



## 10 x HOT FIREPol<sup>®</sup> Master Mix

BI ((NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> based with 15 mM MgCl<sub>2</sub>)

Cat. No.	Pack Size	Conc. (MgCl <sub>2</sub> )
04-23-00S15	0.2 ml SAMPLE (100 reactions)	15 mM
04-23-00115	1 ml (500 reactions)	15 mM
04-23-10015	100 ml (50000 reactions)	15 mM

For *in vitro* use only

### Description:

10 x HOT FIREPol<sup>®</sup> Master Mix is a ready-to-use solution containing all reagents required for Hot Start PCR (except template, primers and water).

### Applications:

- Hot Start PCR
- DHPLC
- TA cloning

### Kit Composition:

- **10 x HOT FIREPol<sup>®</sup> Master Mix**
  - HOT FIREPol<sup>®</sup> DNA polymerase
  - HOT FIREPol<sup>®</sup> 10 x Buffer B1  
*Tris-HCl and (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>*
  - 15 mM MgCl<sub>2</sub>  
*1 x PCR solution – 1.5 mM MgCl<sub>2</sub>*
  - 2 mM dNTPs of each  
*1 x PCR solution – 200 μM dATP, 200 μM dCTP, 200 μM dGTP and 200 μM dTTP*
- **100 mM MgCl<sub>2</sub>**

### Shipping and Storage conditions:

Routine storage: -20°C

Shipping and temporary storage for up to 1 month at room temperature or storage for up to 6 months at 2-8°C has no detrimental effects on the quality of 10 x HOT FIREPol<sup>®</sup> Master Mix.

### Recommendations:

Reaction setup at room temperature is highly recommended for HOT FIREPol<sup>®</sup> Master Mix. We recommend using 10 x HOT FIREPol<sup>®</sup> Master Mix in any PCR application that will be visualized by agarose gel electrophoresis and ethidium bromide staining.

### Recommended PCR reaction mix:

Component	Volume	Final conc.
10 x HOT FIREPol <sup>®</sup> Master Mix B1	2 μl	1 x
Forward primer (10 pmol/μl)	0.2-0.6 μl	0.1-0.3 μM
Reverse primer (10 pmol/μl)	0.2-0.6 μl	0.1-0.3 μM
Template DNA	x μl	5-50 ng/μl
Add H <sub>2</sub> O	Up to 20 μl	

### Recommended PCR cycles:

Operation	Temp.	Time	Cycles
<b>Initial denaturation</b>	<b>95°C</b>	<b>12-15 min</b>	1
Denaturation	95°C	20-40 s	25-30
Annealing	54-66°C	30-60 s	
Elongation	72°C	40 s - 4 min	
Final elongation	72°C	5-10 min	

**IMPORTANT:** To activate the polymerase, include an incubation step **at 95°C for 12 - 15 minutes** at the beginning of the PCR cycle.

### Safety warnings and precautions:

This product and its components should be handled only by persons trained in laboratory techniques. It is advisable to wear suitable protective clothing, such as laboratory overalls, gloves and safety glasses. Care should be taken to avoid contact with skin or eyes. In case of contact with skin or eyes, wash immediately with water.

*Some applications this product is used in may require a license which is not provided by the purchase of this product. Users should obtain the license if required.*

### Related products:

Product name	Pack size	Cat. No.
<b>FIREPol<sup>®</sup> DNA Polymerase</b>	500 U	01-01-00500
<b>FIREPol<sup>®</sup> DNA Polymerase</b>	1000 U	01-01-01000
<b>FIREPol<sup>®</sup> DNA Polymerase</b>	2000 U	01-01-02000
<b>HOT FIREPol<sup>®</sup> DNA Polymerase</b>	500 U	01-02-00500
<b>HOT FIREPol<sup>®</sup> DNA Polymerase</b>	1000 U	01-02-01000
<b>5 x FIREPol<sup>®</sup> Master Mix Ready to Load</b> <i>(1.5 mM MgCl<sub>2</sub> final conc.)</i>	250 reactions	04-12-00115
<b>5 x FIREPol<sup>®</sup> Master Mix Ready to Load</b> <i>(2.5 mM MgCl<sub>2</sub> final conc.)</i>	250 reactions	04-12-00125
<b>5 x FIREPol<sup>®</sup> Master Mix</b> <i>(1.5 mM MgCl<sub>2</sub> final conc.)</i>	250 reactions	04-11-00115
<b>5 x FIREPol<sup>®</sup> Master Mix</b> <i>(2.5 mM MgCl<sub>2</sub> final conc.)</i>	250 reactions	04-11-00125
<b>dNTP MIX (20 mM of each)</b>	20 μmol	02-31-00020
<b>dNTP MIX (20 mM of each)</b>	100 μmol	02-31-00100