DreamPrep™ NGS Compact.

TECAN.

TECAN Automated NGS Library Preparation Portfolio

FROM PLUG&PLAY TO HIGHLY FLEXIBLE SOLUTIONS

MagicPrep NGS

Throughput: 8 samples per run
Plug&Play
TECAN NGS reagents only

DreamPrep NGS Compact

Throughput up to 48 per run
Open platform
Optimized for Tecan NGS reagents

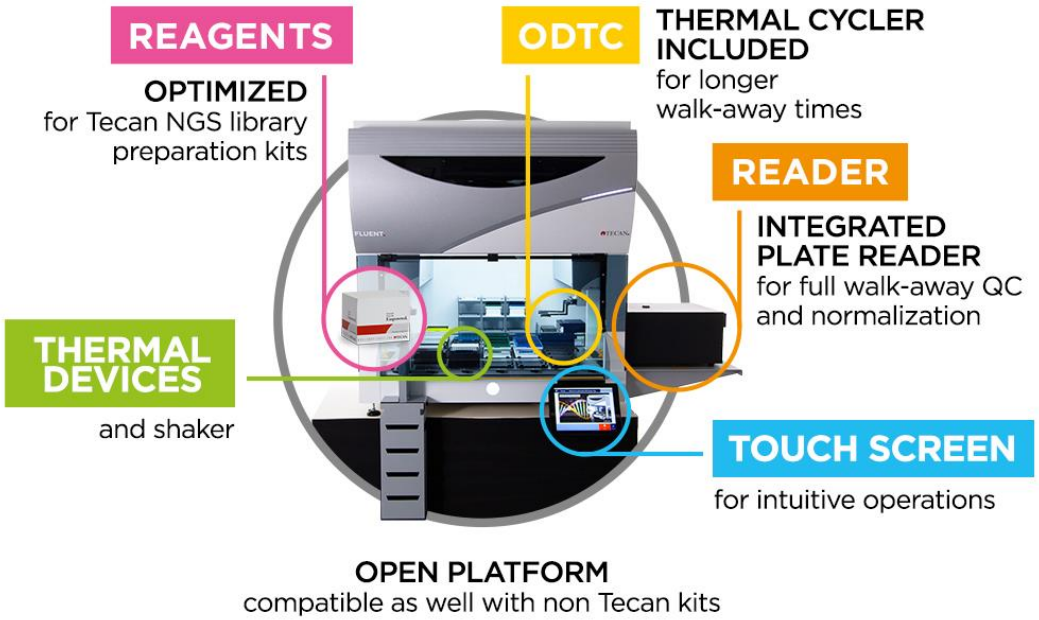
DreamPrep NGS

Throughput up to 192 per run
Open platform
Optimized for Tecan NGS reagents

TECAN IS YOUR SINGLE POINT OF CONTACT FOR NGS SAMPLE PREP
Automation · NGS Reagents · Consumables · Application Support · Troubleshooting & Service

DreamPrep NGS Compact

A SUPERIOR LEVEL OF AUTOMATION IN A SMALLER FOOTPRINT



Optimal performance with **Tecan NGS reagents** for faster and more efficient workflows

Intuitive and user-friendly interface empowers your daily operations

QC and normalization **without sample loss** in 6 minutes with the integrated reader and Tecan's NuQuant® technology

Longer walk-away times enabled by the on-deck thermal cycler

Optimized chemical performance allowed by temperature-controlled reaction

DreamPrep NGS Compact

FEATURING TECAN GENOMICS NGS LIBRARY PREPS

- **Walk-away solution for low-mid throughput NGS library preps**
  DNA-seq libraries quantified, normalized and ready to sequence in a low-medium-throughput format.

- **Tecan's NuQuant® technology for integrated library QC in less than 6 minutes with no sample loss**
  Measure 96 samples simultaneously in the final plate with no sample transfer.

- **User friendly interface & system performance monitoring**
  Intuitive touchscreen operation to reduce operator training. Introspect™ software is tracking your system productivity, incl. runtime, consumable usage and error rates.

