



Maximum consistency and reproducibility!

With a new formulated buffer our MESA GREEN reagents show minimum variation, ensuring consistent results over a broad range of targets and excellent reproducibility across the different templates. This buffer has been optimized and designed to ensure maximal performance.

High performance for your Real-Time thermocyclers

The MESA GREEN kits contains all the components needed to perform an optimal qPCR reaction on your Real-Time thermocyclers in a convenient 2x MasterMix.

We have designed different formulations that have been optimized and validated on every Real-Time thermocyclers:

- ➔ MESA GREEN qPCR MasterMix Plus for SYBR® Assay containing ROX passive reference for ABI thermocyclers
- ➔ MESA GREEN qPCR MasterMix Plus for SYBR® Assay Low ROX for thermocyclers that require lower concentration of ROX
- ➔ MESA GREEN qPCR MasterMix Plus for SYBR® Assay No ROX, for Real-Time thermocyclers that do not require any dye for normalization
- ➔ MESA GREEN qPCR MasterMix Plus for SYBR® Assay w/ fluorescein for iCycler iQ®, MyiQ and iQ5 instruments to allow a correct "normalization" on these instruments

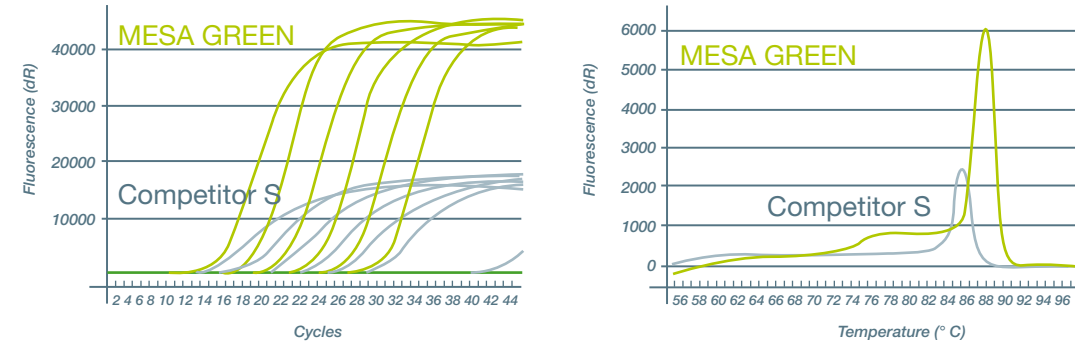


Figure 5: Outstanding performance of the MESA GREEN qPCR MasterMix Plus for SYBR® Assay Low ROX on a Mx3000P®. Comparison between MESA GREEN qPCR MasterMix Plus for SYBR® Assay Low ROX and competitor S SYBR® Green kit. Experiment was performed using 18S primers and the same cDNA on a Mx3000P®. Eurogentec NEW MESA GREEN MasterMix showed superior performance, better sensitivity on a Mx3000P®, earlier Ct values, higher ΔRn and steeper amplification curves compared to competitor S SYBR® Green reagent.

Faster protocol validated on the LC480

The use of our MeteorTaq will allow you the possibility to run a "faster" protocol, which has been validated for the use of the LC480 fast block thermocycler. This protocol will allow you to run a complete PCR including the meltcurve in between 1 and 1.5 hours. The PCR itself will be run in less than 1 hour (between 45 min to 1 h) without compromising the sensitivity, efficiency or specificity of your assay.

Recommended protocol:

