DIALAT Ltd.

Data sheet
This data sheet provided for information only

5X MaSTaq^{DD}-2025

RESEARCH USE ONLY

"Ready-to-load" MasterMix for DNA amplification

Cat.No.	Pack	Conc.
MDD5-100	**100 rnx**	**5 X**
MDD5-500	**500 rnx**	**5 X**

Stability:
5X MasTaq^{DD} stable for 24 months at -20°C, **or** for 6 months at +4°C storage without freezing.

CONTENT:
1X: SmarTaq Polymerase
0.2mM each of dNTP's
2.0 mM $MgCL_2$
Reaction Buffer components
Stabilizer
Two inherent dyes **(Red color)**

DESCRIPTION

5X MasTaq^{DD} is a ready-to-use/load premix of all components for amplification of target DNA, contains **stabilizer/ enhancer ,** which improves thermostabilization of enzyme during PCR amplification and storage, and two inherent dyes, which allows direct loading of the sample into gel for electrophoresis.
5X MasTaq^{DD} is optimized for PCR with **complex, low-copy number DNA templates, multiplex PCR,** and allows improving specificity of your PCR.
5X MasTaq^{DD} contains optimal $MgCl_2$ concentration (2.0mM).
You can use an appropriate volume of **5X MasTaq^{DD}** for amplification reaction, depending on total final reaction volume.
Just place it into the tube/plate adds primers and template of choice mix all components and run PCR.
After PCR reaction running load 5-10μl of reaction mixture directly onto the gel without any other manipulations (addition of "Loading Buffer") and run electrophoresis.

Recommended PCR assay

50μl PCR assay		Final Conc.
10μl	**5X MasTaq^{DD} -2025**	1X
0.2-1μM	each Primer	
Variable*	DNA Template	
To 50μl	PCR Grade Water	

*- depending on DNA template initial concentration

APPLICATIONS:
- Routine PCR
- Primer extension
- Low-copy PCR (SmarTaq Polymerase)

STORAGE CONDITIONS :
Store **5X MasTaq^{DD}** at -20°C (for long term storage).

SHIPPING CONDITIONS:
Should be shipped at ambient temperature
For land distance shipments preferably in **Blue Ice**

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General Protocol for amplification with 5X MasTaq^{DD}-2025

Add and mix the following components:

Component	50μL reaction	25μL reaction	Final concentration
PCR grade Water	Up to 50 μL	Up to 25 μL	
5X MasTaq^{DD}-2025	10 μL	5 μL	1X
Primers			0.2-0.5 μM each
Template DNA	optionally	optionally	

In some cases we recommends to ortimize Mg concentration in the range 2.0-3.0mM
We recommend to use 25μl reaction for the PCR with **5X MasTaq^{DD}**

Cycling Protocol:

Cycle step	3-step amplification		Cycles
	T°C	Time	
Initial Denaturation	95°C	2 min	1
Denaturation	95°C	15-30 S	
Annealing	55-68*	15-30 S	25-35
Extension	72°C	30-60 S/Kb**	
Final extension	72°C	5-10 min	1
	4°C	hold	

*Optimal Tm for the primer pair recommended as Tm of the lower primer, for the standard oligos <20nt.
**For non-complex DNA templates (plasmid DNA, phage DNA, BAC clone) extention time could be reduced up to 15-30 sec/Kb.
For compex DNA templates (human DNA) strongly recommended to apply Extention time as 60 sec/Kb

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