



## D-5 Agarose

D-5 Agarose 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 an strong intercatenary interaction, yielding a gel with very high gel strength and higher exclusion limit.

### Features:

- 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-1LE. 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).

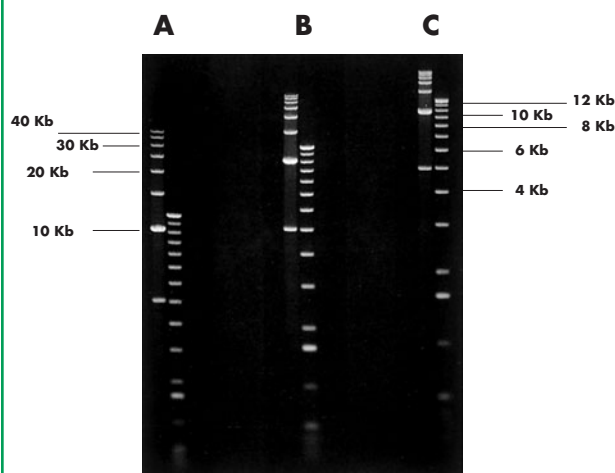
### Applications:

- Conventional Electrophoresis: can be used in a wide range of concentrations.
- Pulsed Field Gel Electrophoresis: because of its higher exclusion limit, larger molecules can be separated.
- Blotting.
- Agarose Beads preparation.
- Cell and enzyme immobilization.

### Specifications and Functional Tests:

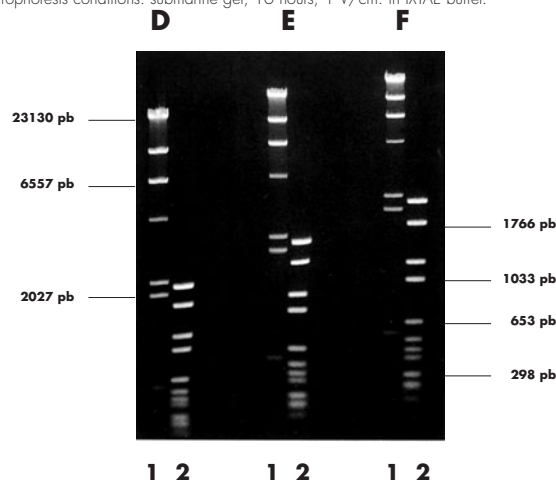
|  | D-5             |
|--|-----------------|
| Moisture                               | ≤7%             |
| Ash                                    | ≤0.25%          |
| EEO                                    | ≤0.12           |
| Sulfate                                | ≤0.12%          |
| Clarity (NTU)                          | ≤4              |
| Gel Strength 1% (g/cm <sup>2</sup> )   | ≥1800           |
| Gel Strength 1.5% (g/cm <sup>2</sup> ) | ≥3200           |
| Gelling Temperature (°C)               | 36±1.5          |
| Melting Temperature (°C)               | 88±1.5          |
| DNAse/RNAse activity                   | None detected   |
| DNA resolution ≥1000 bp                | Finely resolved |
| Gel background                         | Very low        |

As we can see in the following photographs, D-5 Agarose is suitable for a wide variety of ranges, just by modifying its concentration.



D-5 Agarose gels in 1 X TAE. A-0.3%, B-0.5%, C-0.8%. Markers: lane 1-5 kb, lane 2-1 kb ladder.

Electrophoresis conditions: submarine gel, 16 hours, 1 V/cm. in IX TAE buffer.



D-5 Agarose gels in 1 X TAE. D-0.5%, E-1%, F-1.5%.

Markers: lane 1-Lambda DNA. HindIII, lane 2-pBR328DNA. BglII.

Electrophoresis conditions: submarine gel, 2 hours, 4.5 V/cm. in 1XTAE buffer.