- **DreamPrep NGS Compact fits in every lab** and offers unprecedented accuracy for automated library preparation and quantification with Tecan Genomics reagents in a mid-throughput automation format.

Choose your DreamPrep NGS Compact configuration.

Three configurations available

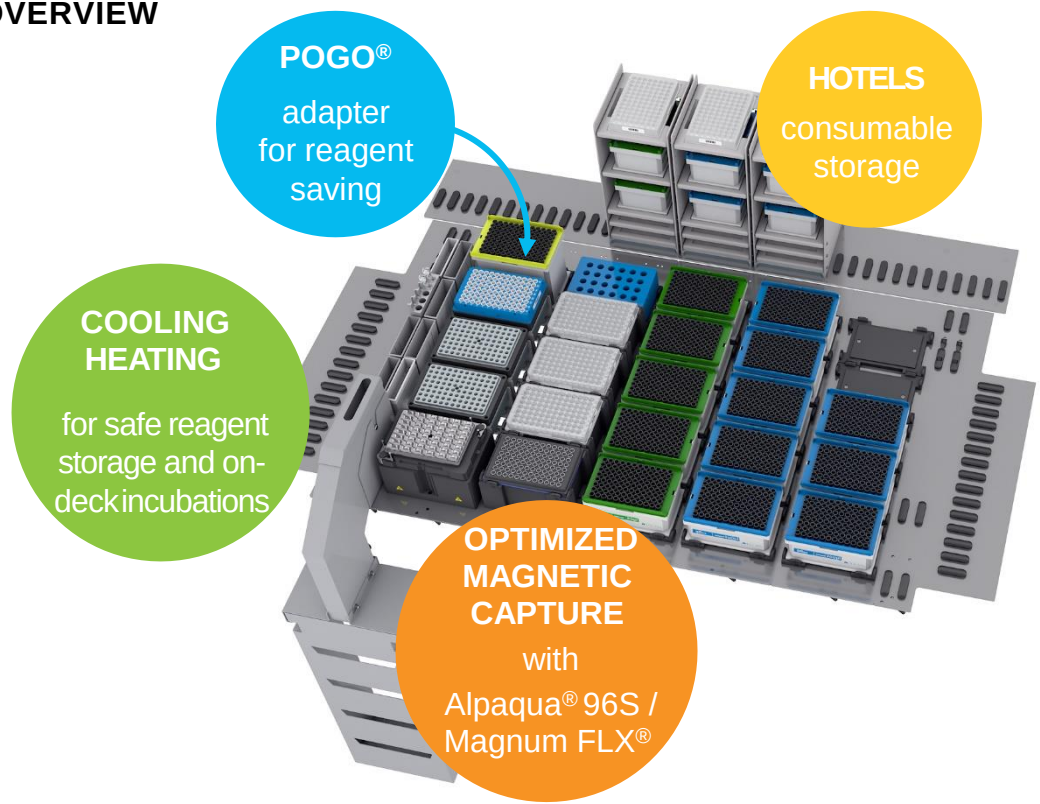
Basic
Increase your productivity

Mid
Extend your walk-away time

Full
Integrate Quant/Norm workflows

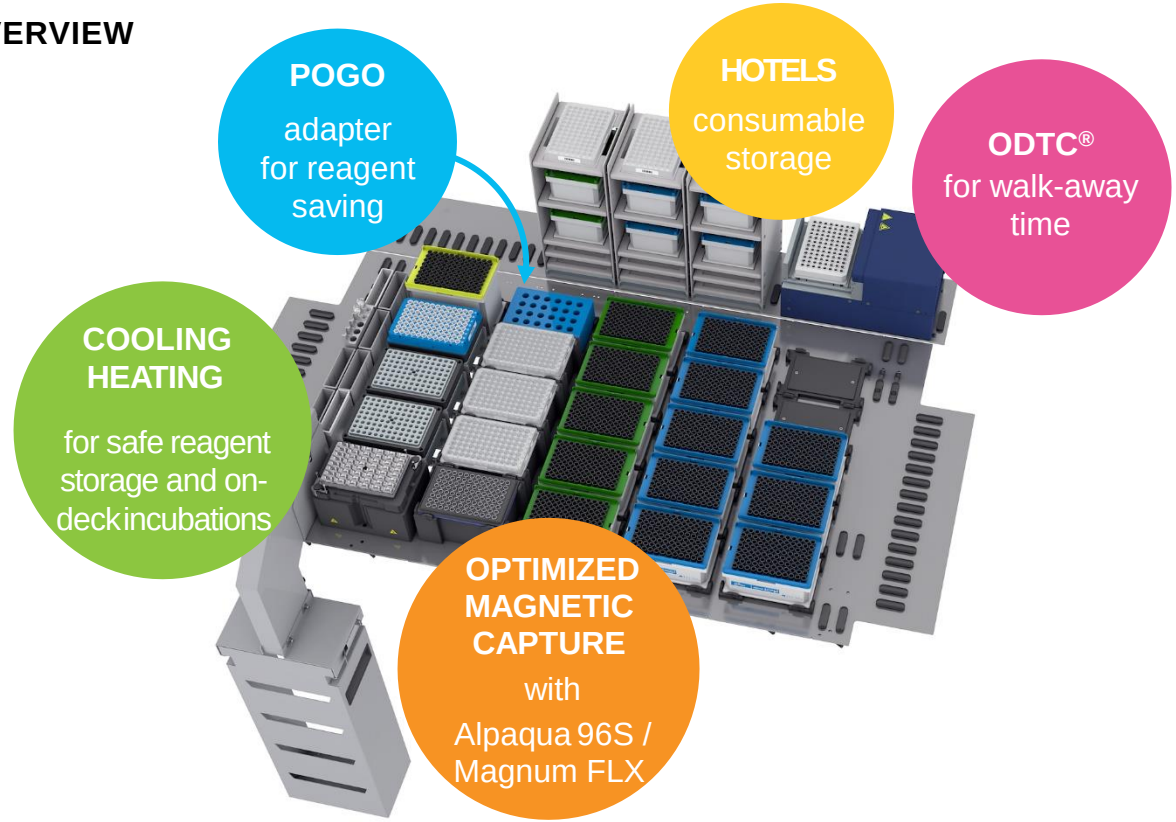
DreamPrep NGS Compact

BASIC WORKTABLE OVERVIEW



DreamPrep NGS Compact

MID WORKTABLE OVERVIEW



