



## 5x FIREPol® Master Mix Ready to Load (12.5 mM MgCl<sub>2</sub>)

Cat. No.	Pack Size	Conc. (MgCl <sub>2</sub> )
04-12-00S25	0.1 ml SAMPLE (25 reactions)	12.5 mM
04-12-00125	1 ml (250 reactions)	12.5 mM

For *in vitro* use only

### Description:

5x FIREPol® Master Mix Ready to Load is a premixed ready-to-use solution containing all reagents required for PCR (except template, primers and water), additional compound needed for direct loading onto agarose gel and two tracking dyes (blue and yellow) that allow to monitor progress during electrophoresis.

### Applications:

- Suited for a wide range of PCR assays

### Reagent Composition:

- **FIREPol® DNA polymerase**
- **5x Reaction Buffer B**  
0.4 M Tris-HCl, 0.1 M (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 0.1% w/v Tween-20
- **12.5 mM MgCl<sub>2</sub>**  
1x PCR solution – 2.5 mM MgCl<sub>2</sub>
- **1 mM dNTPs of each**  
1x PCR solution – 200 μM dATP, 200 μM dCTP, 200 μM dGTP and 200 μM dTTP
- **Blue dye**  
Migration equivalent to 3.5-4.5 kb DNA fragment
- **Yellow dye**  
Migration rate in excess of primers in 1% agarose gel:  
<35-45 bp
- **Compound that increases sample density for direct loading**

### 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 5x FIREPol® Master Mix Ready to Load.

### 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.

### Recommended PCR reaction mix:

Component	Volume	Final conc.
5x FIREPol® Master Mix Ready to Load	4 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>3-5 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	

### Recommendations:

We recommend using 5x FIREPol® Master Mix Ready to Load in any PCR application that will be visualized by agarose gel electrophoresis and ethidium bromide staining.

We do not recommend using the 5x FIREPol® Master Mix Ready to Load for PCR reactions where detergent free buffer system is required (detergent free 5 x Master Mix available upon request).

5x FIREPol® Master Mix Ready to Load is not recommended for use in applications where spectrophotometric measurements (absorbance or fluorescence) are necessary because yellow and blue dyes can interfere with these applications.

*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® DNA Polymerase</b>	500 U	01-01-00500
<b>FIREPol® DNA Polymerase</b>	1000 U	01-01-01000
<b>FIREPol® DNA Polymerase</b>	2000 U	01-01-02000
<b>HOT FIREPol® DNA Polymerase</b>	500 U	01-02-00500
<b>HOT FIREPol® DNA Polymerase</b>	1000 U	01-02-01000
<b>5x FIREPol® Master Mix</b> (1.5 mM MgCl <sub>2</sub> final conc.)	250 reactions	04-11-00115
<b>5x FIREPol® Master Mix</b> (2.5 mM MgCl <sub>2</sub> final conc.)	250 reactions	04-11-00125
<b>dNTP MIX</b> (20 mM of each)	20 μmol	02-31-00020
<b>dNTP MIX</b> (20 mM of each)	100 μmol	02-31-00100
<b>dNTP SET</b> (100 mM)	4 x 25 μmol	02-21-00100
<b>dNTP SET</b> (100 mM)	4 x 100 μmol	02-21-00400