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SeaKem® Gold Agarose

The fastest agarose available for separation of megabase DNA.

Introduction

SeaKem® Gold Agarose is a unique, patented, very high gel strength, low EEO (≤0.05) standard gelling temperature agarose. This Genetic Technology Grade™ Agarose product was developed for rapid resolution of DNA and PCR† products between 1 kb and 50 kb by conventional electrophoresis.

Analytical Specifications

Gelling temperature (1.5%)	36°C ±1.5°C
Melting temperature (1.5%)	≥90°C
Gel strength (1%)	≥1,800 g/cm²
Gel strength (1.5%)	≥3,500 g/cm²

Applications

- Preparative DNA and RNA electrophoresis
- Analysis of Long PCR† reactions
- Separation and further manipulation of DNA ≥1,000 bp
- Analytical electrophoresis of DNA and RNA
- Blotting of DNA and RNA

Suggested Agarose Concentrations

Size Range (Base Pairs)	Final Agarose Concentration (%) 1X TAE Buffer
5,000-50,000	0.3
1,000-20,000	0.5
800-10,000	0.8
400-8,000	1.0

: TBE Buffer is not recommended for separation of DNA ≥12,000 bp.

Dye Mobility Table

Migration of double-stranded DNA in relation to Bromophenol Blue (BPB) and Xylene Cyanol (XC) in SeaKem® Gold Agarose Gels.

1X TAE Buffer		%	1X TBE Buffer	
XC	BPB	**Agarose**	XC	BPB
24,800	3,550	**0.30**	19,000	2,550
12,200	2,050	**0.50**	9,200	1,500
9,200	1,050	**0.75**	7,100	800
6,100	760	**1.00**	4,000	500
4,100	600	**1.25**	2,550	350
2,600	400	**1.50**	1,900	250
2,000	330	**1.75**	1,400	180
1,500	250	**2.00**	1,000	100

Precautions

Always wear eye protection when dissolving agarose and guard yourself and others against scalding solutions. Refer to Material Safety Data Sheet for additonal safety and handling precautions.

Microwave Instructions for Agarose Preparation

1. Choose a beaker that is 2-4 times the volume of the solution.
2. Add room temperature 1X or 0.5X electrophoresis buffer and a stir bar to the beaker.
3. Slowly sprinkle in the agarose powder while the solution is rapidly stirred.
4. **Remove the stir bar if not Teflon® coated.**
5. Weigh the beaker and solution before heating.
6. Cover the beaker with plastic wrap.
7. Pierce a small hole in the plastic wrap for ventilation.
8. Heat the beaker in the microwave oven on **High** power until bubbles appear.
9. Remove the beaker from the microwave oven. **Caution: Any microwaved solution may become superheated and foam over when agitated.**
10. **GENTLY** swirl the beaker to resuspend any settled powder and gel pieces.
11. Reheat the beaker on **HIGH** power until the solution comes to a boil.
12. **Hold at boiling point for 1 minute** or until all of the particles are dissolved.
13. Remove the beaker from the microwave oven.
14. **GENTLY** swirl the beaker to thoroughly mix the agarose solution.
15. After dissolution, add sufficient hot distilled water to obtain the initial weight.
16. Mix thoroughly.
17. Cool the solution to 50°C-50°C prior to casting.

Hot Plate Instructions for Agarose Preparation

1. Choose a beaker that is 2-4 times the volume of the solution.
2. Add room temperature electrophoresis buffer and a stir bar to the beaker.

3. Slowly sprinkle the agarose powder while the solution is rapidly stirred.
4. Weigh the beaker and solution before heating.
5. Cover the beaker with plastic wrap.
6. Pierce a small hole in the plastic wrap for ventilation.
7. Bring the solution to a boil while stirring.
8. Maintain gentle boiling until all the agarose is dissolved (approximately 10 minutes).
9. Add sufficient hot distilled water to obtain the initial weight.
10. Mix thoroughly.
11. Cool the solution to 50°C-60°C prior to casting.

Ordering Information:

Catalog No.	**Size**
50150	125 g
50152	25 g

Related Products:
AccuGENE® 10X TAE Buffer
GelStar® Nucleic Acid Gel Stain
Megabase DNA Standards
InCert® Agarose

†The PCR process may be covered by one or more third-party patents.

For Laboratory Use.

For more information contact Technical Service at (800) 521-0390 or visit our website at www.Lonza.com