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Data Sheet

Agarose Small Fragments EP-0020-10 • EP-0020-SA

Eurogentec products are sold for research or laboratory use only and are not to be administered to humans or used for medical diagnostics.

Description

The Small Fragments agarose is a Molecular Biology grade agarose, which provides superior resolution of nucleic acid fragments below 1000 base pairs. The Small Fragments agarose is capable of separating DNA or RNA fragments differing by only a few base pairs.

As a gelling agent, agarose is used:

1. To separate nucleic acids electrophoretically because agarose gels have larger pore sizes than polyacrylamide gels at low concentrations. Unlike polyacrylamide, the consistency of the gels is more solid (but also less elastic);
2. To demonstrate cross-reaction in IEP (Immuno electrophoresis) and Ouchterlony (double diffusion) plates in which antibody-antigen precipitin lines are studied;
3. To make gel plates or overlays for cells in tissue culture,
4. To form a gel matrix (either beaded and/or crosslinked), which can be used in chromatographic separations.

Package content

Reagent	Reference	Quantity
Small Fragment Agarose	EP-0020-10 EP-0020-SA	125 g 5 g sample

Shipping conditions

Shipped at ambient temperature.

Storage

The Small fragment agarose can be stored at room temperature.

Quality control

Each lot is tested for DNase, RNase activity, melting point, gelation temperature, gel strength, electroendosmosis and absence of sulfate.

Description	Values
Nucleic acid length range	< 1000bp
Gelling temperature	32.5 °C – 38 °C
Melting Temperature	85 °C
Gel Strength	< 1400 g/cm ²
DNase or RNase activity	ND
DNA binding	ND
Electroendosmosis	0.06 – 0.14
Sulfate	< 0.1 %

ND: Non Detected

Protocol

Size (Base Pairs)	Final Agarose 1x TAE Buffer	Concentration (%) 1x TBE Buffer
500-1.000	3.0	2.0
100-500	4.0	3.0
10-100	6.0	5.0

1. Weigh the appropriate amount of agarose depending on the concentration required into an Erlenmeyer flask.
2. Add the running buffer to obtain the appropriated final volume; the flask should not be more than half full.
3. Swirl the beaker.

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- Heat the solution in a microwave (500 W is recommended) or boiling water bath until agarose completely dissolves. Cover to minimize evaporation but ensure that the lid is loose to avoid buildup of pressure. Be careful not to let the solution boil as it becomes super-heated.
- Cool down the agarose to 55-60 °C.
- Pour the agarose onto the gel tray.

Useful information

Buffer	Concentration/ composition of working solution	Composition of 1 liter stock solution
TAE	1x : 40 mM Tris-acetate, 1mM EDTA	50 x: 242 g Tris base, 57.1 ml glacial acetic acid, 100 ml 0.5 M EDTA, pH 8 Adjust volume to 1 liter with H ₂ O
TBE	0.5x: 45 mM Tris-borate, 1mM EDTA	5 x: 54 g Tris base, 27.5 g boric acid, 20 ml 0.5mM EDTA, pH 8 Adjust volume to 1 liter with H ₂ O

Related products

Reagent	Package size	Reference
Molecular Biology Grade Agarose	500 g 2 x 500 g	EP-0010-05 EP-0010-10
AgaTabs	150 g (300 tablets)	EP-0030-15
Mupid®-One electrophoresis system	1	MU-0041
SmartLadder DNA ladder	1000 lanes	MW-1700-10
Smart Ladder SF	400 lanes	MW-1800-04

For further information please contact our
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