Product Stability Report

Blastaq™ 2X qPCR MasterMix

Cat. No. G891, G892

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Purpose

To test the stability of **Blastaq™ 2X qPCR MasterMix** under several conditions

Method

Blastaq™ 2X qPCR MasterMix was subjected to the following conditions:

- Freeze Thaw (20 cycles)
- 4°C (1 Day, 3 Days, 7 Days)
- 20°C (1 Day, 3 Days, 7 Days)
- 55°C (1 Day, 3 Days, 7 Days)

The qPCR reactions were assembled according to G891 Product Datasheet. Negative control reactions (NTCs) received an equal volume of nuclease-free water instead of the template. The freeze-thaw results were compared to an identical tester that did not undergo any treatment. The results from the "Elevated Temperature" Test were compared against Blastaq™ 2X qPCR MasterMix stored under standard conditions (-20 °C). Each dilution was performed in duplicate. After data collection, the melting curve peaks were recorded and analyzed, and any changes in Ct values among the samples were examined.

Result

Blastaq™ 2X qPCR MasterMix samples with comparable qPCR amplification activity to the control are noted as a "Pass" and any condition that is showing less activity is noted with "Decrease in activity".

Sample Name	20 X	1 Day	3 Days	7 Days
Freeze-thaw	Pass	--	--	--
4 °C	--	Pass*	Pass*	Pass*
20 °C	--	Pass*	Pass*	Pass*
55 °C	--	Pass*	Pass*	No activity

* Decrease in fluorescence may be observed

Conclusion

Blastaq™ 2X qPCR MasterMix remains stable and retains full functionality after 7 days at both 4°C and 20°C, as well as after 20 cycles of freeze-thaw. However, repeated freeze-thaw cycles and storage at elevated temperatures are not recommended, as they may result in a reduced fluorescence signal. Furthermore, incubation at 55°C should not exceed 3 days, as this will result in complete loss of activity.

The product has been tested and shown to be in compliance with all specifications.