

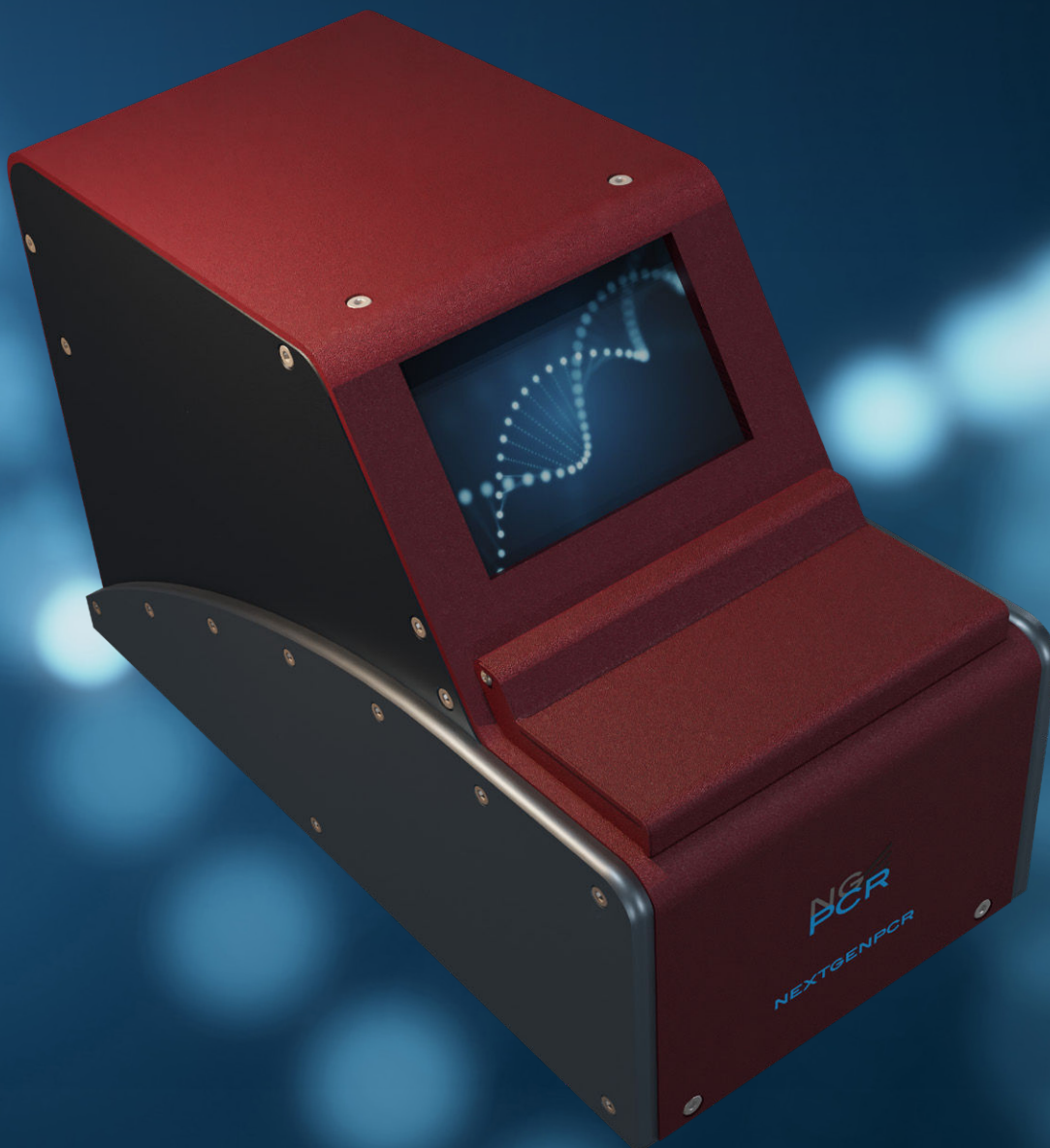
NEXTGENPCR

THE WORLD'S FASTEST THERMAL CYCLER

Innovative and patented heat/cool technology

Molecular Biology Systems has managed to build the **fastest** thermal cycler.

