

## Agarose LE (Low Electroendosmosis)

Agarose LE from Axxygen Bioscience is a high quality molecular biology grade Agarose suitable for analytical and preparative electrophoresis of nucleic acids. Nucleic acid separation with Agarose LE is between 0.2–15 kbp depending on the concentration of Agarose LE.

### Applications

- **DNA electrophoresis**
- **Analysis of PCR products**
- **Separation of restriction endonuclease digests of DNA**
- **Electrophoresis of RNA**
- **Protein Electrophoresis such as radial diffusion.**

Nucleic acid fragments separated with Agarose LE can be blotted to nylon or nitro-cellulose membranes by all standard blotting techniques. Detection with non-radioactive probes, e.g. digoxigenin (DIG) - labeled nucleic acids, does not interfere with the use of Agarose LE.

LE is tested for preparative electrophoresis and isolation of DNA fragments. However, we recommend also our low melting point Agarose LM that is optimized for these applications.

### Specifications

CLARITY 1.5% (NTU)	≤ 3%
ELECTROENDOSMOSIS (EEO)	0.05 - 0.13
SULFUR AS SO <sub>4</sub>	0.14%
GELLING TEMPERATURE (1.5 %)	36° C (± 1.5°C)
MELTING TEMPERATURE (1.5 %)	88° C (± 1.5°C)
GEL STRENGTH (1%)	1200 G/CM <sup>2</sup>
GEL STRENGTH (1.5 %)	2500 G/CM <sup>2</sup>
DNASE	NONE DETECTED
RNASE	NONE DETECTED

### Storage and Stability

Store in a cool dry place at 15-25°Celsius.

### Protocol: Electrophoresis of DNA and RNA

The most commonly used technique for DNA separation is electrophoresis in horizontal agarose gels submerged in either Tris-acetate or Tris-borate buffer.

RNA molecules are separated in denaturing agarose gels containing formaldehyde. RNA gels are submerged in MOPS buffer.

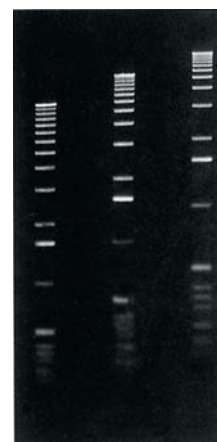
**Step1:** Add Agarose LE to a measured volume of buffer in a beaker or flask that is 3 times the volume of solution prepared. The amount of Agarose LE added depends on the desired concentration.

**Step2:** Dissolve the Agarose by melting, simply by heating the slurry in a boiling water bath. If you are using a microwave oven, heat on high power and mix gently.

**Step3:** Cool the solution to approx. 50°C before pouring. Efficient separation of DNA fragments of a wide size range can be achieved by adjusting Agarose LE concentration (see table).

Concentration of Agarose LE %	DNA separation range (kbp)	Size of linear DNA fragment (bp)
0.8	1 to 15	950
1	5 to 10	525
1.25	0.3 to 5	450
1.5	0.2 to 4	400
1.75	0.2 to 2.5	300

### Results



Agarose LE gels in IX TAE buffer A-0.75%, B-1%, and C-1.25%  
Marker: 1kb ladder.  
Electrophoresis conditions: submarine gel, 2 hours 30 min, 4.5 V/cm in 1XTAE

Ordering Information		
Part#	Product	Qty.
AGR-LE-100	Agarose LE	100gm
AGR-LE-500	Agarose LE	500gm
AGR-LE-5000	Agarose LE	5kg