







# Bacterial and Fungal DNA Amplification

DNA Polymerases and Optimized Master mix

## Suitable applications

-  Food Testing
-  Water Testing
-  Environmental
-  Human Diagnostics
-  Vet Health
-  DNA Barcoding



PCR amplification for the detection of fungal and bacterial nucleic acids offers greater sensitivity over current culture-based methods, the potential for multiplex analysis, and can be applied to a variety of specimen types. However, trace amounts of residual bacterial and fungal DNA can be found in commercially available PCR reagents which can cause contamination and non-specific amplification. The most effective strategy to reduce false-positive reactions due to residual DNA contamination is to use reagents with low DNA content and low bioburden.

## DNA Polymerases

### Low DNA Taq

- Heat-activated thermostable DNA polymerase
- Convenient room-temperature reaction set-up
- Ideal for bacterial and fungal detection assays
- Proven performance in commercial high-throughput and high-multiplex assays

PRODUCT	CAT NO.	VOLUME	REACTIONS
Low DNA Taq HS 5 U/ $\mu$ L	MDX009	100 mL	500 Units
		10 mL	50,000 Units
Low DNA Taq HS 10 U/ $\mu$ L	MDX010	50 mL	500 Units
		5 mL	50,000 Units

## Optimized qPCR Master Mix

### Low DNA qPCR Mix

- 2x Mastermix containing a heat-activated thermostable DNA polymerase and optimized buffer
- Robust performance and high tolerance to common PCR inhibitors
- Extended stability at ambient temperature
- Ideal for high-multiplex reactions

PRODUCT	CAT NO.	VOLUME	REACTIONS
Low DNA qPCR Mix	MDX030	5 mL	500 Rxn
		100 mL	10,000 Rxn

## General Reagents

PRODUCT	CAT NO.	VOLUME	REACTIONS
<b>qPCR controls</b>			
Internal control designed to closely mimic test samples. Can be used to validate the extraction step and monitor any co-purification of PCR inhibitors. Controls are available with different dyes to fit with existing protocols.			
qPCR Extraction Control RED (Quasar® 670)	MDX026	10 mL	2,000 Rxn
qPCR Extraction Control ORANGE (Cal Fluor® 560)	MDX027	10 mL	2,000 Rxn
<b>General Reagents</b>			
<b>Uracil DNA Glycosylase (UDG)</b>			
Enzyme that efficiently hydrolyzes uracil from ssDNA or dsDNA. Endonuclease, exonuclease, nickase and RNase-free	MDX054	10 mL	10,000 Units
<b>Proteinase K Solution</b>			
RNase and DNase free, ideal for removing endogenous nucleases when purifying native DNA or RNA	MDX055	25 mL	500 mg
<b>RNase Inhibitor</b>			
Inhibits a broad spectrum of eukaryotic RNases, including RNases A, B and C to control for contaminants in RT-PCR assays	MDX056	250 µL 2.5 mL	10,000 Units 100,000 Units
<b>Tissue Extract-PCR Buffers</b>			
Lysis and neutralization buffers optimized for use with Taq HS DNA Polymerase (Cat# MDX008) to perform PCR direct from crude lysate	MDX004	1 Kit	1,000 Rxn

**Ultra-pure (>99% determined by HPLC) dNTPs supplied as lithium salts are also available. They are sold individually (100mM), in sets (100mM) or as mixes (40mM and 100mM).**

### Ordering information:

**USA**  
E: info@meridianlifescience.com  
Toll free: +1 800 327 6299

**Germany**  
E: info.de@bioline.com  
Tel: +49 (0)3371 60222 00

美国迈迪安生命科学公司  
电子邮件: vivian.li@meridianlifescience.com  
电话: +86-159-1103-0750

**UK**  
E: info.uk@bioline.com  
Tel: +44 (0)20 8830 5300

**France**  
E: info.fr@bioline.com  
Tel: +33 (0)1 42 56 04 40

**Australia**  
E: info.au@bioline.com  
Tel: +61 (0)2 9209 4180

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