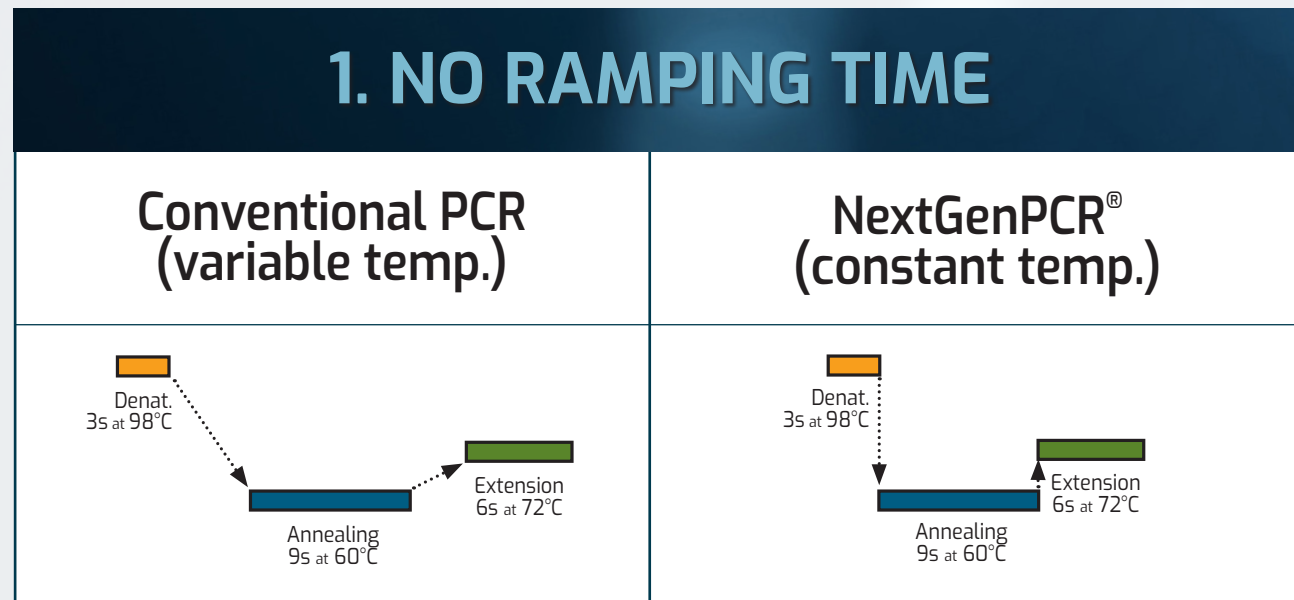
The **NextGenPCR**[®] machine is a thermal cycler that uses innovative and patented heat/cool technology to perform **ultra fast** PCR, up to 30 cycle, 3 temperature PCR, **in as little as 2 minutes.**



HOW DOES IT WORK?

The NextGenPCR® innovation is based on three core principles that work in concert to create ultra fast PCR.

1. NO RAMPING TIME



In conventional PCR, a microplate is placed in a machine that heats and cools using Peltier elements. Peltier technology is used to heat and cool a metal block, which in turn heats and cools the microplate and its content. Nearly all thermal cyclers use Peltier technology, despite its lack of speed.

NextGenPCR® revolutionizes the way in which heat is transferred to and from the reaction mixes using three 'temperature zones' with a constant temperature. The zones correspond with the set denaturing, annealing and extension temperatures.

