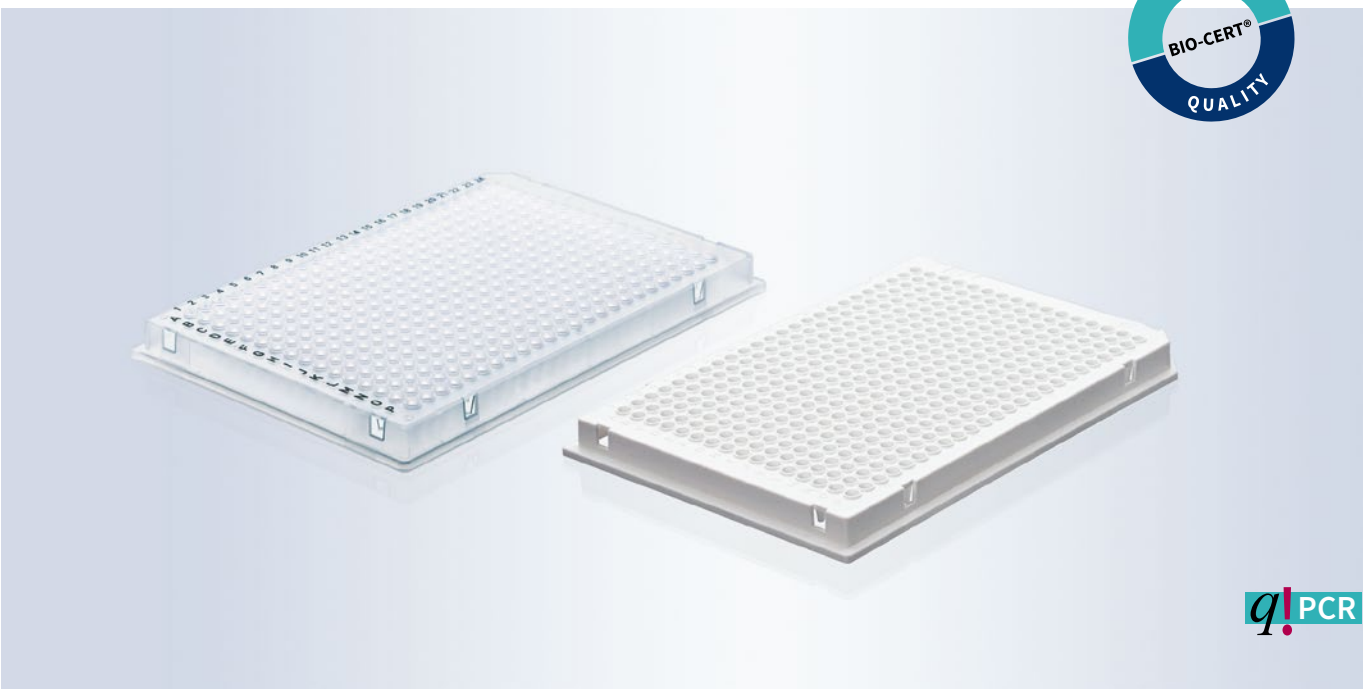
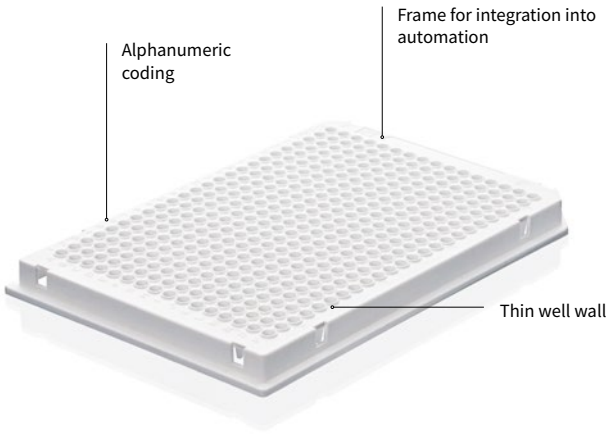
7.3 384-well PCR plates



- ✔ For applications in automation and high-throughput analyses
- ✔ Rapid heat transfer through thin vessel walls
- ✔ Can be sealed reliably with self-adhesive sealing films

BRAND 384-well PCR plates are an economical solution for automated high-throughput analyses. The thin walls allow fast transmission of the temperature specified by the cycler, thus reducing cycle times.
The stable design of the plates makes them ideal for automation, as they can be gripped by robot systems without twisting.
To minimize evaporation with small sample volumes and to prevent contamination, seal the plates with the appropriate sealing film.



Applications

+ High throughput analyses
+ Automated process sequences
+ PCR arrays

Features

+ Made of PP in low profile
+ Compatible with most cyclers
+ 40 µl wells for use with sample volumes between 2 µl and 30 µl
+ Rigid edges for ideal hold in automated applications
+ Available with a bar code

User information

To achieve good results throughout the entire plate, the plates must fit the cycler exactly. The plates must be tightly sealed to prevent evaporation. This is the only way to obtain reliable results.

The right plate for your automated system:

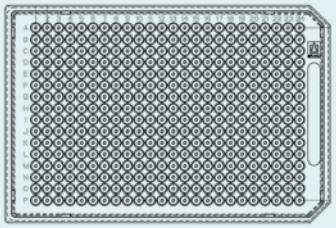
- Skirted plates allows the plate to be gripped with different gripper systems
- Rigid plates with reinforced covers provide increased stability
- All plates are low profile.

