

10X PCR Buffer "E"

alternative buffer system for colony PCR

fon:
 +49 (0)731 - 3608 123
 fax:
 +49 (0)731 - 3608 962
 eMail:
info@genaxxon.com
 internet:
www.genaxxon.com

Product	Cat#	Package size
10X PCR Buffer "E" complete	M3456.0015	1.5mL
10X PCR Buffer "E" incomplete	M3455.0015	1.5mL

Product description

The Genaxxon 10X PCR Buffer "E" is an alternative PCR buffer system to the Genaxxon 10X PCR Buffer "S" with additional ammoniumsulfate in the buffer. Ammoniumsulfate in PCR increases PCR amplification rates, thus giving higher DNA yields, respectively enables more complicated PCR systems such as multiplex PCR.

The buffer is optimal suited for colony PCR without intensive purification of the DNA.

The buffer can be used together with all DNA-polymerases from Genaxxon, and is the "normal" buffer shipped together with the Genaxxon HotStart enzymes.

The buffer can be ordered together with our Taq DNA polymerase under the catalogue number M3034.

Buffer composition

- 10 x PCR buffer "E" with MgCl₂: 670 mM Tris/HCl (pH 8.8 at 25°C), 160 mM (NH₄)₂SO₄, 25 mM MgCl₂, 0.1% Tween 20
- 10 x PCR buffer "E" without MgCl₂: 670 mM Tris/HCl (pH 8.8 at 25°C), 160 mM (NH₄)₂SO₄, 0.1% Tween 20.

Stability and Storage

The 10X PCR Buffer "E" is stable for more than 24 months at -20°C.

Properties and application

The 10X PCR Buffer "E" substitutes the regularly shipped PCR buffer. It is used exactly like the normal 10X PCR buffer. It is recommended to vortex all 10X buffers before use to avoid buffer concentration gradients in the tube.

The complete buffer contains 25 mM MgCl₂.

For different purposes it is recommended to titrate MgCl₂ to get better PCR results.

MgCl₂ concentration in a 50µL reaction

Final MgCl ₂ conc. in reaction (mM)	2.5	3.0	3.5	4.0	4.5	5.0	5.5
Additional volume of 25 mM MgCl ₂ per reaction (µL)	0	1	2	3	4	5	6

Preparation of a PCR master mix solution

Pipette the following into a PCR reaction tube, mix and make up to final volume of 50µL:

Components	Vol. / reaction	Final concentration
10X PCR buffer	5µL	1X
dNTP-mix (12.5 mM each)	0.8µL	0.2 mM each
Primer A and B	variable	0.1 - 1.0 µM each
Taq / HotStart Taq polymerase	0.5µL	2.5 units
Template DNA	variable	variable
Distilled water	variable	- - -
Total Volume	50µL	- - -

Note: For every template/primer pair the optimal reaction conditions have to be evaluated empirically, changing the primer/template ratio, the ionic strength (with MgCl₂) and the cycle parameters (time and temperatures).