MeteorTaq activation	5 min. 95 °C
40/45 Cycles	3 sec. 95 °C
	45-60 sec. 60 °C

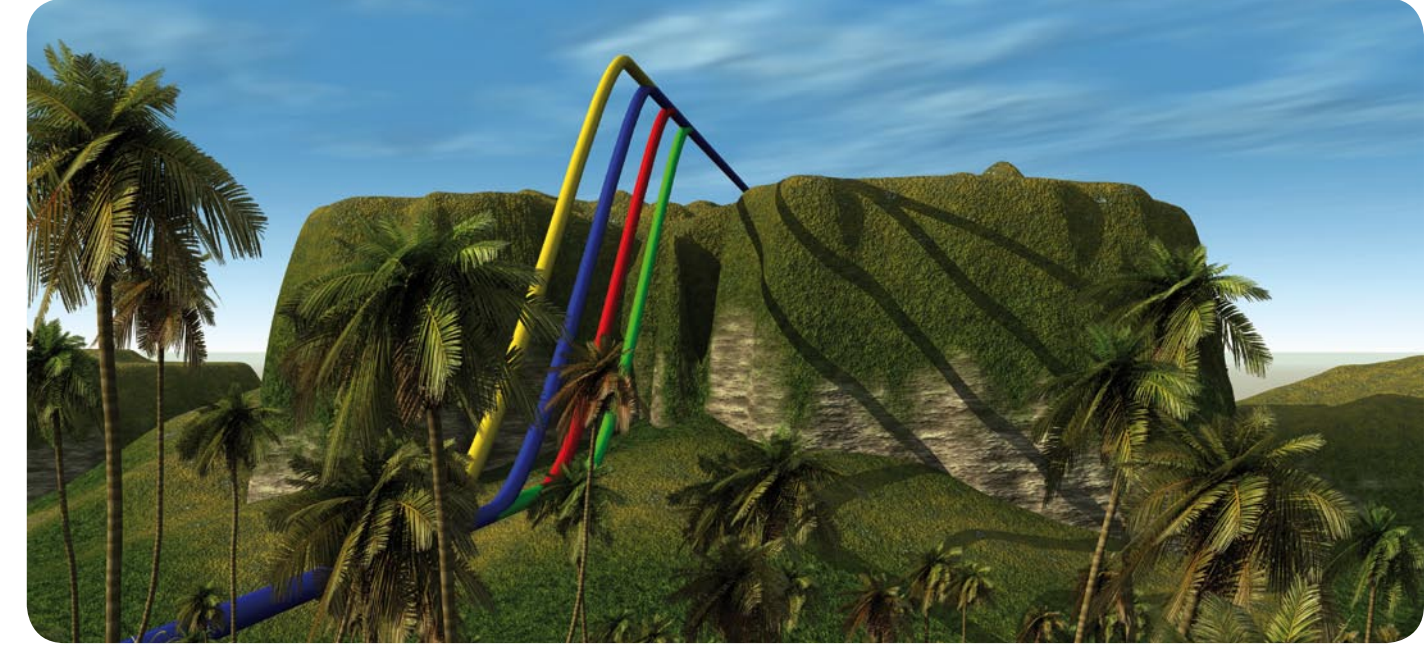
Maintain at 50 °C or perform a meltcurve



Ordering information

Product	Reference	# of 50 µl Rxns	ABI GeneAmp® 5700 ABI Prism® SDS 7000/7300/7700/7900HT/ MasterCycler® ep realplex	ABI Prism® 7500	iCycler iQ® My iQ iQ5	Mx4000® Mx3000P® Mx3005P® W/ ROX	Mx4000® Mx3000P® Mx3005P® W/o ROX	RotorGene 2000/3000/6000 MiniOpticon® DNA Engine Opticon® 1,2 Chromoc4 Quantica® LC480	SmartCycler® I SmartCycler® II
MESA GREEN qPCR MasterMix Plus for SYBR® Assay – 7.5 ml	RT-SY2X-03+WOU	300	X						
MESA GREEN qPCR MasterMix Plus for SYBR® Assay – 15 ml	RT-SY2X-06+WOU	600	X						
MESA GREEN qPCR MasterMix Plus for SYBR® Assay – 50 ml	RT-SY2X-20+WOU	2000	X						
MESA GREEN qPCR MasterMix Plus for SYBR® Assay dTTP – 7.5 ml	RT-SY2X-03+WOUN	300	X						
MESA GREEN qPCR MasterMix Plus for SYBR® Assay Low ROX – 7.5 ml	RT-SY2X-03+WOU LR	300		X					X
MESA GREEN qPCR MasterMix Plus for SYBR® Assay Low ROX – 15 ml	RT-SY2X-06+WOU LR	600		X					X
MESA GREEN qPCR MasterMix Plus for SYBR® Assay Low ROX – 50 ml	RT-SY2X-20+WOU LR	2000		X					X
MESA GREEN qPCR MasterMix Plus for SYBR® Assay No ROX – 7.5 ml	RT-SY2X-03+NRWOU	300				X			
MESA GREEN qPCR MasterMix Plus for SYBR® Assay No ROX – 15 ml	RT-SY2X-06+NRWOU	600				X			
MESA GREEN qPCR MasterMix Plus for SYBR® Assay No ROX – 50 ml	RT-SY2X-20+NRWOU	2000				X			
MESA GREEN qPCR MasterMix Plus for SYBR® Assay w/ fluorescein – 7.5 ml	RT-SY2X-03+WOU FL	300			X				
MESA GREEN qPCR MasterMix Plus for SYBR® Assay w/ fluorescein – 15 ml	RT-SY2X-06+WOU FL	600			X				
MESA GREEN qPCR MasterMix Plus for SYBR® Assay w/ fluorescein – 50 ml	RT-SY2X-20+WOU FL	2000			X				