We advise against autoclaving PCR products. Autoclaving can be a source of contamination for disposable products.

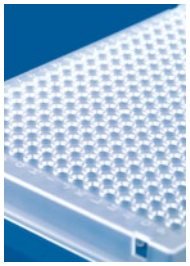
Technical information & Ordering data

384-well plates, skirted

- Transparent wells for optimal control
- Especially rigid for secure handling with robots and automated pipetting systems
- Labels and coding for easy identification



384-well, skirted

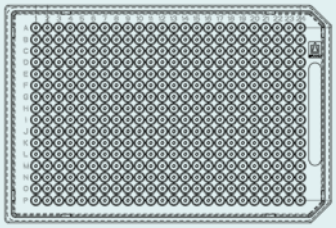


Type	low profile	low profile
Color	transparent	transparent
Volume [ml]	0.03	0.03
Cut corner	A24, P24	A24
Pack of	50 pieces (10 plates per bag)	50 pieces (10 plates per bag)
Cat. No.	**781345**	**781347***

* Manufacturing under controlled room conditions

384-well plates, skirted, for Roche Light Cycler

- White wells for better fluorescence measurement
- Optimal for Roche LightCycler 480 and comparable devices
- Labels and coding for easy identification



384-well, skirted, for Roche Light Cycler

Type	low profile
Color	white qPCR
Volume [ml]	0.03
Cut corner	A24, P24
Pack of	50 pieces (10 plates per bag)
Cat. No.	**781358**

Application Note

Higher sensitivity of qPCR reactions with BRAND 384-well PCR plates

Author: BRAND GMBH + CO KG

Introduction

In many laboratories transcriptase quantitative PCR has become a standard technique to correlate phenotypic observations not only with altered protein expression data but also with quantitative changes. The quality of results obtained by RT-qPCR depends on several factors, including, but not limited to, adequate primers for reverse transcriptase and qPCR response, proper RNA sample preparation and well-defined reference genes. However, the best experimental design will give poor results if external factors like malfunction of thermocyclers and inadequate PCR-vessels disturb the reaction.

Here we show, for example, that signal amplification is improved with white 384-well PCR plates from BRAND when compared with the white plates of another well-known manufacturer.

Material and Methods

Murine hippocampi were homogenized in peqGOLD RNAPure™ buffer (PeqLab) with TissueLyser (Qiagen). Total RNA was extracted using RNeasy Kit (Qiagen). cDNA was synthesized from 1 µg total RNA using iScript™ cDNA Synthesis Kit (Bio-Rad).

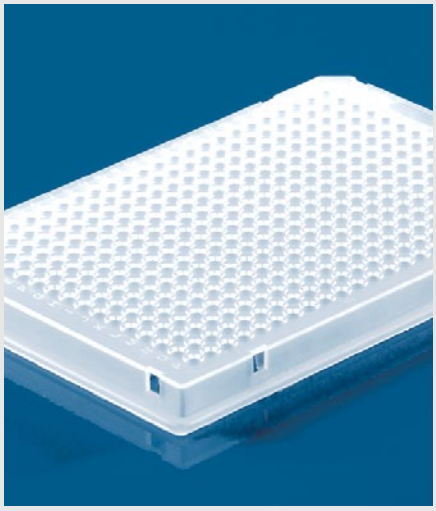
For RT-qPCR the following reaction was set up:

0.5 µl	Primer 5 µM
5 µl	SYBR®select (2X)
1 µl	cDNA
3 µl	H_2O
10 µl total	

SYBR® Green based gene expression reactions were loaded in triplicates in white 384-well PCR plates from BRAND (#781358) and a competitor. Plates were sealed with qPCR sealing films from BRAND (#781391). PCR was performed in the CFX384TM real-time PCR machine (Bio-Rad).

Results

In the two different white 384-well PCR-plates none of the PCR-reactions failed. However, signal intensity was much stronger in the BRAND plates when compared to the competitor.



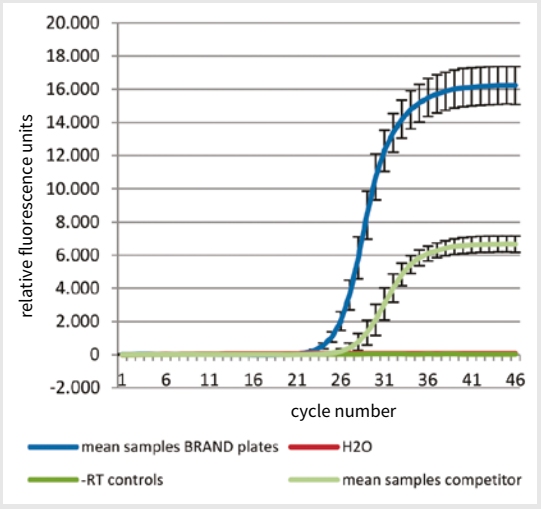


Figure:
Data show mean and standard deviation of 384 RT-qPCR results per plate.

Conclusion

RT-qPCR runs more efficiently in the white 384-well PCR-plates from BRAND in comparison with the plates from another well-known manufacturer as indicated by the slope and the plateau of the two different curves. This might be the result of optimized thin walled wells leading to a fast and homogenous thermal transfer, and by the use of raw materials from which less PCR-inhibiting substances could be released.