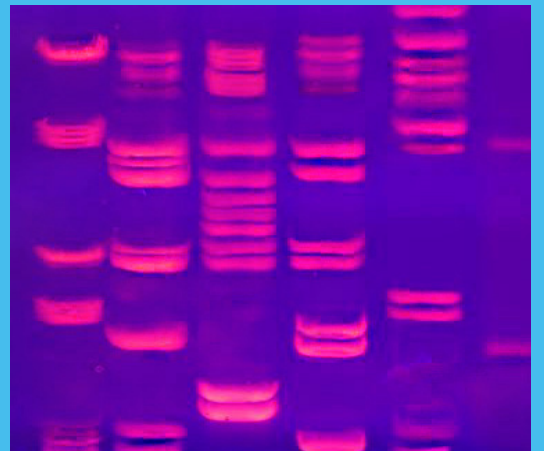


# SmartBuffers

# Electrophoresis

- Ideal for standardizing electrophoresis methods
- Protein and DNA/RNA electrophoresis
- Blotting techniques
- Exactly pre-weighed powders with pre-set pH
- Stable at room temperature for more than 3 years



# Electrophoresis Buffers for all Occations

## Save time and increase the precision

Medicago specialize in the development and manufacture of high-quality, pre-made SmartBuffers for electrophoresis and blotting techniques that save valuable time in routine laboratory work while providing maintained or even increased precision. Do not waste time and effort preparing your own buffer solutions. Medicago's Electrophoresis SmartBuffers are ideal for standardizing the laboratory work so you can focus on your research and development or routine laboratory work.

## Ultimate Convenience, Reproducibility and Consistency

SmartBuffers are supplied in exactly pre-weighed tablets or powder pouches with given concentration and pre-set pH. Just dissolve one SmartBuffer tablet or the contents of one pouch in the specified volume of deionized water, and you are ready-to-go in less than 5 minutes. This ultimate convenience allows you to eliminate errors in calculation, formulation, weighing and pH adjustment.

Medicago's laboratories and manufacturing site are ISO 9001 and ISO 13485 certified. Each stage of the SmartBuffers manufacturing process is controlled and monitored by stringent quality control procedures to guarantee the highest possible quality and lot-to-lot reproducibility.

## Nucleic Acid Electrophoresis

### TBE SmartBuffer

- No detectable DNase or RNase
- Exactly pre-weighed in sealed pouches
- Selection of 3 concentrations: 10X, 5X and 1X
- Buffer of choice when running short DNA fragments (<1500 bp)

The Tris-Borate-EDTA buffer is very popular because it helps to keep the integrity of the DNA sample, which suits the purpose of many agarose gel electrophoreses methods, i.e. to analyze the size of DNA fragments.

TBE buffer is used for agarose and polyacrylamide gel electrophoresis when analyzing DNA fragments from PCR amplification, DNA isolation protocols or DNA cloning experiments. It is particularly useful for separating smaller DNA fragments (< 1500 bp on a 0.8 % agarose gel), e.g. small products of restriction enzyme digests.

TBE buffer has a greater buffering capacity and will give sharper resolution than TAE buffer. Small DNA fragments also move faster in TBE than in TAE buffer

### TAE SmartBuffer

- No detectable DNase or RNase
- Exactly pre-weighed powder in sealed pouches
- 50X with choice of 500 ml or 1000 ml pouches
- Perfect for agarose electrophoresis of long DNA fragments (>1500 bp)

The Tris-Acetate-EDTA buffer is recommended for large fragments (> 1500 bp) and complex mixtures of large genomic DNA. TAE buffer has a lower buffering capacity than TBE buffer, however linear dsDNA tends to migrate faster in TAE than in TBE.

TAE SmartBuffer is also used in non-denaturing RNA agarose gel electrophoresis. Southern blots are generally derived from gels prepared and run in TAE buffer. TAE buffers are considered better for gel purification since acetate is less inhibitory than borate for downstream applications.

## Protein Electrophoresis

### TG-SDS SmartBuffer

- Ideal to standardize protein electrophoresis
- Running buffer for SDS-PAGE
- Western blotting assays
- Exactly pre-weighed in pouches to yield 1000 and 5000 ml

Tris-Glycine SDS SmartBuffer (1x formulation) is used to run denaturing protein electrophoresis in acrylamide gels. The samples need to be pre-treated under denaturing and reducing conditions with sodium dodecyl sulfate (SDS).