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MESA GREEN qPCR MasterMix Plus for SYBR® Assay

Maximize and Enhance your SYBR® Assay



Discover our new MESA GREEN reagents, to improve your qPCR SYBR® Green I results and illuminate your research

- Superior sensitivity - clean detection of low-copy targets
- Increased specificity - minimize non-specific amplification
- Maximum consistency and reproducibility - ensure consistent results over a broad range of targets
- High performance for your Real-Time thermocycler

Our new generation of SYBR® Green reagents the MESA GREEN qPCR MasterMix Plus for SYBR® Assay, will allow you to achieve reliable, consistent and accurate Real-Time qPCR results. Our new MESA GREEN MasterMix contains our newly designed hotstart enzyme, "MeteorTaq", that will ensure, together with its newly formulated buffer, maximum specificity and sensitivity for your Real-Time qPCR SYBR® Green assay.

Brighter fluorescent signals!

The new buffer formulation together with all the different components of the qPCR reaction including the SYBR® Green double-stranded dye has been optimized to reduce PCR inhibition and will yield brighter fluorescence intensity (Figure 1 & figure 2D).

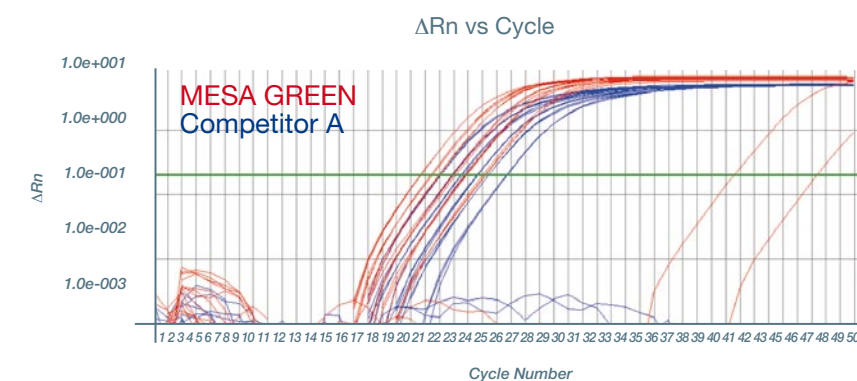
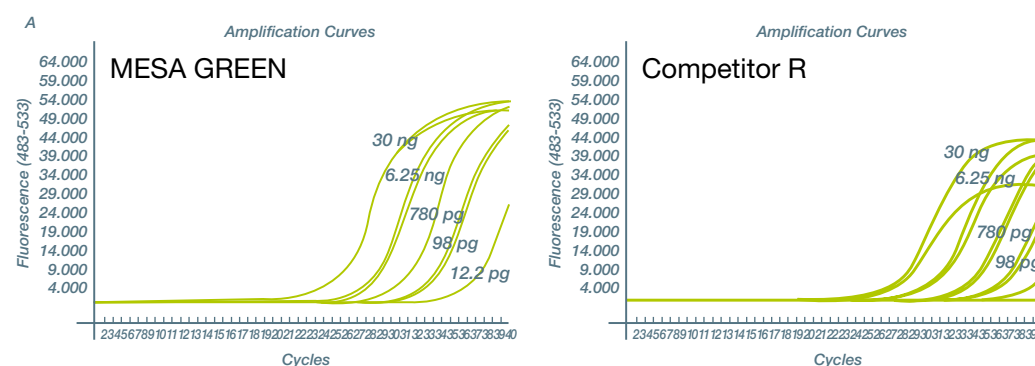


