

# Reagents and Chemicals

Cleaver Scientific now offers a choice selection of chemicals and reagents for electrophoresis and molecular biology techniques. Each Cleaver Scientific reagent is manufactured to a high a standard free of impurities and tested using the most stringent analytical methods.

## Horizontal Nucleic Acid Electrophoresis

### CleaverGEL – High Grade Agarose for Nucleic Acid Electrophoresis Clever for DNA and Clever for the Environment

CleaverGEL is a new environmentally friendly agarose suitable for routine analysis of nucleic acids using standard electrophoretic procedures. CleaverGEL is manufactured by a process which excludes organic solvents harmful to marine life, making it far kinder to the environment than conventional agarose.

A low EEO (electroosmotic) flow minimises diffusion so that even the smallest of nucleic acid fragments remains sharp and tightly resolved, while a high gel strength aids handling and maintains compatibility with blotting techniques.

CleaverGEL is now available in a low melting point form for nucleic acid recovery and enzymatic applications, as well as in a high resolution PCR-grade form to resolve very small nucleic acid fragments 20-800bp in size.



Three types of agarose available:

Low EEO general purpose agarose resolves 0.1-10Kb in size

Low Melting Point – for nucleic acid recovery – typically resolves fragments 20bp-1Kb

High Resolution – PCR grade – high resolution, low background for analysis of fragments, 20-800bp

Technical Specification			
	Low EEO	Low Melting Point	High Resolution
CAS	9012-36-6	39346-81-1	39346-81-1
EEO	<0.13	≤0.1	≤0.1
Gelling Point*	36°C ± 1.5°C	26-30°C	≤33°C
Melting Point*	88°C ± 1.5°C	≤65°C	≤70°C
Solubility	Clear, colourless @ 1% [w/v] solution	Clear, colourless @ 2% [w/v] solution	
Moisture	≤10%	≤10%	≤10%
Gel Strength	>1200 g/cm <sup>2</sup> (1% [w/v] Gel)	>200 g/cm <sup>2</sup> (1% [w/v] Gel)	≥750 g/cm <sup>2</sup> (1.5% [w/v] Gel)
Nuclease & Protease Free	Yes	Yes	Yes

\*For a 1.5% [w/v] gel

Ordering Information			
CSL-AG5	Agarose 5g, Low EEO	CSL-AG20KG	Agarose 20Kg, Low EEO (40x500g)
CSL-AG100	Agarose 100g, Low EEO	Low Melting Point	
CSL-AG500	Agarose 500g, Low EEO	CSL-LMA100	Agarose 100g, LMP
CSL-AG1000	Agarose 1000g, Low EEO (2x500g bottles)	CSL-LMA500	Agarose 500g, LMP
CSL-AG2000	Agarose 2000g, Low EEO (4x500g)	High Resolution PCR-grade	
CSL-AG5000	Agarose 5000g, Low EEO (10x500g)	CSL-HRA100	Agarose 100g, HR
CSL-AG10KG	Agarose 10Kg, Low EEO (20x500g)	CSL-HRA500	Agarose 500g, HR

## Powdered and Liquid Buffers

Cleaver Scientific supplies TBE and TAE in powder and liquid form. Both TBE and TAE are widely used to separate nucleic acids by horizontal gel electrophoresis, and occasionally in vertical polyacrylamide gels. TBE has a higher buffering capacity than TAE, which is used for faster separations of linear double-stranded DNA.

Cleaver Scientific TBE is supplied in packs of 10 powder sachets to maintain shelf life. Each buffer sachet may be opened as required and reconstituted in distilled water to make 1 litre of working solution.

Buffers are also provided as ready-made 50x TAE and 10x TBE solutions in 1 and 4 litre volumes. These are ideal for laboratories running horizontal nucleic acid gels on a daily basis that require off-the-shelf working stock solutions.



Ordering Information	
CSL-TBEP	Powdered Tris-Borate-EDTA Running Buffer – 10 sachets (10 litres / pack)
TBE10X1L	Cleaver Buffer Tris-Borate-EDTA Running Buffer, 10x 1L
TBE10X4L	Cleaver Buffer Tris-Borate-EDTA Running Buffer, 10x 4L
TAE50X1L	Cleaver Buffer Tris-Acetate-EDTA Running Buffer, 10x 1L
TAE50X4L	Cleaver Buffer Tris-Acetate-EDTA Running Buffer, 10x 4L

Technical Specification	
TAE	Each 50x solution contains: Tris-base (2.0M final stock concentration); glacial acetic acid (1.0M); EDTA, pH 8.0 (0.05M); followed by distilled water to 1L
TBE	Each 10x solution / powder contains: Tris-base (0.112M final stock concentration); boric acid (0.112M); EDTA, pH 8.0 (0.02M); followed by distilled water to 1L