10X COMBINATION BUFFER, 1,5MM $MGCL_2$

Cat. No.: 257750

-	10x Combination Buffer, 1,5mm $MgCl_2$
ID No.	CL1.500-0048
Cap color	Green
Content	3 x 1.5 ml

Features and General Description

10x Combination buffer are usually supplied in 10x formulations with 15 mM $MgCl_2$ included but are also available as Mg^{2+} free tampon, detergent free tampon as well as Mg^{2+} and detergent free tampon.

Combination buffer

Combination buffer is a proprietary mixture of K^+ and NH_4^+. This Combination buffers high specificity with good product yield and high tolerance to optimization of primer annealing temperatures and Mg^{2+} concentrations due to its balanced ammonium-potassium formulation.

Magnesium

Mg^{2+} is required for polymerase activity. Low Mg^{2+} concentrations increase the fidelity but with too low Mg^{2+} concentrations the polymerase will not work. The Mg^{2+} concentration available in the reaction is dependent on several parameters e.g. the presence of chelators or the dNTP concentration. Therefore, the Mg^{2+} concentration should be optimized.

Tween, Triton

Non-ionic detergents are used to prevent the polymerase to stick to the walls of the tube, to stabilize the polymerase and increase yield. However, these agents might increase non-specific amplification or interfere with downstream reactions. Tween can be used to neutralize SDS contaminations in the DNA template.

Recommended Storage and Stability

Long term storage at -20 °C. Product expiry at -20 °C is stated on the label.
Option: Store at +4 °C for up to 6 months.

Quality Control

Each lot of tampon is functionally tested in PCR.

Kit Components

10x Combination buffer

Tris-HCl pH 8.7, KCl, $(NH_4)_2SO_4$, 15 mM $MgCl_2$, 1% Tween® 20.

Determining the optimal tampon system for your application

ClearLine offers several PCR buffers to allow the customer to choose the optimal tampon system for a specific amplification process.
For your specific application the optimal reaction condition can be determined by comparing PCR reactions containing the different tampons.
The final concentration of the tampon in the reaction should be 1x.

Other product sizes, combinations and customized solutions are available. Please look at www.dutscher.com or ask for our complete product list for PCR Enzymes. For customized solutions please contact us.

Made in Europe

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