Biozym Prep Agarose

Introduction

Biozym Prep has an extraordinary low melting / gelling point, which makes it a valuable tool for many biomolecular techniques. Biozym Prep is prepared by organic synthesis, which introduces methoxylate groups into the agarose molecule. The gelling temperature is a function of the degree of methoxylation. As a consequence of this process, the gel strength is reduced and the gel clarity is increased. Biozym Prep can be used for a variety of tissue and cell culture applications as well as viral plaque assays. It might also be used for capillary electrophoresis and normal gel electrophoresis. The low melting temperature allows for the recovery of undamaged nucleic acids below the denaturation temperature. The low gelling temperature ensures that the agarose will be in a liquid state at a temperature range where In-Gel manipulations can be performed without prior extraction of the DNA from the gel slice.

Biozym Prep Agarose has no detectable DNase or RNase activity.

Specifications

Moisture:	≤ 10%
Electroendosmosis:	≤ 0.05
Sulphate:	≤ 0.10%
Gel Strength 2%:	≥ 75 g/cm^2
Gelling Temperature 0.8%:	8 - 17°C
Melting Temperature 1.0%:	≤ 50°C
DNase/ RNase activity:	None detected

Applications

- Soft agarose cloning of hybridoma and human tumor cells
- General cell culture; plant protoplast culture
- Embedding/encapsulation of cells for electron microscopy, neuron activity studies, transplantation research in rats
- Electrophoresis of cells in a density gradient with reversible gel

Recommended Agarose Concentrations

For horizontal electrophoresis, concentrations above 1.5% are recommended. For usage as a suspension medium for cells, concentrations between 0.75% and 1.5% are best suited. If in doubt, please contact Biozym for a product sample for your personal evaluation.

Precautions

Please refer to Material Safety Data Sheet for safety and handling information. Always wear eye protection when dissolving agarose and guard yourself and others against scalding solutions.

Agarose Preparation

When preparing agarose for cell culture work, it is always best to prepare the agarose in water suitable for cell culture and separate from any growth media or nutrients. Agarose solution and media solutions should be prepared at 2X concentrations (i.e., if desired final agarose concentration is 0.6%, prepare a 1.2% agarose solution), autoclaved separately, and aliquoted into useable aliquots.

Instructions for Dissolving (Hotplate)

- Choose a beaker / flask that can hold 2-4 times the volume of the desired solution.
- Add room temperature water / buffer and a stir bar to the beaker.
- Slowly sprinkle in the agarose powder into the liquid while rapidly stirring to prevent clumping.
- Heat to boiling while rapidly stirring. If lumps may remain, continue gentle boiling with stirring for 20 – 30 minutes
- Remove the beaker from the microwave oven and GENTLY swirl the beaker and thoroughly mix the agarose solution.
- After dissolution, add sufficient hot distilled water to obtain the initial weight and mix thoroughly.

- Cool the solution (even down to room temperature) before casting. In order to achieve a maximum gel strength, keep cooled / refrigerated for at least 2 hours before use.

Microwave

(Based on a 250 ml Flask with 100 ml solution in a 750-watt oven. Please adjust when using different set-up)

- Before heating up the solution, remove stir bar. Heat up the covered flask for 2 minutes at medium power
- Gently swirl to resuspend remaining powder
- Heat at high power for 1 – 2 minutes
- Gently mix the contents
- Remove cover and adjust for evaporation
- Proceed as mentioned in the hotplate instruction section

Microwave remelting of Gels

- Set loosely covered container in microwave oven and heat at low power (defrost setting) for 1 minute (100 ml gel volume, use shorter times for smaller volumes)
- Gently swirl content to break up matrix. Repeat heating briefly if necessary

Procedure for Autoclaving Agarose

- Choose a beaker / flask that can hold 2-4 times the volume of the desired solution.
- Add room temperature water and sprinkle in agarose (2 x of final concentration)
- Cover with aluminium foil and place in autoclave
- Autoclave 5 minutes (see instrument manual for appropriate use)
- Once the agarose has cooled, aliquot and store at 4°C

Please notify: Agarose may lose gel strength when exposed to autoclave for longer periods.

Use of agarose as culture medium

- Remelt in microwave as given above or place in hot water bath
- Cool down to 37°C and prewarm 2x media solution to 37°C
- Mix equal volumes and cast into plates or sterile culture tubes
- Allow to gel for 20 minutes or maintain at 37°C if used as liquid culture

Ordering Information

Catalog No.	Size
840302	25 g

Contact

For more information about this or other Biozym products, please contact us at:
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For Research Use.
Not for use in *In-Vitro* Diagnostic Procedures.

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