# LM and LM GQT

Low Melting (LM) Agaroses are derivatized by organic synthesis which generates methoxylate groups from the basic agarose structure. The main properties of these agaroses are their low melting and gelling temperatures when compared with standard agaroses.

The low melting temperature allows for the recovery of undamaged nucleic acids at temperature lower that its denaturing temperature. The low gelling temperature assures the agarose will be in a liquid state at a temperature range where In-Gel manipulations can be performed without prior extraction of the DNA from the gel slice.

LM GQT Agarose is a low melting temperature agarose with the highest resolving capacity for large DNA fragments, ≥1000 bp, including PCR products. This agarose is GQT (Genetic Quality Tested) certified. This ensures that In-Gel applications can be performed in remelted agarose, avoiding difficult DNA extraction steps.

LM GQT Agarose is ideal for digestion by agarase enzymes, which makes it very easy to recover large DNA fragments suitable for cloning or enzymatic processing.

## Features

- Lower gel strength than standard agaroses. Even so, gels can be handled easily.
- Higher clarity (gel transparency) than gels of standard agaroses.
- Great sieving capacity.

LM Agaroses are classified in three categories, depending on the degree of derivatization. Gelling / melting temperatures and gel strength are the most important differences.

## Applications

- Electrophoresis of DNA fragments ≥1000 bp.
- In-Gel enzymatic processing (digestion, ligation, PCR).
- Preparative electrophoresis.
- Analysis and recovery of large DNA fragments for further applications.

## Functional Tests

- DNA resolution: bands appear sharp and finely resolved.
- DNAse/RNAse activity: none detected.
- Gel background: very low after Et.Br. staining.

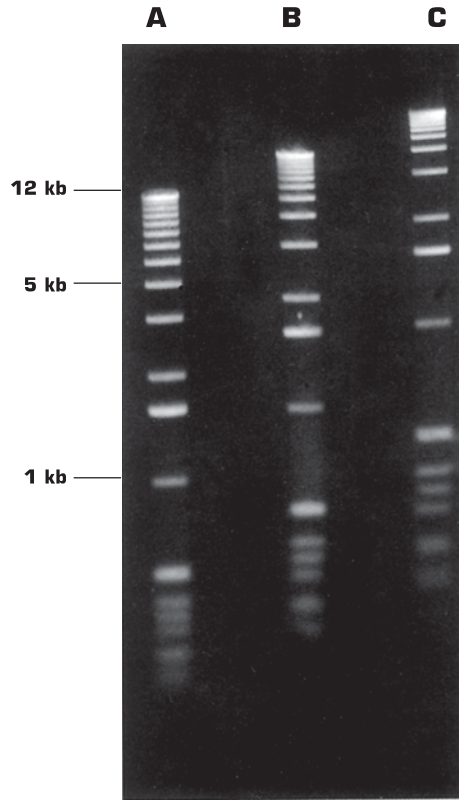
**Only for LM GQT:**

- DNA binding: none detected.
- In-Gel enzymatic processing: passes test.
- Enzymatic degradation by agarase: passes test.

## Specifications

| | LM/LM GQT |
|---|---|
| Moisture | ≤ 7% |
| Ash | ≤ 0.4% |
| EEO* | ≤ 0.12 |
| Sulfate | ≤ 0.12% |
| Clarity 1.5% (NTU) | ≤ 4 |
| Gel Strength 1.5% (g/cm²) | ≥ 500 |
| Gelling Temperature 1.5% (°C) | 24-28 |
| Melting Temperature 1.5% (°C) | ≤ 65.5 |
| DNAse/RNAse activity | None detected |
| DNA resolution ≥1000 bp | Finely resolved |
| Gel background | Very low |

*EEO (electroendosmosis)




LM GQT Agarose at different concentrations. A-0.75%, B-1% and C-1.25%. Marker: 1kb ladder, 0.5 µg/lane. Running conditions: 1XTAE buffer, 4,5V/cm, 2 hours 30 min.