

LabReCon

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## GeneStep™ LE Agarose

The most popular name in agarose.

### Introduction

GeneStep™ LE Agarose is an all purpose agarose for routine nucleic acid electrophoresis of fragments between 500bp-23,000 bp. GeneStep™ LE Agarose has no detectable DNase or RNase activity.

### Analytical Specifications

Gelling temperature (1.5%) :  $36^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$   
Melting temperature (1.5%) :  $\geq 90^{\circ}\text{C}$   
Gel strength (1%) :  $\geq 1,200 \text{ g/cm}^2$

### Applications

- Analytical electrophoresis of DNA and RNA  $\geq 1,000$  bp
- Blotting of DNA and RNA

### Suggested Agarose Concentrations

Size Range (Base Pairs)	Final Agarose Concentration (%)	
	1X TAE Buffer	1X TBE Buffer
1,000-23,000	0.60	0.50
800-10,000	0.80	0.70
400-8,000	1.00	0.85
300-7,000	1.20	1.00
200-4,000	1.50	1.25
100-3,000	2.00	1.75

### Dye Mobility Table

Migration of double-stranded DNA in relation to Bromophenol Blue (BPB) and Xylene Cyanol (XC) in GeneStep™ LE Agarose Gels.

1X TAE Buffer		% Agarose	1X TBE Buffer	
XC	BPB		XC	BPB
24,800	2,900	0.30	19,400	2,850
11,000	1,650	0.50	12,000	1,350
10,200	1,000	0.75	9,200	720
6,100	500	1.00	4,100	400
3,560	370	1.25	2,500	260
2,800	300	1.50	1,800	200
1,800	200	1.75	1,100	110
1,300	150	2.00	850	70

### Precautions

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

### 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  $50^{\circ}\text{C}$ - $60^{\circ}\text{C}$  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
LRD11990	500 g

For more information on GeneStep™ LE Agarose, contact Technical Service at (+91) 85-95-222-053 or visit our website at [www.labrecon.in](http://www.labrecon.in)

### Related Products:

DNA Markers  
DNA Ladders  
RNA Markers  
Nucleic Acid Gel Stain

### For Laboratory Use.

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