

# Air-Dryable™ Direct DNA qPCR Plant

## Product Handling Guide

Shipping:	On Dry/Blue Ice
Catalog number:	MDX116
Batch No.:	See vial
Concentration:	4x

Store at -20 °C



### Storage and stability:

Air-Dryable™ Direct DNA qPCR Plant is shipped on dry/blue ice. On arrival store at -20 °C for optimum stability. Repeated freeze/thaw cycles should be avoided. Thawing during transportation does not affect the product performance. 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 qPCR Plant 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™ Direct DNA qPCR Plant is a glycerol-free qPCR mix containing an antibody-mediated hot-start Taq polymerase, reaction buffer, dNTPs, MgCl<sub>2</sub> and air-dry compatible excipients. In order to produce room temperature air-dried qPCR reagents, assay specific primers and probes can be added to Air-Dryable™ qPCR Plant Mix for subsequent air-drying.

The mix has been developed to tolerate the effects of the inhibitors present in plant tissues, for this reason, the dried pellet can be rehydrated with samples or buffers containing plant lysates or crude extraction of plant samples.

## Kit components

Table 1

Component
Air-Dryable™ Direct DNA qPCR Plant, 4x

## Users Guidelines

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

## Master mix preparation

Recommended reagent volumes of Air-Dryable™ Direct DNA qPCR Plant and Primer-Probe Mix for air-drying are given in Table 2. Volumes are indicated per 20 µL final rehydrated reaction.

Table 2

Reagent	Volume
Air-Dryable™ Direct DNA qPCR Plant, 4x	5 µL
Primer-Probe Mix, 20x	1 µL*
<b>Total Volume</b>	<b>6 µL</b>

\* Primer and probe concentration needs to be optimised

Dispense into reaction vessels, immediately transfer into a convection oven and run a suitable drying cycle.

For long-term storage at ambient temperatures, the air-dried product from the oven should be packaged with silica desiccant in a heat sealed pouch.

## Lysate preparation

**Direct Buffer** - A single leaf punch (leaf disc of ø1,2 mm or approximately 0.1 mg) was heated at 95 °C for 5 min in 20 µL water.

**SDS Buffer** - A single leaf punch was heated at 95 °C for 5 min in 26 µL SDS Lysis Buffer (0.1% SDS).

**Alkaline Buffer** - A single leaf punch was heated at 95 °C for 5 minutes in 20 µL alkaline Lysis Buffer (0.2 M NaOH) and neutralised using 6 µL 2 M Tris-HCl, pH 7.5 (Total lysate volume per leaf punch = 26 µL).

## Assay setup

Rehydrate the air-dried qPCR master mix with 20 µL template-containing lysate preparation, vortex and run qPCR.

The qPCR conditions in Table 3 are suitable for amplicons of up to 200 bp. These cycling parameters are compatible with Air-Dryable™ Direct DNA qPCR Plant on a number of platforms, however they can be varied to suit different detection assay and machine-specific protocols.

Table 3

Step	Temperature	Time	Cycles
Polymerase activation	95 °C	3 min	1
Denaturation	95 °C	10 s	45
Annealing/Extension	60 °C	25 s	

## Associated Products

Product	Cat. No.
Air-Dryable™ qPCR Mix	MDX082
Air-Dryable™ Direct DNA qPCR Blood	MDX092
Inhibitor-Tolerant qPCR Mix	MDX013
Hi-throughput dUTP qPCR Mix	MDX031

## Technical Support

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