# Lyo-Ready™ Direct RNA/DNA LAMP Urine

## Product Handling Guide

| | |
|---|---|
| Shipping: | Dry ice/blue Ice |
| Catalog number: | MDX155 |
| Batch No.: | See vial |
| Concentration: | 4x |

**Store at –20 °C**

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**Storage and stability:**
Lyo-Ready™ Direct RNA/DNA LAMP Urine 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 Urine and its components are extensively tested for activity, 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 Urine 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 excipients allowing ambient temperature stabilization of assays through lyophilization.

Lyo-Ready™ Direct RNA/DNA LAMP Urine has been designed for amplification of RNA and DNA targets directly from crude urine samples. In order to produce an ambient-temperature stable RT-LAMP reaction mix, specific primers can be added to Lyo-Ready™ Direct RNA/DNA LAMP Urine prior to lyophilization. The mix tolerates the effects of inhibitors present in crude urine samples, meaning that the dried pellet can be rehydrated with whole crude urine samples.

## Kit components

**Table 1**

| Component |
|---|
| Lyo-Ready™ Direct RNA/DNA LAMP Urine, 4x |

## Users Guidelines

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

Please note that this mix does not contain magnesium chloride ($MgCl_2$), the concentration required with this mix has been optimised to be 5 mM in final reaction, however costumers are advised to optimise the concentration of $MgCl_2$ for their individual assay needs.

### Suggested RT- LAMP and LAMP reaction conditions:

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

**Table 2**

| Reagent | Volume | Final Concentration |
|---|---|---|
| Lyo-Ready™ Direct RNA/DNA LAMP Urine, 4x | 5 µL | 1x |
| $MgCl_2$ (100 mM) (not supplied) | 1 µL | 5 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.

## General Guidelines

**The amount of inhibition tolerated by Lyo-Ready™ Direct RNA/DNA LAMP Urine 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 Urine 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. |
|---|---|
| Lyo-Ready™ LAMP Mix | MDX097 |
| Lyo-Ready™ RT-LAMP 1-Step Mix | MDX108 |
| Air-Dryable™ DNA LAMP | MDX119 |
| Air-Dryable™ RNA/DNA LAMP | MDX118 |
| Lyo-Ready™ Direct DNA LAMP Saliva, 4x | MDX134 |
| Lyo-Ready™ Direct RNA/DNA LAMP Saliva, 4x | MDX135 |
| Lyo-Ready™ Direct DNA LAMP Urine, 4x | MDX154 |

### Technical Support

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

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