

Genaxxon BioScience

10X PCR Buffer "S"

standard buffer system for the Genaxxon Taq-Polymerase

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Product	Cat#	Package size
10X PCR Buffer "S" complete	M3454.0015	1.5 ml
10X PCR Buffer "S" incomplete	M3453.0015	1.5 ml

Product description

The Genaxxon 10X PCR Buffer "S" is the standard PCR buffer system for the Genaxxon Taq-DNA polymerase without ammoniumsulfate in the buffer. This buffer increases specificity of PCR reactions resulting in sharper bands and less side products.

The buffer can be used together with all DNA-polymerases from Genaxxon, and is the "normal" buffer shipped together with the Genaxxon Taq-DNA polymerase (M3001).

The buffer can be ordered together with our Taq under the catalogue number M3001.

Buffer composition

- 10 x PCR buffer "S" with MgCl₂ : 100 mM Tris-HCl (pH 9.0 at 25°C), 500 mM KCl, 15 mM MgCl₂, 1.0% Triton X-100
- 10 x PCR buffer "S" without MgCl₂ : 100 mM Tris-HCl (pH 9.0 at 25°C), 500 mM KCl, 1.0% Triton X-100.

Stability and Storage

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

Properties and application

The 10X PCR Buffer "S" is the regularly shipped PCR buffer.

It is recommended to vortex all 10X buffers before use to avoid buffer concentration gradients in the tube.

The complete buffer contains 30 mM MgCl₂.

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

MgCl₂ concentration in a 50 µl reaction

Final MgCl ₂ conc. in reaction (mM)	0	0.5	1.0	1.5	2.0	2.5	3.0
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 50 µl:

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

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).