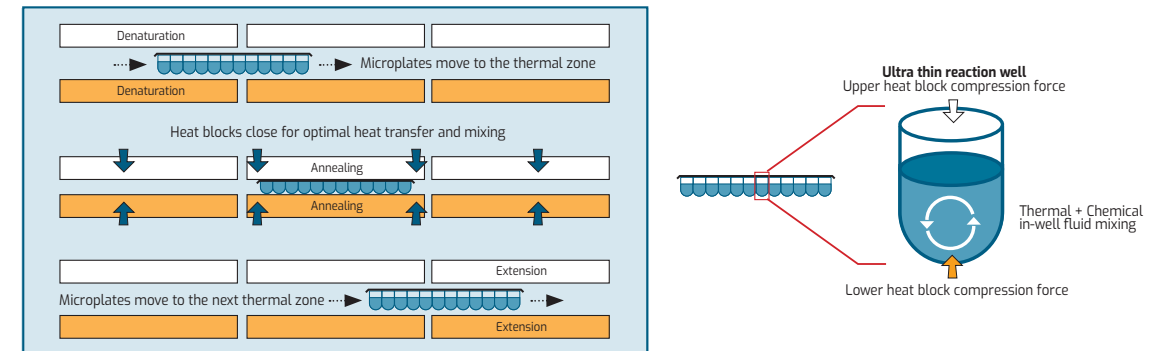
Samples go from denaturing to annealing temperature in practically no time.

PCR times range from 2 to 10 minutes for 30 cycles over 3 temperatures.

"NextGenPCR® technology results in complete removal of the temperature ramping times during which the Peltier elements heat and cool the heating block, **saving up to**

70% of the time required to complete each cycle."

2. ULTRA THIN POLYPROPYLENE



NextGenPCR® technology uses SBS-format microplates. The plates are sealed with heat seals creating wells that can be compressed by the heat blocks in each temperature zone. Compression has several beneficial effects to the speed and precision of the PCR reaction.

Compressing the wells causes thermal and chemical mixing of the samples. The innovative NextGenPCR® technology combined with ultra thin polypropylene, leads to immediate transition from denaturing to annealing temperature, resulting in ultimately precise annealing.

3. ULTRA FAST CHEMISTRIES

NextGenPCR® rapid DNA polymerase chemistries speed up nucleotide incorporation rates to the max. Successful amplification in PCR is dependent on the quality and speed of the DNA polymerase. MBS provides several ready-to-use master mixes that can incorporate up to 10kb nucleotides per second with excellent accuracy.

Using NextGenPCR® chemistry any PCR assay can be converted to work with the NextGenPCR® Machine and run much faster. Read more about the NextGenPCR® product line and technology on our website: www.nextgenpcr.com

"By combining the three core principles, NextGenPCR® delivers the fastest PCR."

We can't meet
the **speed**
of light

Save
time

Save
energy

Save
cost



But we can do
really fast PCR!

IMPROVED CONSUMABLES

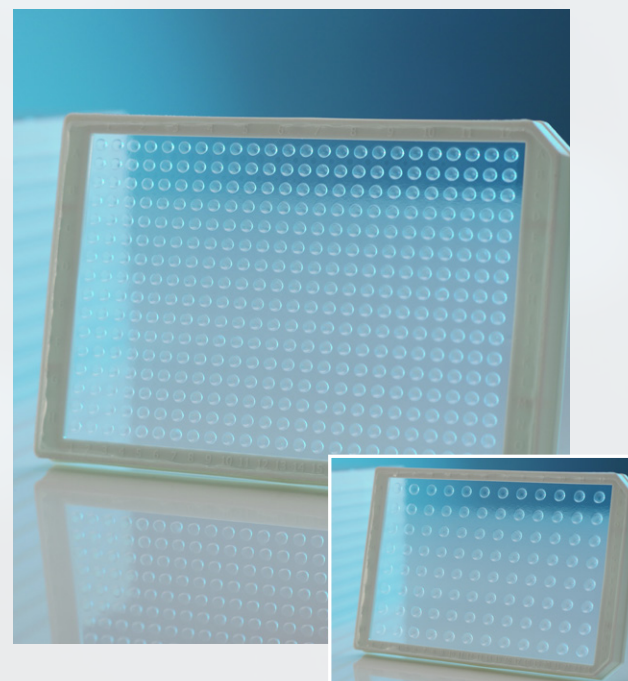
Besides a revolutionary system,
MBS offers you improved consumables



