

IVD solutions through partnership



MASTISOPLEX[®]
DNA Lyo & DNA Lyo Plus
Ready to use isothermal amplification kits

**Just add
Primers**

- Sensitive and specific LAMP technology
- Convenient lyophilised format
- Stable at high temperatures and humidities
- Expanding the Isoplex DNA product range for increased scope and flexibility

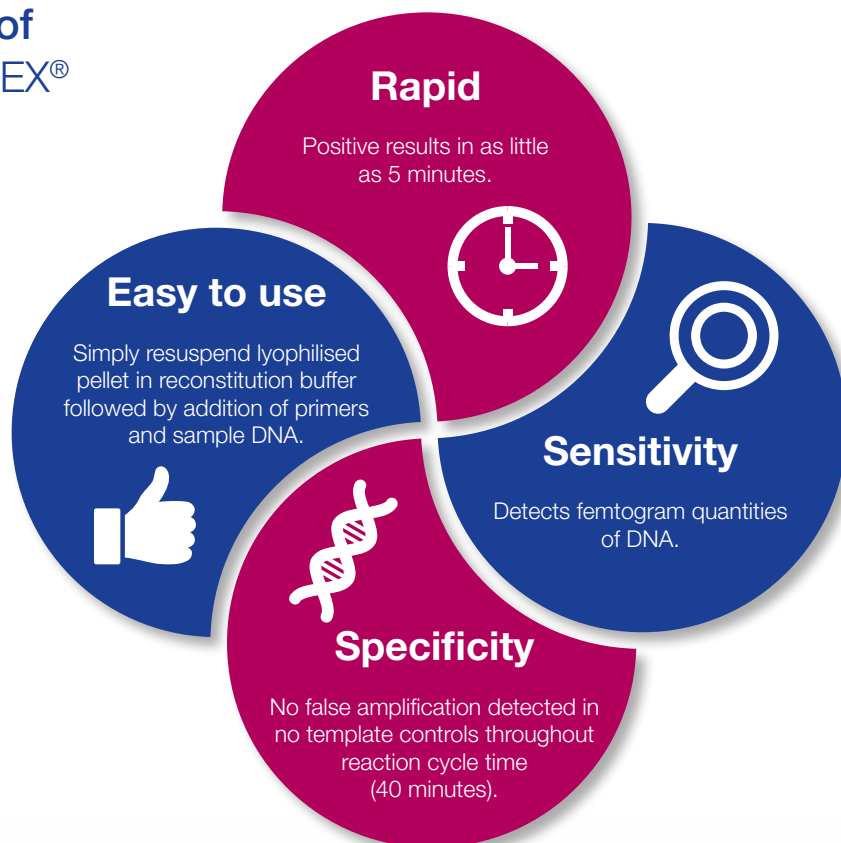
LAMP - DNA amplification in no time!

Loop-mediated Isothermal Amplification (LAMP) is a rapid nucleic acid amplification method, proven to overcome many of the practical limitations associated with conventional PCR. Developed by Notomi et al., in 2000¹, LAMP amplifies DNA in a rapid manner with high efficiency under isothermal conditions. Driven by a single enzyme (Bst DNA-polymerase), LAMP has the ability to amplify large amounts of DNA in short periods of time using auto-cycling strand displacement DNA synthesis. LAMP allows a choice of detection mechanisms to fit user requirements and reduces the time required for downstream applications such as whole genome sequencing.

Results in as little as 5 minutes, overcomes inhibition and no temperature cycling, LAMP can be used anywhere!

MAST ISOPLEX[®] - is LAMP made easy!

Advantages of MAST ISOPLEX[®]



Convenient

MAST ISOPLEX[®] range includes a choice of ready to use amplification kits, making molecular diagnostics with LAMP easy and efficient - **just add primers**. Kit reagents are provided as lyophilised pellets for easy transportation & storage, while reducing the hands-on time to make up and validate your assays.

Stability

Pellet functionality has been shown to be unaltered by continuous exposure to high temperatures and humidity (13 weeks continuous exposure at temperatures up to 50°C with >90% relative humidity). Product shelf life of unopened product is 1 year at room temperature (2°C to 30°C).

Flexibility

- Reconstituted pellets can be freeze-thawed on multiple occasions (at least 5 times) with no adverse loss of functionality. Different ratios of reconstitution buffer to water can be used to optimize your assay.

MAST ISOPLEX® DNA Lyo

With excellent sensitivity and specificity for most applications, MAST ISOPLEX® DNA Lyo is the ideal introduction to LAMP.

MAST ISOPLEX® DNA Lyo is convenience in a tube! Sourcing individual constituent reagents, concerns over batch to batch variation and preservation of reagents for use in remote locations are all addressed.

The kit ensures robust and reproducible amplification conditions, making it an excellent base for primer design and assay optimisation.

MAST ISOPLEX® DNA Lyo – gives results!

For those requiring a rapid and reliable kit to make primer design easy.

MAST ISOPLEX® DNA Lyo Plus

Are you developing a more advanced assay or working with more challenging samples?

