

## DATA SHEET



## Taq High Fidelity Pol Master Mix 2X

Master mix of Thermostable DNA polymerase for high accuracy

Cat. Nº.	Amount
<input checked="" type="checkbox"/> POL-118XS	50 reactions
<input type="checkbox"/> POL-118S	100 reactions
<input type="checkbox"/> POL-118M	200 reactions
<input type="checkbox"/> POL-118L	500 reactions
<input type="checkbox"/> POL-118XL	1.000 reactions

### Shipping:

Shipped on blue ice

### Storage Conditions:

Store at -20 °C

### Additional Storage Conditions:

Avoid freeze/thaw cycles. Taq High Fidelity 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:

24 months

**For *in vitro* use only!**

### Description:

Taq High Fidelity Pol Master Mix contains Taq High Fidelity Polymerase in an optimized PCR buffer with Mg<sup>2+</sup> 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 High Fidelity Pol Master Mix (violet cap)

Master mix of thermostable DNA polymerase for high accuracy, dATP, dCTP, dGTP, dTTP, KCl, MgCl<sub>2</sub> 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 High Fidelity 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 °C	1 min - 3 min
30 cycles	Denaturation	95 °C	15 - 30 sec
	Annealing <sup>1</sup>	45-70 °C	15 - 30 sec
	Elongation <sup>2</sup>	72 °C	1 min/kb
	Final extension	72 °C	1 - 2 min/kb
	Hold	4 - 10 °C	

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.

**Note:** for large fragments it is recommended, in the elongation step, to use 68 °C and 1,5 - 2 min/kbp.

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