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Product Information Sheet

Product Name: 5X Multiplex MasterMix with 10X GC Enhancer *

Concentration: Multiplex MasterMix: 5X, GC Enhancer: 10X

Storage and Handling:

GC Enhancer: Upon arrival store at -20°C for provided expiration date, Room Temperature for 90 Days, 4°C for up to 120 days.

5X Multiplex MasterMix: Upon arrival store at -20°C for provided expiration date, Room Temperature for 30 Days, 4°C for up to 60 days. Minimize Freeze thaw of master mix to avoid loss of performance

Ordering Information:

Item Number	Number of Tubes and Volume	Total number of reactions which can be obtained when using the following reaction sizes		
		50µL Reaction	20µL Reaction	10µL Reaction
TP-MP-GCE-100	5X Multiplex MasterMix: 1x1mL, 10X GC Enhancer: 1x500µL	100	250	500
TP-MP-GCE-500	5X Multiplex MasterMix: 5x1mL, 10X GC Enhancer: 5x500µL	500	1250	2500

Product Description:

5X Multiplex MasterMix is optimized for maximum amplification of multiple PCR products simultaneously. It contains optimal concentrations of dNTPs, salts, stabilizers, and Taq DNA polymerase. The 5X concentration allows maximum volume for multiple primer sets.

Empirical's 10X GC Enhancer is a novel PCR cosolvent that enhances amplification and overcomes inhibition of GC rich templates ≤ 80% GC content. The 10X GC Enhancer can be added to any buffer system or master mix to enhance amplification of difficult templates. This is supplied in a separate tube than the Multiplex MasterMix.

Protocol: The following reaction set up and general cycling conditions are recommended but can vary depending on the template and primers being used.

Reaction set-up for a 50uL Reaction:

Component	Volume	Final Concentration
5X Multiplex MasterMix	10 µl	1X
Upstream Primer, 10µM	0.5-5.0 µl	0.1-1.0µM
Downstream Primer, 10µM	0.5-5.0 µl	0.1-1.0µM
DNA Template	X µl	> 25ng DNA
10 X GCE	5 µl	1X
Nuclease Free Water	To 50 µl	N.A.

Thermal cycling conditions: The following general cycling conditions are recommended but can vary depending on the enzyme, template and primers being used.

Cycling Step	Temperature	Holding Time	Cycles
Initial Denaturation	94-95°C	15sec – 2min	1
Denaturation	94-95°C	15-30sec	40
Annealing#	55-65°C	15-30sec	
Extension	68-72°C	1min/kb	
Final Extension	68-72°C	5-10min	1

#Annealing will depend on primer length and composition. Generally, begin 5°C below primer T_m.

For MSDS and Certificate of Analysis please visit www.empiricalbioscience.com