

## Agarose D-5

Cat. 8045

For conventional electrophoresis, pulse field electrophoresis, blotting and cell/enzyme immobilization.

### Practical information

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

### Principles and uses

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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.

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.

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).

### Physical-chemical characteristics

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Description	Specification
Ash	<= 0,25%
Clarity 1,5 % (NTU)	<= 4
Gel strength 1% (g/cm <sup>2</sup> )	>= 1800
Gel strength 1,5% (g/cm <sup>2</sup> )	>= 3200
Gelling temperature 1,5 % (°C)	36±1,5 °C
Melting temperature 1,5% (°C)	88±1,5 °C
DNase/RNase activity	None detected
EEO	<= 0,13
Moisture	<= 10%
Color	White
Appearance	Fine, homogeneous powder
DNA Resolution >= 1000 bp	Finely resolved
Comparative assay of different size DNA fragments	Clear and sharp bands
Background fluorescence assay in ethidium bromide	Very low
Sulphate	<= 0,12%

### Storage

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Temp. Min.: 2 °C  
Temp. Max.: 25 °C