

Air-Dryable™ RNA/DNA LAMP

Product Handling Guide

Shipping:	Blue ice
Catalog number:	MDX118
Batch No.:	See vial
Concentration:	4x

Store at -20 °C



Storage and stability:

Air-Dryable™ RNA/DNA LAMP is shipped on dry or blue ice. On arrival store at -20 °C for optimum stability. Repeated freeze/thaw cycles should be avoided. Solutions should be mixed/equilibrated after each thawing to avoid phasing.

Expiry:

When stored under the recommended conditions and handled correctly, full activity of the kit is retained until the expiry date on the outer box label.

Safety precautions:

Read and understand the SDS (Safety Data Sheets) before handling the reagents. Hardcopies of the SDS will be provided with the first shipment, thereafter they will be available upon request.

Quality control:

Meridian operates under ISO 13485 Quality Management System. Air-Dryable™ RNA/DNA LAMP and its components are extensively tested for activity, processivity, efficiency, heat activation, sensitivity, absence of nuclease contamination and absence of nucleic acid contamination.

Notes:

For research or further manufactured use only.

Description

Air-Dryable™ RNA/DNA LAMP is a glycerol-free mix for isothermal applications such as loop-mediated isothermal amplification (LAMP). It contains Reverse transcriptase, Bst DNA Polymerase (exo-), reaction buffer, dNTP and is provided with air-dryable excipients allowing ambient temperature stabilization of assays through air-drying. Air-Dryable™ RNA/DNA LAMP has been designed for amplification of RNA and DNA targets. In order to produce an air-dried ambient-temperature stable LAMP reaction mix, specific primers and SYTO could be added to Air-Dryable™ RNA/DNA LAMP for subsequent air-drying. Air-Dryable™ RNA/DNA LAMP does not contain Mg⁺⁺, which must be added prior to the amplification.

Kit components

Table 1

Component
Air-Dryable™ RNA/DNA LAMP, 4x
100 mM Magnesium Sulfate (MgSO ₄) Solution*

* Only supplied with small sizes

Users Guidelines

Thawing during transportation does not affect product performance. Prior to use or storage at -20 °C, the thawed reagents must be thoroughly mixed by 10 inversions.

Please note that this mix does not contain magnesium. We suggest using 4 mM MgSO₄ as a starting concentration in the reaction. However, this might require optimization depending on the assay. It is advised to optimise Mg⁺⁺ concentration.

Suggested LAMP reaction conditions:

The following protocol is for a standard 20 µL LAMP reaction and is to be used as a starting point for optimization.

Table 2

Reagent	Volume	Final Concentration (1x)
Air-Dryable™ RNA/DNA LAMP	5 µL	1x
MgSO ₄ (100 mM)	1.6 µL	8 mM
FIP/BIP Primers (20x)	1 µL	1.6 µM*
F3/B3 Primers (20x)	1 µL	0.2 µM*
Loop F/B Primers (20x)	1 µL	0.8 µM*
Sample DNA	variable	> 10 copies
Water (ddH ₂ O)	to 20 µL	

*Primer ratio needs to be optimised.

Incubate at 65 °C for 60 minutes.

Air-Drying

For air-drying protocols, please consult our "Air-Drying User Guideline".

General Guidelines

Air-Dryable™ RNA/DNA LAMP is compatible with fluorescence detection methods such as intercalating dyes (e.g. SYTO-82).

If analysing the LAMP products requires opening the reaction tubes, it is strongly recommended to carry out the analysis in a separate/designated area to avoid contamination.

It is recommended to include a no-template control (NTC) to verify product specificity.

Associated Products

Product	Cat. No.
Bst DNA Polymerase (8 U/µL)	MDX012
High Conc. Glycerol-Free Bst	MDX018
Lyo-Ready LAMP Mix,4x	MDX097
Lyo-Ready RT-LAMP 1-Step Mix, 4x	MDX108
Air-Dryable™ DNA LAMP	MDX119

Technical Support

For any technical enquiries, please contact our Technical Support team via email at: mbi.tech@meridianlifescience.com

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