

Combination Buffer

The final concentration of the buffer in the reaction should be 1x.

For Research Use Only. Not for use in diagnostics procedures.

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

Made in Denmark

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MADE IN DENMARK

Cat. No.	10x Combination Buffer, 15 mM MgCl ₂ ID: 5600400
A303103	3 x 1.5 ml
A303110	10 x 1.5 ml
A303156	6 x 5 ml

Features and General Description

Combination Buffer

Combination Buffer is a proprietary mixture of K⁺ and NH₄⁺. This buffer combines high specificity with good product yield and high tolerance to optimization of primer annealing temperatures and Mg²⁺ concentrations due to its balanced ammonium-potassium formulation.

Magnesium

Mg²⁺ is required for polymerase activity. Low Mg²⁺ concentrations increase the fidelity but with too low Mg²⁺ concentrations the polymerase will not work. The Mg²⁺ concentration available in the reaction is dependent on several parameters e.g. the presence of chelators or the dNTP concentration. Therefore, the Mg²⁺ concentration should be optimized.

Note: The 10x Combination Buffer is also available in a Mg²⁺ free version.

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.

Note: The 10x Combination Buffer is also available in a detergent free version.

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 buffer is functionally tested in PCR.

Kit Components

10x Combination Buffer

Tris-HCl pH 8.7, KCl, (NH₄)₂SO₄, 15 mM MgCl₂, 1% Tween® 20.

Determining the optimal buffer system for your application

Ampliqon offers several PCR buffers to allow the customer to choose the optimal buffer system for a specific amplification process.

For your specific application the optimal reaction condition can be determined by comparing PCR reactions containing the different Ampliqon buffers.