Taq Dilution Buffer
Product Handling Guide

Shipping:	On Dry or Blue Ice
Catalog number:	MDX007
Batch No.:	See vial
Concentration:	1x

Store at –20 °C

meridian BIOSCIENCE™

Storage and stability:
Taq Dilution Buffer is shipped on dry or 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 upon request.

Quality control:
Bioline operates under ISO 13485 Quality Management System. Taq Dilution Buffer and its components are extensively tested for activity, processivity, efficiency, heat activation, sensitivity, absence of nuclease contamination and absence of nucleic acid contamination.

Notes:
This reagent has been manufactured under 13485 Quality Management System and is suitable for R&D and further manufacturing use.

Description

Taq Dilution Buffer is a combination of the latest advances in buffer chemistry. This Buffer provides the optimal conditions to store Meridian polymerases, conferring long-term stability at -20 °C. The reaction mix requires addition of Reaction Buffer, dNTPs and $MgCl_2$, together with primers and template.

Kit components

Table 1

Component
Taq Dilution Buffer, 1x

Users Guidelines

The optimal conditions will vary from reaction to reaction and are dependent on the template/primers used.

A buffer comprising of dNTPs, $MgCl_2$, stabilizers and enhancers is required.

Forward and reverse primers are generally used at the final concentration of 0.2-0.6 mM each. As a starting point, we recommend using 0.4 mM final concentration (i.e. 4 pmol of each primer per 20 mL reaction volume).

For DNA templates with low structural complexity, such as plasmid DNA, we recommend using 50 pg - 10 ng DNA per 50 mL reaction volume. For eukaryotic genomic DNA, we recommend a starting amount of 200 ng DNA per 50 mL reaction, this can be varied between 5 ng - 500 ng.

Related Products	Cat. No.
Taq HS DNA Polymerase	MDX008
MyTaq HS DNA Polymerase, 2 U/µL	BIO-21111.K02
dNTP Mix, 100mM	MDX051

PCR reaction set-up

Prepare a master mix of MyTaq HS DNA Polymerase and assay-specific primers (see recommended composition for a 20 µL reaction in Table 2).

Table 2

Reagent	Volume	Final Concentration
5x MyTaq Reaction Buffer	4 µL	1x
Template	As required	As required
20 µM Forward Primer	0.4 µL	400 nM
20 µM Reverse Primer	0.4 µL	400 nM
MyTaq HS DNA Polymerase, 2 U/µL	1 µL	0.1 U/µL
Taq Dilution Buffer	As required	As required
Water (ddH_2O)	≤ 20 µL	

PCR amplification

The PCR conditions in Table 3 are suitable for amplicons of up to 1 kb. For multiplex PCR we suggest using 55 °C as a starting annealing temperature. If further optimization is required we recommend using a temperature gradient to determine the optimal annealing temperature needed for the multiplex PCR. Since multiplex PCR generally requires a longer extension step, we suggest starting with a minimum of 90 s and increasing it if required.

Table 3

Step	Temperature	Time	Cycles
Initial Denaturation	95 °C	1 min	1
Denaturation	95 °C	15 s	25-35
Annealing	User determined	15 s	
Extension	72 °C	10 s	

Technical Support

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

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