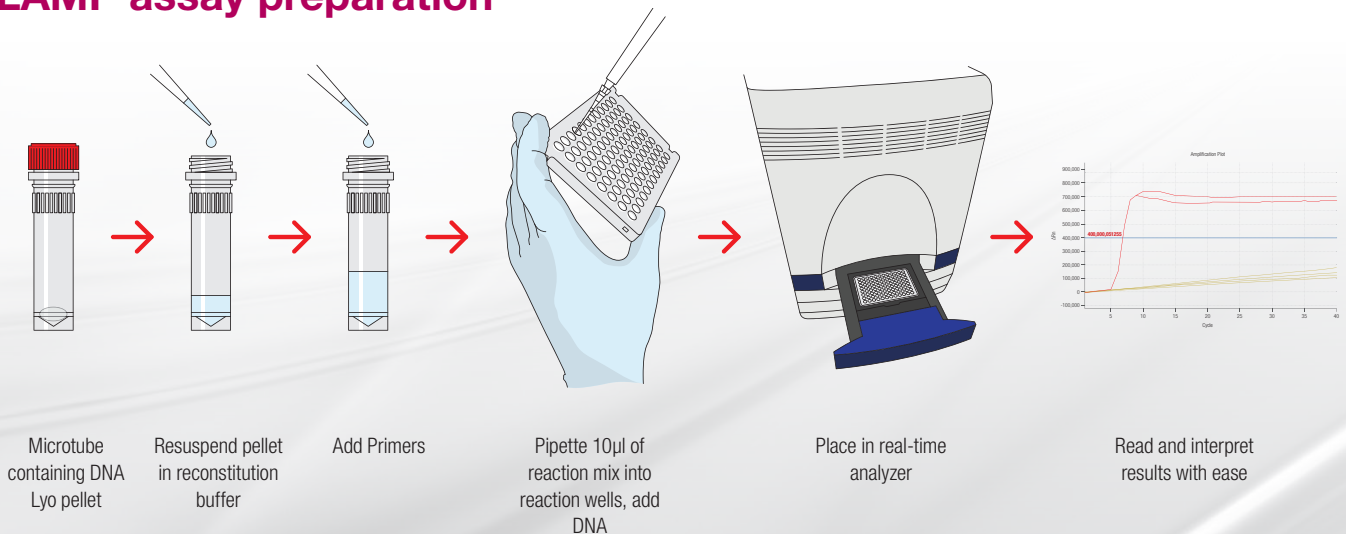
MAST ISOPLEX® DNA Lyo Plus is the choice for you.

Originally developed for exceptionally low level pathogen detection in whole blood, MAST ISOPLEX® DNA Lyo Plus enhances the benefits of standard LAMP offering reduced inhibition, low level target detection and high product yield. Capable to work with genitourinary samples, faecal specimens, food products and plant material, the possibilities are endless.

MAST ISOPLEX® DNA Lyo Plus also includes additional reconstitution buffers, adding scope to the primer design and making it easier to design assays incorporating multiple primer sets, without compromising specificity.

For those assays with too much inhibition from samples, extremely low target concentrations, requirement of multiple primer sets and complex primer design.

LAMP assay preparation



MAST ISOPLEX® is suitable for use on any real-time analyser that has a fluorescent reader with a FAM detection channel for the recognition of amplification products.



1. Notomi T, Okayama H, Masubuchi H, Yonekawa T, Watanabe K, Amino N, Hase T (2000). Loop-mediated isothermal amplification of DNA. *Nucleic Acids Research* 28 (12): e63
2. Edwards T, Burke PA, Smalley HB, Gillies L, Hobbs G (2014). Loop-Mediated Isothermal Amplification Test for Detection of *Neisseria gonorrhoeae* in Urine Samples and Tolerance of the Assay to the Presence of Urea. *Journal of Clinical Microbiology* 58(6): p.2163-2165
3. Melville L, Kenyon F, Javed S, McElarney I, Demeler J, Skuce P. (2017) Development of a loop-mediated isothermal amplification (LAMP) assay for the sensitive detection of *Haemonchus contortus* eggs in ovine faecal samples. *Vet Parasitol* (2014) 206:308–12.

* Loop Mediated Isothermal Amplification (LAMP) is licenced under International Patent application numbers: WO 00/28082, WO 01/34838, WO 01/77317, WO 02/24902, WO 02/103053 and corresponding patents owned by Eiken Co., Ltd., Japan in other countries

Ordering Information

Order Code	Product	Kit Size
DNA/LYO1	MAST ISOPLEX® DNA Lyo	100 tests
DNA/LYO2	MAST ISOPLEX® DNA Lyo Plus	100 tests

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United Kingdom
Mast Group Ltd.
Mast House
Derby Road, Bootle
Merseyside L20 1EA

Tel: + 44 (0) 151 933 7277
 Fax: + 44 (0) 151 944 1332
 e-mail: sales@mastgrp.com

Germany
Mast Diagnostica GmbH
Feldstrasse 20
DE-23858 Reinfeld

Tel: + 49 (0) 4533 2007 0
 Fax: + 49 (0) 4533 2007 68
 e-mail: mast@mast-diagnostica.de

France
Mast Diagnostic
12 Rue Jean-Jacques Mention
CS 91106
80011 Amiens CEDEX 1

Tél. + 33 (0) 322 80 80 67
 Fax + 33 (0) 322 80 99 22
 e-mail: info@mast-diagnostic.fr