DATA SHEET

Taq Pol - Master mix (2X)

Master mix of thermostable DNA polymerase

Cat. Nº.	Amount
■ POL-101XS	50 reactions
□ POL-101S	100 reactions
□ POL-101M	200 reactions
□ POL-101L	500 reactions
□ POL-101XL	1.000 reactions

Shipping:
Shipped on blue ice

Storage Conditions:
Store at -20 °C

Additional Storage Conditions:
Avoid freeze/thaw cycles. Taq Pol – Master mix (2X) is also stable for three months at 4°C, so for frequent use, an aliquot may be kept at 4°C.

Shelf Life:
12 months

For *in vitro* use only!

Description:
Taq Pol Master Mix contains Taq Polymerase in an optimized PCR buffer with Mg^{2+} and dNTPs. It contains all reagents required for PCR (except template and primer) in a premixed 2x concentrated ready-to-use solution and should be used at a 1X concentration with DNA template and primers in a total reaction volume of 25 or 50 µL. The Master Mix is recommended for use in routine PCR reactions from templates including pure DNA solutions, bacterial colonies, and cDNA. It is optimized for high specificity and guarantees minimal by-product formation.

Kit contents:
2x Taq Pol Master Mix (violet cap)
Composition: 0.05 U/ µL Taq DNA polymerase, reaction buffer, 0.3 mM $MgCl_2$, 0.4 mM of each dNTP (dATP, dCTP, dGTP, dTTP), and stabilizers.

PCR Reaction Setup

Use the quantities below to prepare a single 50 µl PCR reaction. Thaw, mix, and briefly centrifuge each component before use. Add the following components to a microcentrifuge tube:

1. Prepare PCR master mix

Note: Consider the volumes for all components listed next steps to determine the correct amount of water required to reach your final reaction volume.

Components	50 µL rxn	[final]
Water, grade PCR	To 50 µl	
2 X Taq Pol Master Mix	25 µl	1X

Mix and briefly centrifuge the components.

2. Add template DNA and primers

Components	50 µL rxn	[final]
Foward primer (10 µM)	0,5 - 2,5 µl	0,1 – 0,5 µM
Reverse primer (10 µM)	0,5 - 2,5 µl	0,1 – 0,5 µM
DNA template		10 pg – 1 µg**

**genomic DNA: 1 ng-1µg; plasmidial ou viral DNA: 1 pg-1 ng

Cap each tube, mix, and briefly centrifuge the content.

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3. Incubate reactions in a thermal cycler.

Recommended cycling conditions:

Step		Temp.	Time
Initial denaturation		95 ºC	1 min
30 cycles	Denaturation	95 ºC	15 - 30 sec
	Annealing [1]	45-68 ºC	15 - 30 sec
	Elongation [2]	72 ºC	30 sec - 4 min
Final extension		72 ºC	2 min
Hold		4 - 8 ºC	

1)The annealing temperature depends on the melting temperature of the primers used.

2)The elongation time depends on the length of the fragments to be amplified. A time of 1 min/kb is recommended.

For optimal specificity and amplification an individual optimization of the recommended parameters may be necessary for each new template DNA and/or primer pair.