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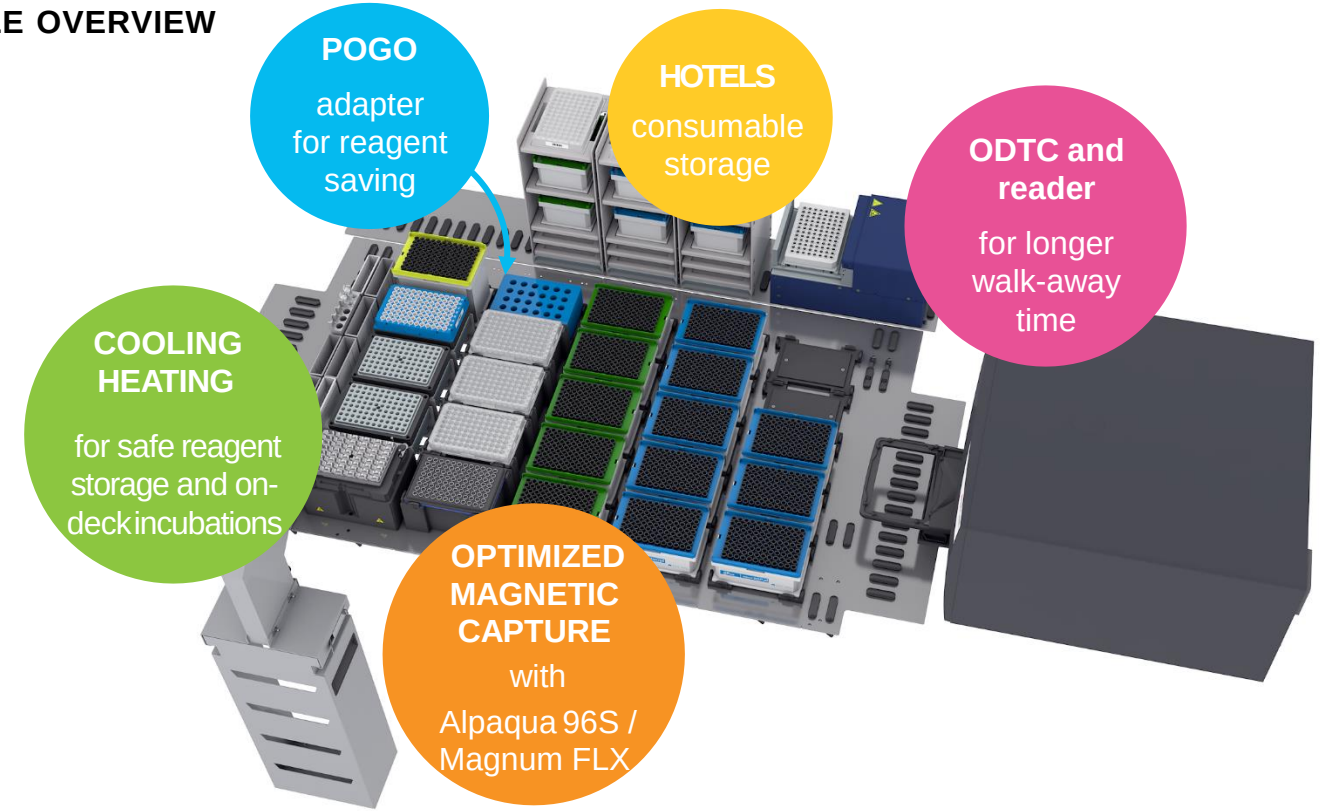
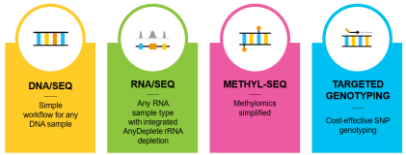
DreamPrep NGS Compact

FULL WORKTABLE OVERVIEW



DreamPrep NGS Compact

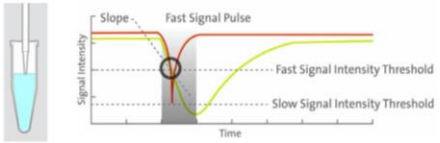
HIGHLIGHTS



Open Platform 1

8 independent channels 2
Precision
Flexibility
Speed

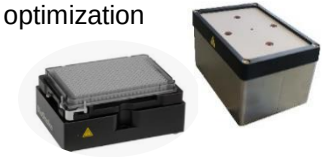
AST™ (Next-gen liquid level detection) 3
Minimize dead volumes



Fluent® GX & Magellan™ 9
Traceability
Monitoring

Fluent Gx **Assurance Software**
(User Mgmt., Method approval, sample tracking, Electronics records, Audit tool)

4x active modules & accessories 4
Samples and reagents safety
Workflow optimization



User-friendly Interface 8
Intuitive interaction

Independent gripper 5
Workflow optimization
Speed
Integrations

Reader (DreamPrep NGS Compact Full) 7
Q&N integrated

Thermal cycler (DreamPrep NGS Compact Mid and Full) 6
Walk-away protocols

TECAN

DreamPrep NGS Compact

MODULAR SCRIPTING

NGS modules development

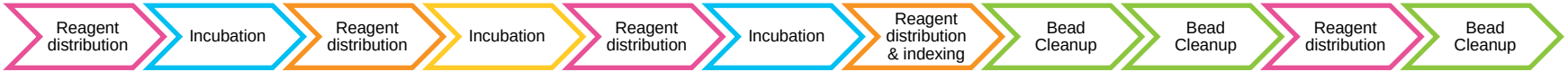
NGS workflows are based on the multiple repetition of similar steps throughout the same protocol and between protocols

