AMPLIQON
PCR ENZYMES & REAGENTS

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Ammonium Buffer (Mg^{2+} free, Tween free)

Cat. No.	10x Ammonium Buffer, Mg^{2+} free, Tween free ID: 5101010
A301503	3 x 1.5 ml
A301510	10 x 1.5 ml
A301556	6 x 5 ml

Features and General Description

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

Ammonium Buffer

Ammonium Buffer (NH_4^+) usually gives a superior amplification signal (high yield) in many primer-template systems. Ammonium in the buffer minimizes the need for optimization of the $MgCl_2$ concentration or the annealing temperature for most primer-template systems.

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 buffer is functionally tested in PCR.

Kit Components

10x Ammonium Buffer, Mg2+ free, Tween free

Tris-HCl pH 8.5, $(NH_4)_2S0_4$.

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.

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

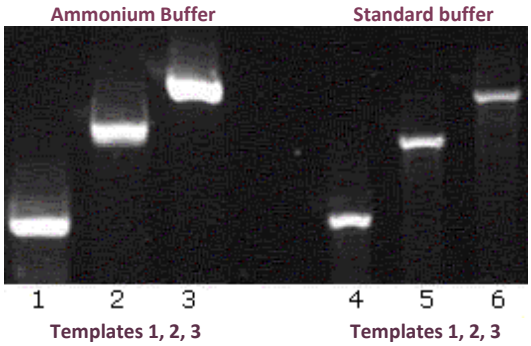


Figure 1: Amplification of three different cDNA templates using Ammonium Buffer versus Standard Buffer.

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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