IMPROVED MICROPLATES

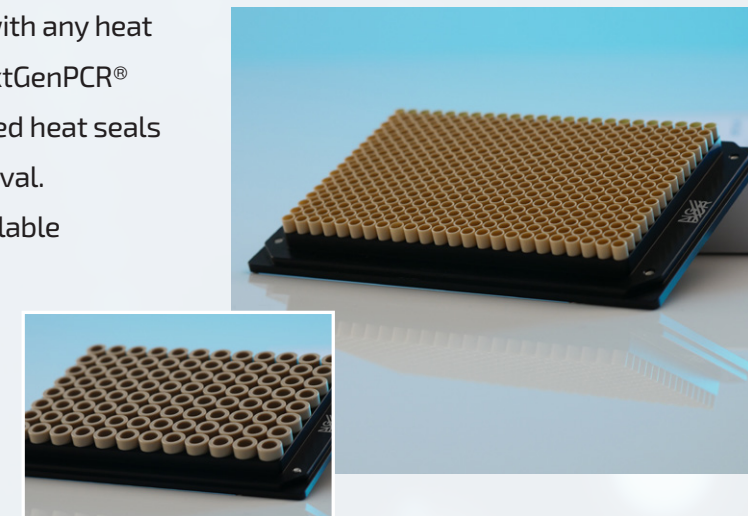
NextGenPCR® plates are made of ultra-thin polypropylene, creating ideal heat transfer. Samples reach set temperatures instantly. The low weight of the plates, and the low energy use of the cycler creates a very small environmental footprint.

The plates are available in 96 and 384 well format. Using the same frame all plates fit one and the same thermal cycler. Plate volumes range from 2 to 20 µL.



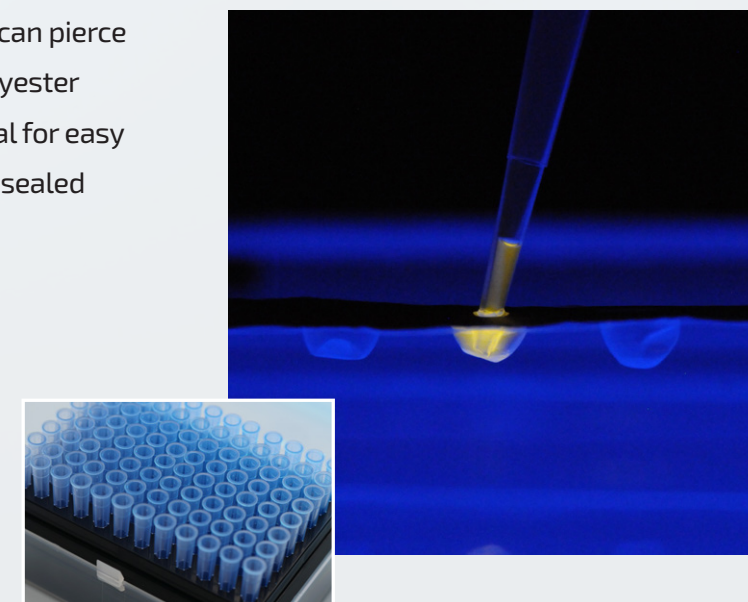
IMPROVED SEALING

The well plates can be sealed with any heat sealer and a corresponding NextGenPCR® anvil. MBS has aluminium backed heat seals available for easy sample retrieval. Polyester backed seals are available to allow fluorescent reading.



IMPROVED PIPETTE TIPS

MBS pipette tips are sharp and can pierce both aluminium backed and polyester backed heat seals. They are ideal for easy recovery of PCR-products from sealed microplates.



Moreover: decrease your energy costs substantially

The ultra fast PCR thermal cycler is a durable solution. MBS plates contain almost 4 times less plastic, and use up to 160 times less energy per PCR reaction compared to other thermal cyclers.

NEXTGENPCR



MBS MOLECULAR BIOLOGY SYSTEMS

Accelerate your work flow with NextgenPCR®