Time saving using the already developed modules

1. Quick and easy run optimization
2. New workflow development in weeks rather than months

Workflow 1

Workflow 2



DreamPrep NGS Compact

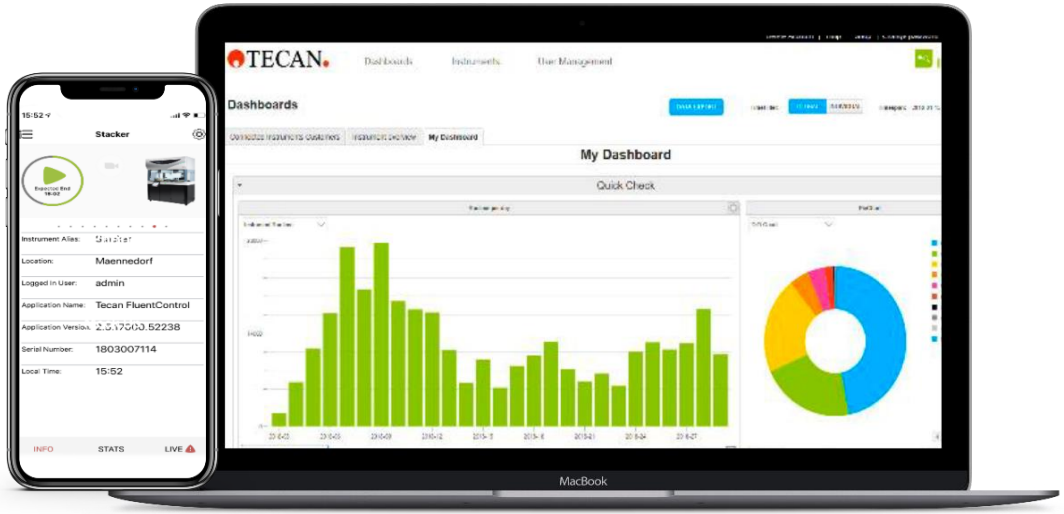
SOFTWARE PACKAGES

Fluent GX Assurance software for regulated environments.
Touchscreen-based everyday workflow interactions for fast onboarding of operator.
Advanced process security features (user management, sample tracking and more).

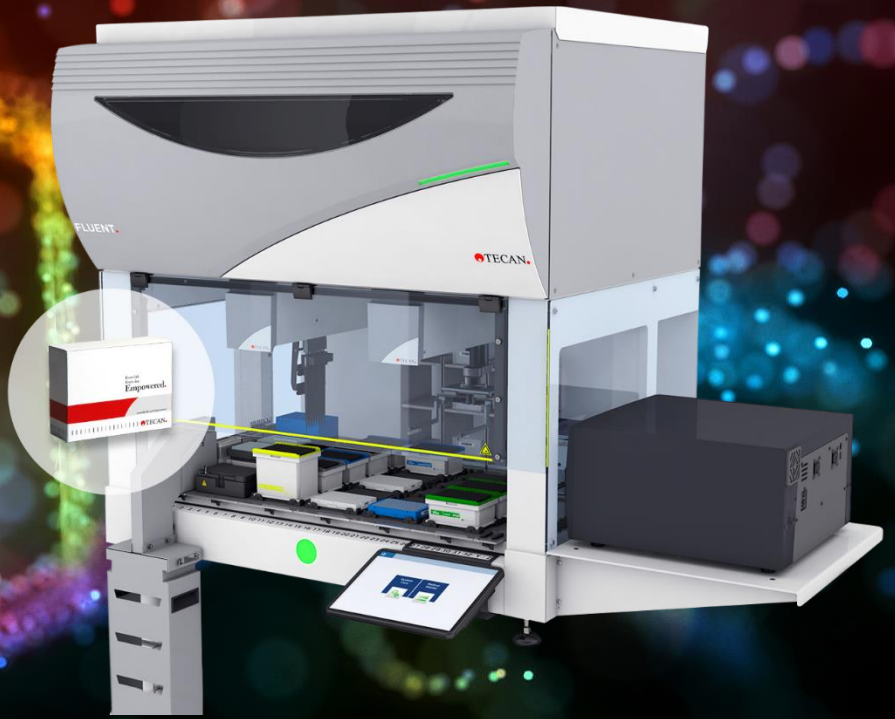
Tecan Connect™ app for remote monitoring of instrument status.

