

Product Information Sheet

Product Name: 5X Multiplex Master Mix with GC Enhancer*

Concentration: Multiplex Master Mix-5X, GC Enhancer-10X

Ordering Information:

Item Number	Total Volume Received	Quantity Received	Total number of reactions which can be obtained when using the following reaction sizes		
			50µL Reactions	20µL Reactions	10µL Reactions
SS-TP-MP-GCE-10	TP-MP (100 µL) & GCE-10 (50µL)	TP-MP (1x 100µL) & GCE-10 (1 x 50 µL)	10	25	50
TP-MP-GCE-100	TP-MP (1mL) & GCE-10 (500µL)	TP-MP (1x1mL) & GCE-10 (1x500µL)	100	250	500
TP-MP-GCE-500	TP-MP (5mL) & GCE-10 (2.5mL)	TP-MP (5x1mL) & GCE-10 (5x500µL)	500	1250	2500

Storage and Handling:

Store at -20°C upon arrival. The GCE should avoid prolonged exposure to light.

Product Description:

5X Multiplex Master Mix is a low foam formulation 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 and is ideal for automated systems due to its low foam formula .

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 Master Mix.

Reaction set-up: For a 50µL Reaction

Component	Volume	Final Concentration
5X Multiplex Master Mix	10 µl	1X
Upstream Primer	0.5-5.0 µl	0.1-1.0µM
Downstream Primer	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.

* This product is for "Research Use Only. Not for use in diagnostic procedures".
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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

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