GENAXXON bioscience

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Agarose Tiny

Product	Cat#	Pack size
Agarose Tiny	M3046.0025	25g
Agarose Tiny	M3046.0100	100g
Agarose Tiny	M3046.0250	250g
Agarose Tiny	M3046.0500	500g

Product description

The Genaxxon bioscience Agarose Tiny is a high resolution agarose with a resolution comparable to MetaPhor(R) from Lonza. Resolution is almost as good as with polyacrylamide. Agarose Tiny is a low melting (72°C – 75°C) agarose with twice the resolution capabilities of the finest sieving agarose products. Using submarine gel electrophoresis, you can resolve PCR products and small DNA fragments that differ in size by only 2%.

Product Specifications

Dnases/Rnases/Proteases: ..... not detected

Electroendosmosis: ..... <0.12 (EEO)

Gelstrength (3.0 %): ..... >900 g/cm²

Gel point (3.0%): ..... <25°C

Melting point (1.5%): ..... <63°C

Moisture: ..... <7%

Ash: ..... <0.3%

Sulfate: ..... <0.11%

Applications

- High resolution separation of 10bp – 500bp fragments
- Recovery of fragments under 800bp
- Fine analysis of PCR products
- AMPFLP, STR and tri- and tetranucleotide repeat analysis

Suggested Agarose Concentrations

Size Range Base Pairs	Final Agarose Conc. (%) 1X TAE Buffer	1X TBE Buffer
150-800	2.0	1.8
100-600	3.0	2.0
50-250	4.0	3.0
20-130	5.0	4.0

Dye Mobility Table

Migration of double-stranded DNA in relation to Bromophenol Blue (BPB) and Xylene Cyanol (XC) in Agarose Tiny gels.

1X TAE Buffer			1X TBE Buffer	
XC	BPB	Agarose (%)	XC	BPB
480	70	2.0	310	40
200	40	3.0	140	35
120	35	4.0	85	30
85	30	5.0	60	15

Stability

Agarose Tiny is stable for at least 5 years starting from production date and if stored at a dry place at RT.

Product Use Limitations

Agarose Tiny is developed, designed, and sold for research purposes only. It is not to be used for human, diagnostic or drug purposes or to be administered to humans unless expressly cleared for that purpose by the Food and Drug Administration in the USA or the appropriate regulatory authorities in the country of use. All due care and attention should be exercised in the handling of many of the materials described in this manual.

Safety information

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate material safety data sheets (MSDSs). These are available online as pdf-file or on request (info@genaxxon.com).

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Agarose Gel Preparation

Microwave instructions (suggested)

1. Choose a beaker that is 2-4 times the volume of the solution.
2. Add **chilled** 1X or 0.5X electrophoresis buffer and a stir bar to the beaker.
3. Slowly add agarose powder while the solution is stirred to avoid clotting.
4. Remove the stir bar if not Teflon® coated.
5. Soak the agarose in the buffer for 15 minutes before heating. This reduces the tendency of the agarose solution to foam during heating.
6. Weigh the beaker and solution before heating.
7. Cover the beaker with plastic wrap.
8. Pierce a small hole in the plastic wrap for ventilation.
9. Heat the beaker in the microwave oven on **medium** powder for 2 minutes.
10. Remove the beaker from the microwave oven. **Caution**: any microwaved solution may become superheated and foam over when agitated.
11. Gently swirl the beaker to resuspend any settled powder and gel pieces.
12. Reheat the beaker on **high** power until the solution comes to boil.
13. Hold at boiling point **for 1 minute** or until all of the particles are dissolved.
14. Remove the beaker from the microwave oven.
15. Gently swirl the beaker to thoroughly mix the agarose solution.
16. After dissolution, add sufficient hot distilled water to obtain the initial weight.
17. Mix thoroughly.
18. Cool the solution to 50°C-60°C prior to casting. Once the gel is cast, allow the molten agarose to cool and gel at room temperature. **The gel must then be placed at +2°C to +8°C for 20 minutes** to obtain optimal resolution and gel handling characteristics.

Hot Plate instructions (suggested)

1. Choose a beaker that is 2-4 times the volume of the solution.
2. Add **chilled** 1X or 0.5X electrophoresis buffer and a stir bar to the beaker.
3. Slowly add agarose powder while the solution is stirred to avoid clotting.
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. Once the gel is cast, allow the molten agarose to cool and gel at room temperature. **The gel must then be placed at +2°C to +8°C for 20 minutes** to obtain optimal resolution and gel handling characteristics.

These protocols serve as guidelines for dissolving agarose. Optimal conditions such as incubation times, temperatures, and exact procedure may be determined individually.

Related products:

Agarose Tiny HT (M3047)
Agarose LE (standard agarose) (M3044)
Agarose LM (low melting agarose) (M3049)
HiResolve buffer (M3083)

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