Redoxica

PRODUCT CODE
AG9001-500G

RESEARCH PRODUCT

Agarose LE, Analytical Grade

Ultrapure, certified DNase and RNase activity free. Low EEO.

PRODUCT DESCRIPTION

Agarose LE, ultrapure, certified DNase and RNase activity free, low electroendosmosis (EEO), multi-purpose, analytical grade agarose LE suitable for a molecular biology applications including analytical and preparative electrophoresis and liquid chromatography

Agarose LE is polysaccharide made up of many units of the the disaccharide agarobiose, which is made up with D-galactose and 3,6-anhydro-L-galactopyranose. Agarose LE is derived from macroalgae and is further purified from agar via removal of agaropectin. During the gel formation process the polysaccharide units build a matrix of varying pore sizes which enables the separation of DNA. Common application of Agarose LE includes: DNA and RNA electrophoresis, liquid chromatography, PCR analysis of fragments between 0.2 and 15 kb, restriction endonuclease examination, digests of plasmids, cosmids, λ phage DNA, and radial diffusion protein electrophoresis. Redoxica's Agarose LE provides outstanding clarity, ultra high purity, low background, low error rate, high contrast, high reliability, low staining absorption, and is completely safe, non-toxic to use. We have also administered a series of quality assurance tests to certify DNase free, RNase free, neutral charge, and bioinert characteristics. Utilizing non-radioactive probes such as DIG (digoxigenin) labeled nucleic acids will not interfere with the use of Agarose LE. DNA and RNA fragments which have been separated using Agarose LE may be blotted with nitrocellulose and/or nylon based membranes.

CAS Number	9012-36-6
Functionality	Gelling Agent
Storage & Handling	RT 15-25°C (KEEP COOL, DRY, DARK). For long-term storage store at 2-8°C.
Shelf Life	24 Months
UOM	G
Appearance	White to slightly off-white, powder
Odor	Odorless
Form	Solid, fine crystalline powder
Grade	Analytical Grade (For analytical, molecular biology applications such as electrophoresis.)
Electroendosmosis (EEO)	0.05 – 0.13 (low, Wieme Method)
Sulfate	0.07%
Moisture	≤7%
Ash	0.4% max.
Gel Strength (1% Gel)	>1,200g/cm2
Gel Strength (1.5% Gel)	>2,500g/cm2
Clarity	1.5% (NTU) = 3
Gelation Temperature (GT)	36°C ± 1.5°C (1.5% gel)
Melting Point (MP)	88°C ± 1.5°C (1.5% gel)
DNase/RNase Activity	None Detected
Infrared Spectrum	Authentic
DNA Resolution	Finely resolved (1,000 bp)
Gel Background	Very low
EINECS Number	232-731-8
Synonyms	Agarose, Agarose LE Low-EEO, Multi-Purpose Agarose

Redoxica's Agarose LE provides excellent analytical capabilities as compared to other brands and is well suited for analytical molecular biology applications. Intensive quality control measures were employed including testing for: DNase, RNase activity, EEO, charge, bioinert status, and tested in analytical and preparative electrophoresis and liquid chromatography to establish Redoxica as the gold standard for ultra pure, reliable Agarose LE.

APPLICATIONS

- DNA/RNA separation > 1Kb.
- Analytical and preparative electrophoresis.
- Blotting
- Low background of staining agents.
- Protein electrophoresis such as radial immunodiffusion.

RECOMMENDED USAGE

RT 15-25°C (KEEP COOL, DRY, DARK). For long-term storage store at 2-8°C.

SAFETY & DISCLAIMER

This product is for research and development purposes only. This product is not intended for diagnostic purposes or any form of human consumption or administration.

PREPARATION

1. Use a flask that is 2-4 times the volume of the solution being prepared.
2. Add the correct amount of dry agarose to a measured quantity of electrophoresis buffer.
3. If you use a **boiling water bath**, melt the agarose by heating the slurry in a boiling water bath until the agarose dissolves. If you use a **microwave oven**, heat the slurry in a microwave oven on a high power setting until it starts to boil. Allow the solution to boil for 1 min or until all particles are dissolved. Then, remove the flask from the microwave oven and gently swirl to mix the agarose solution. Use caution when handling. The solution may become superheated and boil vigorously when touched.
4. Cool the solution to approximately 60°C before pouring.

ELECTROPHORESIS OF DNA/RNA

The most common technique for DNA separation is electrophoresis in a horizontal agarose gel in Tris-acetate or Tris-borate buffer. RNA is typically separated by using denaturing agarose gels containing formaldehyde. RNA electrophoresis is run in MOPS buffer. Staining DNA in agarose gels is most commonly done via ethidium bromide (0.5 - 1ug/mL) directly in the gel and the running buffer. If the gel contains more than 5ug/ml, it is not necessary to add ethidium bromide to the running buffer. It is possible to separate a wide range of DNA fragments by adjusting the agarose concentration. The table below shows various concentrations of agarose LE with the associated DNA fragment size range.

Concentration	Molecular Weight (MW)
1%	500bp - 10kb
1.2%	350bp - 7kb
1.5%	250bp - 2kb

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