eppendorf

Increase Flexibility

Improve the precision and reproducibility of your PCR setup and normalization

Precision Counts

Once a quantum jump in science, nowadays a standard method: PCR. Nevertheless, PCR setup requires precision and the miniaturization of sample volumes enhances this challenge. Pipetting highly affects the precision of the result, but due to human nature, reproducibility is influenced by changes in daily behavior or mood. Furthermore, the workload in labs is increasing and time for other, non-routine tasks is precious.

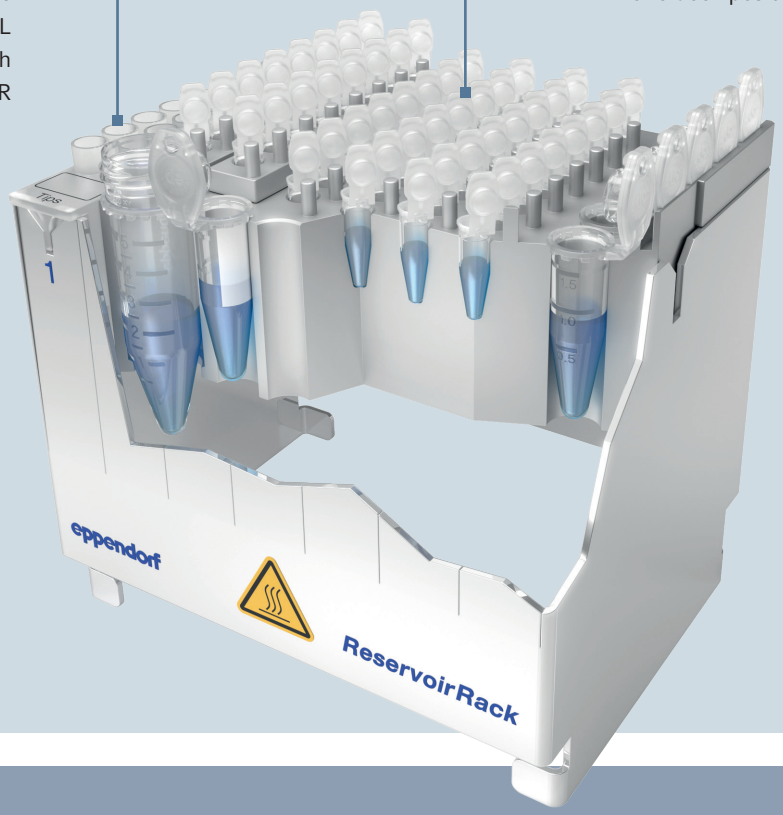
Another tedious, error-affected task is normalization because of numerous pipette volume adjustments and the high concentration level needed by the operator to pipette a full plate.

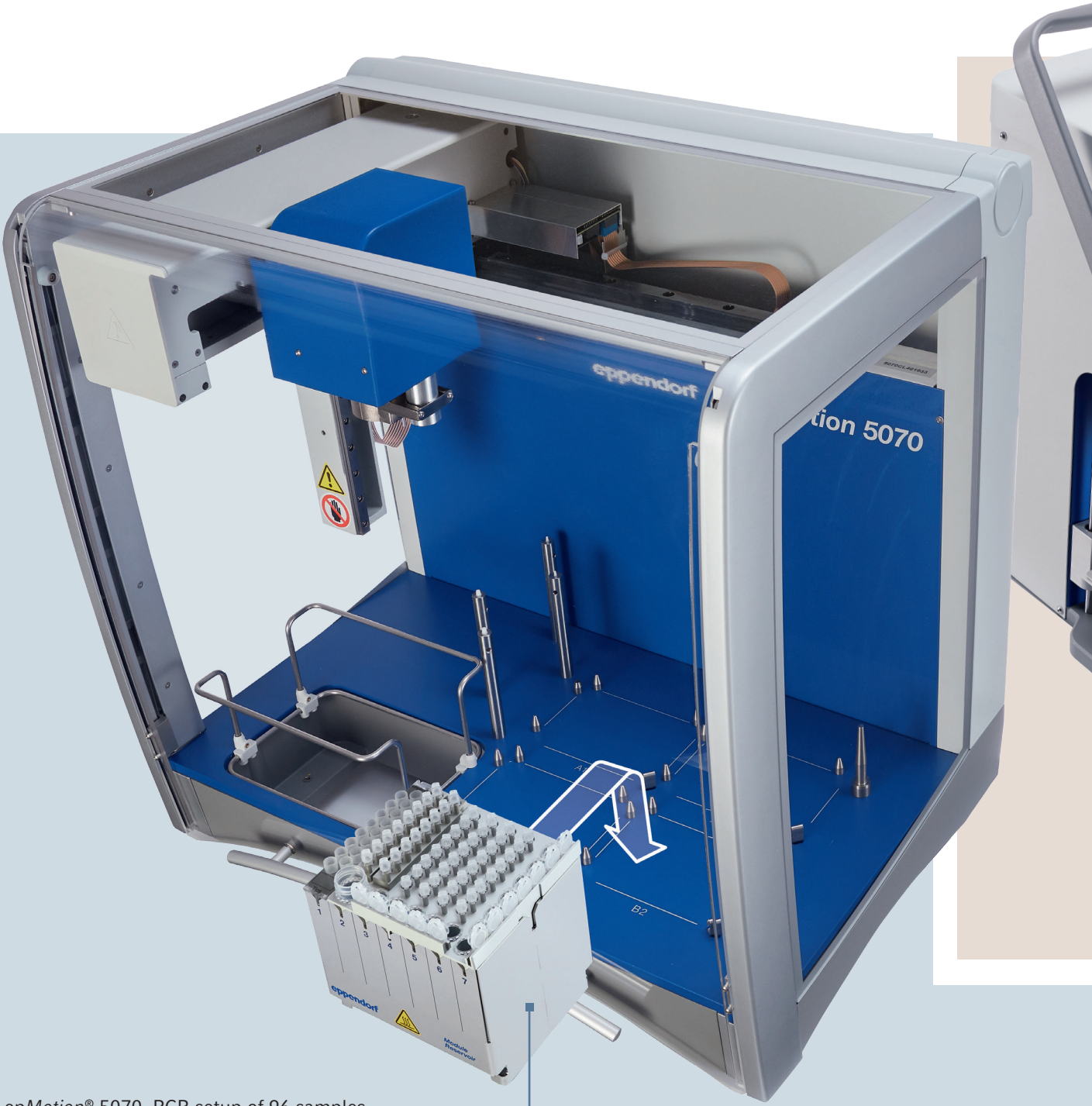
You have various options to improve your daily pipetting, like using electronic pipettes which guarantee higher reproducibility than manual pipettes. You can speed up your work and reduce the risk of repetitive strain injury.

