

# Instructions for Use



## YEAST PEPTONE DEXTROSE (YPD) MEDIA

<a href="#">Cat. no. CG91</a>	Yeast Peptone Dextrose (YPD) Broth, 500ml Polycarbonate Bottle, 500ml	1 each
<a href="#">Cat. no. G422</a>	Yeast Peptone Dextrose (YPD) Agar, 15x100mm Plate, 26ml	10 plates/bag

### INTENDED USE

Hardy Diagnostics CulGenex™ Yeast Peptone Dextrose (YPD) Media are recommended for the rapid growth of yeasts, particularly *Saccharomyces cerevisiae*, used for molecular research.

This product is not intended to be used for the diagnosis of human disease.

### SUMMARY

The genome of *Saccharomyces cerevisiae* can be easily manipulated and is recognized as a model test organism for diversified biological study. Because the genome of *S. cerevisiae* was the first eukaryotic genome to be sequenced, it became a key organism for genetic research. Typical studies include DNA microarray, gene function by disruption analysis, serial analysis of gene expression (SAGE), protein localization, mapping, and analysis of enzyme and lethality functions.<sup>(1,4-6)</sup> Many human genes related to disease have orthologs in yeast, and the conservation of metabolic and regulatory mechanisms in eukaryotes has contributed to the wide-spread use of yeast as a model test organism. In addition, the ability of yeast to replicate yeast artificial chromosomes (YACs) has yielded detailed studies on chromosomal mutations and origins of replication.<sup>(1,5)</sup>

Yeast grow best on minimal media containing only dextrose and salts: adding protein and yeast cell extract hydrolysates helps to promote more rapid growth and cell division. CulGenex™ Yeast Peptone Dextrose (YPD) Media contain yeast extract, peptone and dextrose (D-glucose) and can be utilized in both liquid (broth) and solid (agar) forms; yeast extract and peptone provide carbon, nitrogen, amino acids, essential minerals, vitamins and trace elements to promote growth; dextrose is the energy source, agar, when applicable, is the solidifying agent.

Hardy Diagnostics CulGenex™ Yeast Peptone Dextrose (YPD) Media are pre-made and ready to use. They are available in a variety of packaging styles.

### FORMULA

Ingredients per liter of deionized water:\*

Yeast Peptone Dextrose Broth (Cat. no. CG91):	
Peptone	20.0gm

Dextrose (D-Glucose)	20.0gm
Yeast Extract	10.0gm

Final pH 6.5 +/- 0.2 at 25°C.

In addition, Yeast Peptone Dextrose Agar (Cat. no. G422) contains:

Agar	20.0gm
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Final pH 6.5 +/- 0.2 at 25°C.

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

## STORAGE AND SHELF LIFE

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

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.

## PROCEDURE

Consult listed references for information on specific protocols.<sup>(1-7)</sup>

## INTERPRETATION OF RESULTS

Development of colonies on the solid agar or turbidity in the broth are indicative of growth.

## LIMITATIONS

YPD media are nonselective and cannot be used as a selective medium to test for auxotrophs.

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, swabs, applicator sticks, other culture media, 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 Certificates of Analysis (CofA).

Test Organisms	Inoculation Method*	Incubation			Results
		Time	Temperature	Atmosphere	
<i>Saccharomyces cerevisiae</i> ATCC® 9763	A	1-3 days	30°C	Aerobic	Growth

\* 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

Yeast Peptone Dextrose (YPD) Agar should appear translucent, and light amber in color.

Yeast Peptone Dextrose (YPD) Broth should appear clear, and medium to dark amber in color.

## REFERENCES

1. Ausubel, F.M., R. Brent, R.E. Kingston, D.D. Moore, J.G. Seidman, J.A. Smith, K. Struhl, Editors. 2010. *Current Protocols in Molecular Biology*. John Wiley and Sons, Inc. Malden, MA.

2. Cseke, L.J., P.B. Kaufman, G.K. Podila, and C.J. Tsai. 2004. *Handbook of Molecular and Cellular Methods in Biology and Medicine* . CRC Press.Taylor & Francis LLC. Boca Raton, FL.
3. Fowell, R.R. 1952. Sodium Acetate Agar as a Sporulation Medium for Yeast. *Nature (London)* ; 170:578.
4. Sambrook and Russell. 2001. *Molecular Cloning: A Laboratory Manual*, 3rd ed. Cold Spring Harbor Laboratory Press. Woodbury, New York.
5. Sherman, F. 2002. Getting Started with Yeast. *Meth. Enzymol* ; 350:3-41.
6. Sherman, F., G.R. Fink, J.B. Hicks. 1986. *The Laboratory Course Manual for Methods in Yeast Genetics* . Cold Spring Harbor Press. Cold Spring Harbor, NY.
7. Walker, J.M. 1984. *Methods in Molecular Biology* . The Humana Press Inc. Clifton, NJ.

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