Figure 1: Increased fluorescence and sensitivity using MESA GREEN qPCR MasterMix Low ROX for SYBR® Assay on an ABI 7500 Fast. Comparison between MESA GREEN qPCR MasterMix Plus for SYBR® Assay Low ROX and competitor A SYBR® Green kit. Experiment was performed using the same primers and cDNA on an ABI Prism® 7500 fast. Eurogentec NEW MESA GREEN MasterMix showed better sensitivity, earlier Ct values, higher ΔRn and steeper amplification curves compared to competitor A SYBR® Green reagent.



Superior sensitivity!

Our MESA GREEN SYBR® reagents show increased sensitivity, earlier Ct values and clean low copy detection over a broad dynamic range (figure 2). Our newly engineered chemically modified HotStart Taq polymerase, the MeteorTaq, together with its newly optimized buffer formulation will ensure detection as low as 10 pg of human genomic DNA.



Input quantity	30 ng	6.25 ng	780 pg	98 pg	12.2 pg
RB1					
Competitor R	26.1	29.5	33	36.1	Not detected
Competitor A	23.7	26.9	29.8	32.8	Not detected
MESA GREEN	22.5	26.1	29	32.2	35.9

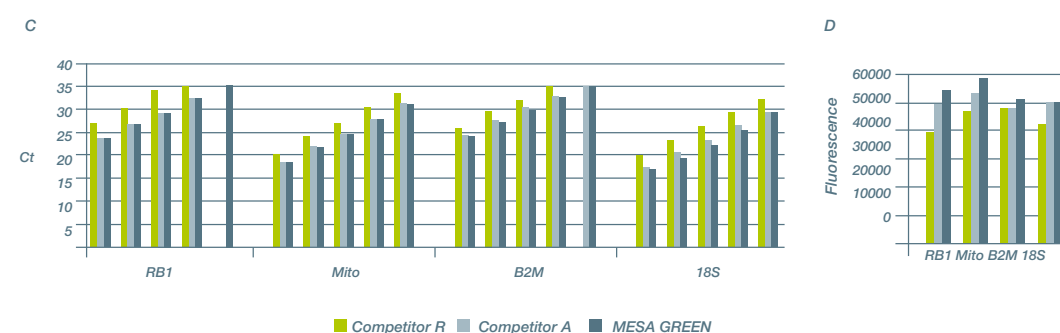


Figure 2: MESA GREEN qPCR MasterMix Plus for SYBR® Assay No ROX shows increased sensitivity over a broad range of targets. Four genomic DNA targets were amplified on the LC480 using 3 different MasterMixes. A-Comparison between MESA GREEN qPCR MasterMix Plus for SYBR® Assay No ROX and competitor R SYBR® Green kit. Experiment was performed using RB1 primers and the same cDNA on a LC480 using the following cycling protocol (5 min 95 °C; 40 cycles: 3 sec 95 °C / 45-60 sec 60 °C). Eurogentec NEW MESA GREEN MasterMix No ROX showed better sensitivity, earlier Ct values, higher ΔRn, steeper amplification curves and amplified one more dilution compared to competitor R SYBR® Green reagent. B&C- Ct values amplification of four different target genes with MESA GREEN qPCR MasterMix for SYBR® Assay No ROX and competitor A and R reagents. D- The MESA GREEN qPCR MasterMix for SYBR® Assay exhibits stronger fluorescence intensity over four target genes.



Increased specificity!

Our MeteorTaq, is a newly chemically modified Taq, which promotes and ensures maximum specific amplifications after only 5 minutes of activation; this is done by minimizing the formation of non-specific products or primer dimers (figures 3 & 4). As specificity is the critical factor in a SYBR® Green assay, the MESA GREEN MasterMixes will ensure the most reliable results even with the presence of highly diluted, low template quantities. Good discrimination between low copy target and non-template control will be consistently obtained.

