

5X Taq PCR Master Mix

Cat. No. CMC17 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Source	E.coli
Description	Taq DNA Polymerase is a thermostable DNA polymerase that possesses a 5' → 3' polymerase activity and a 5' flap endonuclease activity. Taq 5X Master Mix is an optimized ready-to-use solution containing Taq DNA Polymerase, dNTPs, MgCl ₂ , KCl and stabilizers. It is best for routine PCR applications from templates including pure DNA solutions, bacterial colonies, and cDNA. It can amplify up to 4 kb from complex genomic DNA or up to 5 kb from lambda DNA.
Reagents Supplied	MgCl ₂ (25 mM)
1X Taq Master Mix	10 mM Tris-HCl (pH 8.6 @ 25°C); 50 mM KCl; 1.5 mM MgCl ₂ ; 25 units/ml Taq DNA Polymerase; 0.2 mM dNTPs each; 5% glycerol; 0.08% Ethoxylated tert-octylphenol; 0.05% Tween-20
Applications	PCR; Primer Extension; Microarray Analysis; High-Throughput PCR
Heat Inactivation	No
Unit Definition	One unit of Taq DNA Polymerase is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid-insoluble material in 30 minutes at 75°C.
Unit Assay Conditions	1X ThermoPol Reaction Buffer, 200 μM dNTPs including [3H]-dTTP and 200 g/ml

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activated Calf Thymus DNA.

Reaction Conditions 1X Taq Master Mix, DNA template and primers in a total reaction volume of 25 or 50 μ

General Notes

Taq 5X Master Mix is stable for fifteen freeze-thaw cycles when stored at -20°C. Taq 5X Master Mix is also stable for six months at 4°C, so for frequent use, an aliquot may be kept at 4°C. We recommend assembling all reaction components on ice and quickly transferring the reactions to a thermocycler preheated to the denaturation temperature (95°C).

Reaction Setup

Component	25 μlReaction	50 μlReaction	Final Concentration
10 μM Forward Primer	0.5 μl	1 μl	0.2 μM (0.05–1 μM)
10 μM Reverse Primer	0.5 μl	1 μl	0.2 μM (0.05–1 μM)
Template DNA	variable	variable	<1,000 ng
Taq 5X Master Mix	5 μl	10 μl	1X
Nuclease-free water	to 25 μl	to 50 μl	
Step	Temp	Time	
Denaturation	95°C	30 seconds	
30cycles	95°C	15-30 seconds	
45–68°C	15-60 seconds		
68°C	1 minute per kb		
Final extension	68°C	5 minutes	
Hold	4–10°C		

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