Lyo-Ready™ Direct RNA/DNA LAMP Saliva

Product Handling Guide

Shipping:	Blue Ice
Catalog number:	MDX135
Batch No.:	See vial
Concentration:	4x

Store at –20 °C

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Storage and stability:
Lyo-Ready™ Direct RNA/DNA LAMP Saliva is shipped on 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. Lyo-Ready™ Direct RNA/DNA LAMP Saliva 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

Lyo-Ready™ Direct RNA/DNA LAMP Saliva is a glycerol-free mix for isothermal applications such as loop-mediated isothermal amplification (LAMP). It contains Bst DNA Polymerase (exo-), reverse transcriptase, reaction buffer, dNTP and excipients allowing ambient temperature stabilization of assays through lyophilization. Lyo-Ready™ Direct RNA/DNA LAMP Saliva has been designed for amplification of RNA and DNA targets directly from respiratory samples, such as saliva and sputum. In order to produce an ambient-temperature stable LAMP reaction mix, specific primers can be added to Lyo-Ready™ Direct RNA/DNA LAMP Saliva prior to lyophilization. The mix tolerates the effects of inhibitors present in respiratory samples, meaning that the dried pellet can be rehydrated with samples, buffers containing respiratory samples or inhibitors deriving from crude extraction of respiratory samples.

Kit components

Table 1

Component
Lyo-Ready™ Direct RNA/DNA LAMP Saliva, 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 10 inversions.

Please note that this mix does not contain magnesium. We suggest using 4 mM $MgSO_4$ as a starting concentration in the reaction. However, it is advised to optimise Mg^{++} concentration depending on the assay.

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
Lyo-Ready™ Direct RNA/DNA LAMP Saliva, 4x	5 µL	1x
$MgSO_4$ (100 mM) (not supplied)	0.8 µL	4 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 RNA/DNA	variable	> 10 copies
Water (ddH_2O)	To 20 µL	

** Primer ratio need be optimized.*

Incubate at 65 °C for 60 minutes.

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

Lyo-Ready™ Direct RNA/DNA LAMP Saliva 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.

Lyophilization

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

Associated Products

Component	Cat. No.
High Conc. Glycerol-Free Bst	MDX018
Inhibitor-Tolerant Bst Buffer, 10x	MDX019
Lyo-Ready™ LAMP Mix	MDX097
Lyo-Ready™ RT-LAMP Mix	MDX108
Air-Dryable™ DNA LAMP	MDX119
Air-Dryable™ RNA/DNA LAMP	MDX118

Technical Support

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

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