Air-Dryable™ Direct DNA LAMP Blood

Product Handling Guide

Shipping:	On dry/blue Ice
Catalog number:	MDX126
Batch No.:	See vial
Concentration:	4x

Store at –20 °C

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Storage and stability:
Air-Dryable™ Direct DNA LAMP Blood 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™ Direct DNA LAMP Blood and its components are extensively tested for activity, processivity, efficiency, sensitivity and absence of nucleic acid contamination.

Notes:
For research or further manufactured use only.

Description

Air-Dryable™ Direct DNA LAMP Blood is a glycerol-free mix for isothermal applications such as Loop-Mediated Isothermal Amplification (LAMP). It contains Bst-DNA Polymerase (exo-), reaction buffer, dNTP and excipients allowing ambient temperature stabilization of assays through lyophilization.

Air-Dryable™ Direct DNA LAMP Blood has been designed for amplification of DNA targets directly from whole blood samples and its derivatives, such as plasma and serum. In order to produce an ambient-temperature stable LAMP reaction mix, specific primers can be added to Air-Dryable™ Direct DNA LAMP Blood prior to lyophilization. The mix tolerates the effects of inhibitors present in crude blood and its derivatives, meaning that the dried pellet can be rehydrated with whole blood, plasma or serum samples.

Kit components

Table 1

Component
Air-Dryable™ Direct DNA LAMP Blood, 4x

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 briefly vortexing.

Please note that this mix does not contain magnesium sulphate ($MgSO_4$). The concentration required with this mix has been optimized to be 8 mM in the reaction, however customers are advised to optimize the concentration of $MgSO_4$ for their individual assay needs.

Suggested LAMP reaction conditions:

The following protocol is for a standard 25 µL LAMP reaction and is to be used as a starting point for optimization.

Table 2

Reagent	Volume	Final Concentration
Lyo-Ready™ Direct DNA LAMP Blood, 4x	6.25 µL	1x
$MgSO_4$ 100 mM (not supplied)	2 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_2O)	To 25 µL	

** Primer concentration and ratio need be optimized.*

Incubate at 65 °C for 60 minutes.

The amount of inhibition tolerated by Air-Dryable™ Direct DNA LAMP Blood is variable depending on several factors, including assay design and sample quality. For this reason, an initial sample titration is recommended.

Air-Dryable™ Direct DNA LAMP Blood 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.

Air-drying

For lyophilization protocols, please consult our “Lyophilization and Post-Lyophilization User Guideline”.

Associated Products

Component	Cat. No.
Lyo-Ready LAMP Mix	MDX097
Lyo-Ready RT-LAMP Mix	MDX108
Air-Dryable™ DNA LAMP	MDX119
Air-Dryable™ RNA/DNA LAMP	MDX118
Lyo-Ready DNA LAMP Blood	MDX124
Lyo-Ready RNA/DNA LAMP Blood	MDX125

Technical Support

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

Meridian Life Science Inc.
USA

Tel: +1 901 382 8716
Fax: +1 901 382 0027