St. Germain, Guy, et al. 1996. *Identifying Filamentous Fungi*. Star Publishing Company, Belmont, CA.
7. Campbell, M.C. and J.L. Stewart. 1980. *The Medical Mycology Handbook*, John Wiley and Sons, New York, NY.
8. American Public Health Association. *Standard Methods for the Examination of Dairy Products*. APHA, Washington, D.C.
9. APHA Technical Committee on Microbiological Methods for Foods. *Compendium of Methods for the Microbiological Examination of Foods*. APHA, Washington, D.C.
10. Association of Official Analytical Communities. *Official Methods of Analysis*TM. AOAC, Washington, D.C.
11. Robell and Taplin. 1970. *Dermatophytes*, U. of Miami Press.
12. U.S. Food and Drug Administration. *Bacteriological Analytical Manual*. AOAC, Arlington, VA.
<http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm2006949.htm>.

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

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[Ordering Information](#)

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