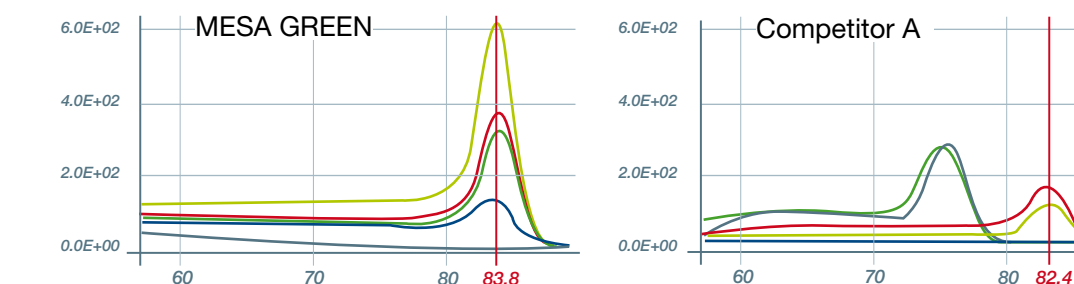


Figure 3: Highly specific results with low expressed target genes using the MESA GREEN qPCR MasterMix Plus for SYBR® Assay. Comparison between MESA GREEN qPCR MasterMix Plus for SYBR® Assay and competitor A SYBR® kit. Experiment was performed using the TBP primers (low expressed gene) using same cDNA on an ABI Prism® 7700. Eurogentec NEW MESA GREEN MasterMix showed better sensitivity and amplified one more dilution and less primer dimers compared to competitor A SYBR® Green reagent.

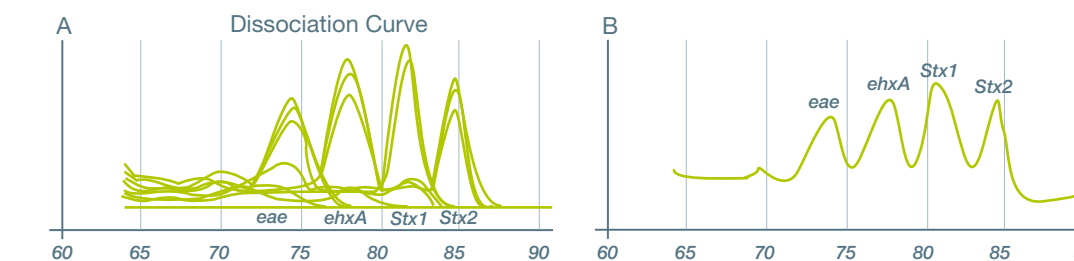


Figure 4: Molecular typing of Shiga-toxin producing E. coli using multiplex real time PCR - China, B - University of Liège, Faculty of Veterinary Medicine, Food Sciences Department, Belgium. The aim of this study was to develop a multiplex Real-Time PCR system allowing to detect the presence of the following genes: eae, stx1, stx2, ehxA in one STEC strain using the MESA GREEN qPCR MasterMix Plus for SYBR® Green Assay on an ABI 7000. A- Shows individual pics for each amplicon. B- Shows multiplex amplification for a single DNA coming from a eae stx1 stx2 ehxA strain.

Now, no compromise between carry-over prevention and maximal sensitivity

We offer 2 types of MasterMixes:

Sensitive MESA GREEN MasterMixes with a safety net

Our MESA GREEN MasterMixes include a dNTP/dUTP mix, which makes them compatible with Uracil-N-Glycosylase. Carry-over prevention requires the addition of UNG in the mix and to have amplicons that contain U's. This is why our buffer contains a dNTP/dUTP nucleotide mix, which is optimized to allow carry-over prevention, without any loss of sensitivity.

MESA GREEN MasterMixes with extra sensitivity

Our MESA GREEN MasterMix dTTP includes dNTP with only dTTPs (with No dUTPs). As the Taq polymerase prefers to incorporate naturally occurring dNTPs, this kit will produce more sensitive and more efficient results compared to a MasterMix containing a dUTP/dNTP blend.



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