

Agarose D-5

For pulsed field technique.

Practical information

Industry: Molecular biology / PCR and Electrophoresis / Cloning / Proteomics / NGS

Principles and uses

Agarose D-5 is a linear polymer with a very high molecular weight, giving gel structures unlike those of traditional agaroses. This characteristic, added to the very low sulfate content, produces a strong intercatenary interaction, yielding a gel with very high gel strength and higher exclusion limit.

Some important features are:

- Extremely high gel strength allowing for lower gel concentrations (0.3%), enabling it to be used not only with high molecular weight nucleic acids, including chromosomes, but also with large sized particles like viruses and ribosomes.
- High electrophoretic mobility. DNA mobility is greater when compared with D-1Low EEO. Electrophoresis times are reduced depending upon buffer and agarose concentration used.
- Easy preparation of the gel by simple dissolution in aqueous buffers either by standard boiling or microwaving.
- Greater thermal stability due to high hysteresis (difference between gelling and melting temperatures).
- Exceptionally low absorption of staining agents.
- Absence of toxicity (the alternative is polyacrylamide which can be toxic).

Agarose D-5 is used in conventional electrophoresis, pulsed-field gel electrophoresis (Because of its higher exclusion limit, larger molecules can be separated), blotting, agarose beads preparation and cell and enzyme immobilization.

Physical-chemical characteristics

Description	Specification
Ash	<0,25%
Sulfate	<0,12%
Clarity 1,5 % (NTU)	< 4
Gel strength 1% (g/cm ²)	>1800
Gel strength 1,5% (g/cm ²)	>3200
Gelling temperature 1,5 % (°C)	36 ± 1,5
Temperature melting 1,5% (°C)	88 ± 1,5
DNase/RNase activity	Non detected
EEO	<0,12
DNA resolution = 1000 bp	Finely resolved
Moisture	< 10%
Gel background	Very low
Color	White
Appearance	Fine, homogeneous powder

Storage

Temp. Min.: 2 °C
Temp. Max.: 25 °C