IFU

Instructions for Use

AGAROSE POWDER

Cat. no. C8740	CulGenex™ Agarose LE, Molecular Biology Grade	100gm
Cat. no. C8741	CulGenex™ Agarose LE, Molecular Biology Grade	500gm

INTENDED USE

Hardy Diagnostics CulGenex™ Agarose LE, Molecular Biology Grade is recommended for use in the preparation of an electrophoresis gel for the analysis of nucleic acids and proteins.

SUMMARY

Agarose is a neutral polysaccharide derived from agar, which is prepared from species of red marine algae, *Gellidium* and *Gracilariae*. Agar may be separated, using an acetylation process, into two different polysaccharides: agarose and aparopectin.(1) This results in the formation of an acidic polymer (agaropectin) and a neutral polymer (agarose).(2)

Agarose is not soluble in cold water, but will dissolve in boiling water or buffer. It is an ideal gel matrix for diffusion and fractionation of particles as small as one nucleotide.(3) The finished gel is an anti-convection medium, which is biologically inert and well suited for electrophoresis of nucleic acids, lipoproteins, lactic dehydrogenase isoenzymes, serum proteins, glycoproteins, heparin, acid mucopoplysaccharides, bacterial proteins, and some viruses.(4) Other uses include chromatography and immunological applications such as agarose gel diffusion, radial immunodiffusion, immunoelectrophoresis, electroimmunoassay, and counterelectrophoresis.

Agarose LE, Molecular Biology Grade has low electroendosmosis (EEO) and high mobility. The gelling temperature of this product is 34.5 to 37.5ºC. while the melting temperature is 86.5 to 89.5ºC.

There is no detectable amount of DNase or RNase in CulGenex™ Agarose products.

STORAGE AND SHELF LIFE

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

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

Refer to appropriate references for specific concentrations of agarose/ethidium bromide and formulas for TAE/TBE buffers.

1. In a flask, add Agarose to distilled water or a suitable buffer (TBE or TAE). For example, a 1% agarose gel with a total volume of 50mL would contain 0.5gm of Agarose.

2. Heat to boiling to dissolve completely. This may be done in a microwave and evaporated water might need to be replaced.

3. In order to later visualize DNA fragments through UV fluorescence, ethidium bromide may be added to the dissolved agarose.

4. Cool and pour into electrophoresis cast. Allow sufficient time for solidification before use.

LIMITATIONS

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

MATERIALS REQUIRED BUT NOT PROVIDED

Standard supplies and equipment such as flasks, microwaves etc., are not provided.

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

CulGenex™ Agarose powder should appear homogeneous, free-flowing, and white in color.

REFERENCES

1. Araki, C. 1937. Acetylation of Agar-like Substances of *Gelidium amansii*. *L. J. Chem. Soc. Japan*; 58:1338-1350.

2. Barteling, S.J. 1969 A Simple Method for the Preparation of Agarose. *Clin. Chem.*; 15:1002-1005.

3. Griess, G. et al. 1993. The Relationship of Agarose Gel Structure to the Sieving of Spheres during Agarose Gel Electrophoresis. *Biophysical Journal.*; Vol. 65:138-148.

4. Santos, G. 1990. *A Manual for the Processing of Agar from Gracilaria*. No. 5. Regional Small-Scale Coastal Fisheries Development Project. Manila, Philippines.

IFU-10362[C]

1430 West McCoy Lane, Santa Maria, CA 93455, USA
Phone: (805) 346-2766 ext. 5658
Fax: (805) 346-2760
Website: HardyDiagnostics.com
Email: TechnicalServices@HardyDiagnostics.com
Ordering Information

Distribution Centers:
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 2207C [D]