### TG SmartBuffer

- Ideal to standardize protein electrophoresis
- Tris-glycine is the buffer of choice for native PAGE
- Western blotting assays
- Exactly pre-weighed in pouches to yield 1000 ml and 5000 ml

Tris-Glycine SmartBuffer is the most commonly used running buffer for native and gradient polyacrylamide electrophoresis of proteins. One pouch of TG buffer 1x dissolved in deionized water and made up to 1000 ml or 5000 ml yields a solution containing 0.1M Tris and 0.192 M glycine, pH 8.3 at 25°C.

Tris-Glycine buffer can be used to perform protein electrophoresis.

## Reliable Reagents for Blotting Assays

### Western Blotting

Widely accepted technique used to detect specific proteins after gel electrophoresis

TBS-T 10X- wash solution when using alkaline phosphatase or peroxidase conjugated antibodies

PBS-T 10X- general wash solution

TG - blotting transfer buffer

Tween™20

### Southern/Northern Blotting

Southern blotting (DNA gels) and Northern blotting (RNA gels)

TBE 10X – blotting transfer buffer

TAE 50X - blotting transfer buffer

SSC 20X – capillary transfer of agarose gels

SSPE (PBS-EDTA) – for hybridization

# Medicago products

## Ordering information

Product name	Pack size	Article no.
SSPE buffer (PBS.EDTA), 200 ml	100 tablets	09-8952-100
Tris buffer, pH 7.4, 1000 ml	10 pouches	12-9198-10
Tris buffer, pH 8.0, 1000 ml	10 pouches	12-9199-10
Tris Buffered Saline (TBS), pH 7.6, 500 ml	10 tablets	09-7500-10
Tris Buffered Saline (TBS), pH 7.6, 500 ml	100 tablets	09-7500-100
Tris Buffered Saline with Tween™ 20 (TBS-T), pH 7.6, 500 ml	10 tablets	09-7510-10
Tris Buffered Saline with Tween™ 20 (TBS-T), pH 7.6, 500 ml	100 tablets	09-7510-100
Tris-Acetate-EDTA buffer (TAE) 50X, pH 8.3, 1000 ml	5 pouches	12-9144-5
Tris-Acetate-EDTA buffer (TAE) 50X, pH 8.3, 500 ml	5 pouches	12-9145-5
Tris-Borate-EDTA buffer (TBE) 10X, pH 8.3, 1000 ml	10 pouches	12-9112-10
Tris-Borate-EDTA buffer (TBE) 5X, pH 8.3, 1000 ml	10 pouches	12-9111-10
Tris-Borate-EDTA buffer (TBE), pH 8.3, 1000 ml	10 pouches	12-9110-10
Tris-EDTA buffer (TE) 10X, pH 7.4, 1000 ml	10 pouches	12-9154-10
Tris-Glycine buffer (TG), pH 8.3, 1000 ml	10 pouches	12-9122-10
Tris-Glycine buffer (TG), pH 8.3, 5000 ml	10 pouches	12-9123-10
Tris-Glycine-SDS buffer (TG-SDS), pH 8.3, 1000 ml	10 pouches	12-9222-10
Tris-Glycine-SDS buffer (TG-SDS), pH 8.3, 5000 ml	10 pouches	12-9223-10
Sodium Dodecyl Sulphate Reagents (SDS)	50 tablets	09-2026-50
Sodium Dodecyl Sulphate Reagents (SDS) 10%, 1000 ml	5 pouches	12-9193-5
Sodium Dodecyl Sulphate Reagents (SDS) 20%, 1000 ml	5 pouches	12-9194-5
Tween 20™	250 ml	16-0023-250
Tween 20™	1000 ml	16-0023-1000

## Selection Table

	TG	TG-SDS	TAE	TBE	PBS-T	TBS	TBS-T	SCS	SSPE	SDS
Protein electrophoresis	x	x								x
Nucleic acid electrophoresis			x	x						
Western blotting (protein)	x	x			x	x	x			x
Southern blotting (DNA)			x	x				x	x	
Northern blotting (RNA)			x	x				x	x	

For more information about our buffers or bulk quotations please call +46 18 56 11 80, email to [info@medicago.se](mailto:info@medicago.se) or visit [www.medicago.se/smartbuffers](http://www.medicago.se/smartbuffers)

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