Introspect™ to receive valuable insights on your instrument usage and availability

1. Understand your system utilization
2. Increase productivity
3. Attain faster production and lower costs
4. Understand the cost of consumable usage
5. Reap the benefits of automated solutions
6. Get notified wherever you are



Arms &
Active Modules



TECAN FCA

FLEXIBLE CHANNEL ARM™ WITH 8 INDEPENDENT PIPETTING CHANNELS

Tecan FCA

- Automatic spacing from 9 - 38mm between labware formats
- Positional definition +/- 0.1mm in all axes for high density plate formats
- Teach-free 384-well access
- Patented* next-generation liquid level detection
- Access to 6 plates or tip boxes in depth

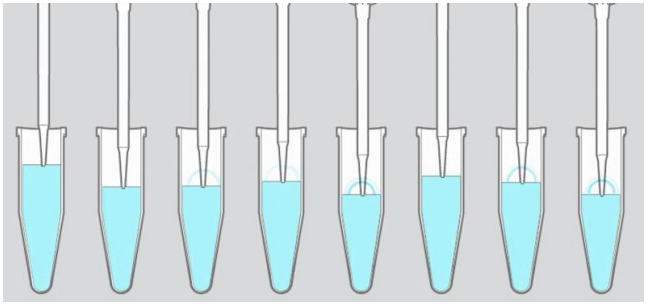
Feature	Description
Tip Ejection System	Designed to keep aerosols away from the deck area
In-line filter	• Protection against contamination • Safety stop in case of liquid infiltration into the channel • Pierce and aspirate • Plate seal piercing • Low maintenance • Just clean DiTi cones at end of day • High chemical compatibility (no sensitive o-ring on liquid path needing to be exchanged)
High-definition pipetting	0.5µl to 1000µl 0.5µl CV<5% at ± 10% accuracy 200µl CV<0.2% at ± 0.5% accuracy 6 x 5µl CV<6% at ± 5% accuracy

Adaptive Signal Technology™

NEXT-GEN LIQUID LEVEL DETECTION

- **Proprietary* safe & fast liquid detection**
- Double signal confirms each detection
- **Save sample and precious reagent**
- Calculation of liquid volume present
- Increased sensitivity
- Low dead volumes
- **Aspiration monitoring**
- **Liquid arrival check**

RELIABLE



Fluent offers a patented liquid level detection technology, independent for each channel and with increased sensitivity

* Link or refer to patents on www.tecan.com/intellectual_property/ patent_portfolios.

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TECAN RGA

ROBOTIC GRIPPER ARM™ FOR SAFE RESOURCES TRANSFER

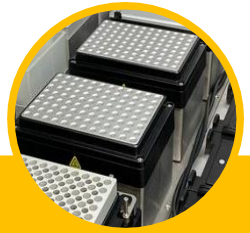
Tecan RGA

Move labware between worktable and periphery

Feature	Description
Fast, precise & quiet	• < 5 second average move • 360-degree continuous rotation
Eccentric gripper fingers	• Extend reach beyond pipetting work area for more device & storage access