If you want to go for the highest possible reproducibility and ease of mind, give your routine and pipetting intense tasks to a liquid handling workstation, the ep*Motion*. Fitting on every bench, equipped with save spacing accessories and easy method programming allow you to hand over tedious tasks and free up your time for other challenges.

No more tip box exchanges:
> Load the tips you need: each Reservoir Rack Module Tips holds up to 16 tips
> Usable with tip volumes 10, 50, 300 and 1,000 µL
> Combine the module with Reservoir Rack Module PCR

Free up deck space:
> Reservoir Rack Module PCR adapts to your needs and holds tubes, PCR strips and reagents together in one deck position

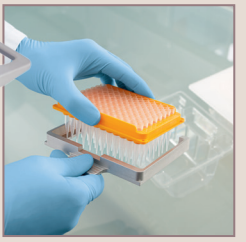




With the ep*Motion*® 5070, PCR setup of 96 samples in parallel is reliable and easy. The new modular Reservoir Rack Module PCR enables storage of reagents, consumables and tips together on one deck position and thus increases deck space available for PCR or sample plates. Automated processing of full protocols with minimal user-intervention increases your walk-away time. Additionally, the epBlue™ software PCR assistant helps you to get your protocols running in no time.

Optimize your deck with intelligent accessories holding multiple tubes, reagents and tips.

Full plate handling on a super-small footprint: ep*Motion*® 96 and 96xl



If you work with 96 or 384-well plates simultaneously, a small 96-channel liquid handler usable in or outside the biosafety cabinet is the solution for increasing precision, plate conformity and speed for:

> Magnetic bead-based nucleic acid purification
> Magnetic bead-based PCR clean up
> PCR setup
> Plate reformatting

Touch control via Apple® iPod® touch and the ep*Motion* 96 App enable easy, intuitive handling. Programming of full protocols using different pipette modes, such as multi-dispense, aspirate, pipette and mix, and small volume pipetting, simplify complex workflows.
You may also use ep*Motion* 96 as a feeder for your larger liquid handling workstations when pre-filling full plates with medium, buffer or Mastermix to reduce pipetting steps.

Simplify your:
> PCR setup
> Normalization
> Hit /Cherry picking
> Dilution series
> Plate reformatting

Your benefits:
> Highly reproducible and comparable results
> Automated reagent and sample pipetting
> Protect your arm from RSI* and reduce pipetting errors
> Skip the routine and spend time with more important tasks

* Repetitive Strain Injury occurs after long pipetting series and can lead to pain, loss in strength and inability to work.

Ideal concentrations of components to optimize your PCR setup	
PCR component	**Optimization criteria**
DNA template	> High-quality and pure (value of 1.8 at A260 nm) > 1 pg–1 ng plasmid, or viral DNA > 1 ng–1 µg genomic DNA
Primer	> 20–30 nucleotides > GC content 40–60 % > Annealing temperatures should be similar (max. 5 °C deviation) > Primer concentration 0.05–0.5 µM > Avoid hairpins
Magnesium concentration	> 1.5–2.0 mM are optimal for Taq Polymerase > Mg^{2+} is too low: no PCR product visible > Mg^{2+} is too high: false PCR products or smear
Desoxynucleotides	> 200–400 µM of each dNTP > 50–100 µM increases specificity, but reduces yield > Concentrations >400 µM increase yield, but reduce specificity
DNA polymerase	> 1.25–1.5 units Taq Polymerase for 50 µL reaction volume

Description	Ordering no.
ep*Motion*® 5070 EasyCon, completely contained housing, system incl. EasyCon, epBlue™ software, mouse, waste box, 100–240 V ±10 %/50–60 Hz ±5 %, 0.2 µL–1 mL	5070 006 032
ep*Motion*® 5070 MultiCon, completely contained housing, system incl. MultiCon, epBlue™ software, keyboard, mouse, waste box, 100–240 V ±10 %/50–60 Hz ±5 %, 0.2 µL–1 mL	5070 000 282
Reservoir Rack Module PCR, for PCR vessels and reagents	5075 751 933
Reservoir Rack Module Tips (set of 7 pieces, each tip module holds 16 tips)	5075 751 950
Mastercycler® X50s, 100–240 V/50–60 Hz (GB), silver block, 96-well plate or 0.1/0.2 mL tubes, with touch screen interface	6311 000 045
Eppendorf twin.tec® PCR Plate 384, skirted, 40 µL, PCR clean, colorless, 25 plates	0030 128 508

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