



# SMARTBUFFERS

## Tris Borate EDTA and Tris-Acetate-EDTA Buffer (TAE & TBE), pH 8.3



### Features

- Nucleic acid electrophoresis buffers
- Molecular biology grade
- TBE stock solutions 1x, 5x and 10x, TAE stock solution 50x
- Exactly pre-weighed in pouches
- Dissolve and use in minutes

### Product description

In molecular biology, TBE and TAE buffers are used for agarose and polyacrylamide gel electrophoresis. TBE buffer is suitable when analysing DNA fragments from PCR amplification, DNA isolation protocols, or DNA cloning experiments. It is adapted for separating smaller DNA fragments (less than 1500 bp on a 0.8% agarose gel).

TAE is advantageous for high resolution of long nucleic acid fragments (longer than 1500 bp) on agarose gels. It has a lower buffering capacity than TBE and in general, nucleic acid fragments move slower in TAE gels (apart from linear dsDNA, which tends to run faster). TBE has a greater buffering capacity and will give sharper resolution than TAE. However, TBE gels in general afford a poor recovery of nucleic acids compared with TAE gels. TAE is also used for native (non-denaturing) RNA analysis and in denaturing gels (instead of MOPS buffer) using prior denaturation of the RNA samples in hot formamide.

Medicago's TBE and TAE buffers are supplied as a pre-weighed powder mix in sealed pouches giving 1000 ml of 1x, 5x or 10x Tris-borate-EDTA buffer or 50x Tris-acetate-EDTA buffer with pH 8.3 at 25°C.

### Applications

- Nucleic acid electrophoresis running buffer for agarose and polyacrylamide gels
- Native and denaturing RNA analysis
- Northern blotting

### Directions for use

Empty one pouch of the TAE or TBE buffer in a laboratory flask or beaker placed on a magnetic stirrer. Add 300 ml of de-ionized water and stir for a couple minutes. Adjust the volume up to the given volume, stir until full dissolution and the buffer is ready to use.

### Shipping and storage

TBE and TAE buffers are shipped at room temperature. Store the pouches in a dry place at room temperature. Shelf life is three years.

### Specifications

	TBE 1x	TBE 5x	TBE 10x	TAE 50x
Chemicals	Analytical grade	Analytical grade	Analytical grade	Analytical grade
RNAse/DNase activity	Non-detectable	Non-detectable	Non-detectable	Non-detectable
Format	Exactly pre-weighed powder mix	Exactly pre-weighed powder mix	Exactly pre-weighed powder mix	Exactly pre-weighed powder mix
Composition	0.089 M Tris-Borate 0.002 M EDTA	0.445 M Tris-Borate 0.010 M EDTA,	0.89 M Tris-Borate 0.020 M EDTA	2.0 M Tris-acetate 0.050 M EDTA
Volume	1000 ml	1000 ml	1000 ml	500 ml and 1000 ml
pH	8.3 ± 0.05 at 25°C	8.3 ± 0.05 at 25°C	8.3 ± 0.05 at 25°C	8.3 ± 0.05 at 25°C
Shelf life	Three years after production date	Three years after production date	Three years after production date	Three years after production date



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## Tips and hints

If the contents of the pouch is not properly dissolved, make sure:

- the water temperature is 25°C (do not exceed this temperature)
- the buffer is properly stirred.

Sterilization can be performed by filtration. Filter the buffer solution through a 0.22 µm filter into a sterile flask. Keep the buffer solution at +4°C.

## Certifications

Medicago's laboratories and manufacturing site in Uppsala are ISO 9001:2008 and ISO 13485:2003 certified. Each stage of the manufacturing process is controlled and monitored by stringent quality control procedures to guarantee the highest possible quality and lot-to-lot reproducibility.



## Ordering information

Article no.	Product name	Pack size	Solution vol.
12-9110-10	TBE buffer 1x pH 8.3	10 pouches	1000 ml/pouch
12-9111-10	TBE buffer 5x pH 8.3	10 pouches	1000 ml/pouch
12-9112-10	TBE buffer 10x pH 8.3	10 pouches	1000 ml/pouch
12-9145-5	TAE buffer 50x pH 8.3	5 pouches	500 ml/pouch
12-9144-5	TAE buffer 50x pH 8.3	5 pouches	1000 ml/pouch