INHECO CPLC

KEEPING REAGENTS AND SAMPLES ALWAYS AT THE RIGHT TEMPERATURE WITH THE COOLING / HEATING MODULES



INHECO CPLCs

- 3 modules for PCR plates

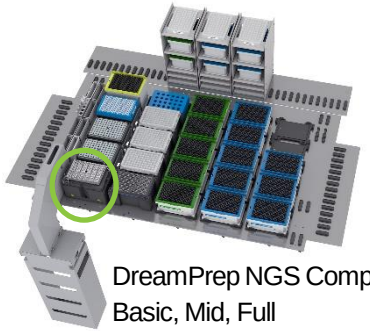
DreamPrep NGS Compact
Basic, Mid, Full

CPLC Model	Parameters
Input voltage / max. current	12Vdc / 4.5 A
Temperature range	+4°C to +70°C [+39.2°F to +158°F]
Temperature range ambient	15°C to +32°C [+59°F to 89.6°F]
Temperature cycling	no
Max reachable temperature difference in the heating mode	up to 80K
Max. reachable temperature difference in the cooling mode	up to 30K
Outer dimensions for length x width x height in mm	129 x 89 x 80
Weight incl. cord	approx. 1.0 kg

QInstruments® BioShake® 3000

MIXING REAGENTS IN THE MOST EFFICIENT WAY

QInstruments BioShake 3000
1 unit with the PCR plate adapter



DreamPrep NGS Compact
Basic, Mid, Full

BioShake 3000	Parameters
Outer dimensions for Length x width x height in mm	142 x 99 x 48.2 (5.59 x 3.897 x 1.8976 in)
Shaking Frequency	200 – 3000 RPM
Amplitude (mm)	2
Input	24Vdc
Environmental operating range	+5°C to 45°C
Relative humidity	80% max.

INHECO ODTC -

INCREASING WALK-AWAY TIME WITH THE THERMAL CYCLER INTEGRATION

INHECO ODTC
1 unit integrated
(Mid and Full configurations)

DreamPrep NGS
Compact Mid

DreamPrep NGS
Compact Full

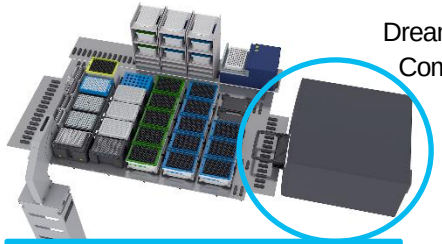
UPGRADEABLE FEATURE

ODTC 96 Model	Parameters
Temperature range	4°C to 99°C [39°F to 210°F]
Temperature accuracy	±0.3K @ 55°C [131°F]
Temperature uniformity	±0.2K @ 55°C [131°F] ±0.2K @ 72°C [162°F] ±0.2K @ 95°C [203°F]
Adjustable heating rate	from 0.1 to 4.4K/s
Adjustable cooling rate	from 0.1 to 2.2K/s
Heating rate average	max. 4.4K/s
Cooling rate average	max. 2.2K/s
Heated lid temperature	adjustable between 30°C to 115°C

TECAN Infinite® 200 PRO Reader

INTEGRATING NORM & QUANT STEPS FOR WALK-AWAY SOLUTIONS

Tecan Infinite 200 PRO Reader
1 unit integrated on the side of the deck
(Full configuration)



DreamPrep NGS
Compact Full

UPGRADEABLE FEATURE

Infinite 200 PRO F NANO+ Model	Parameters
Input voltage / max. current	12Vdc / 4.5 A
Temperature range	+4°C to +70°C [+39.2°F to +158°F]
Temperature range ambient	15°C to +32°C [+59°F to 89.6°F]
Temperature cycling	no
Max reachable temperature difference in the heating mode	up to 80K
Max. reachable temperature difference in the cooling mode	up to 30K
Outer dimensions for length x width x height in mm	129 x 89 x 80
Weight incl. cord	approx. 1.0 kg

Accessories

ALPAQUA® Ring Magnet Plates –

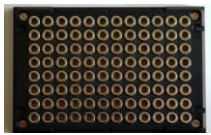
THE RIGHT MAGNET TO EACH PROTOCOL

1. **One dedicated magnet** for each well means fewer effects and greater uniformity of results.
2. Immobilized beads are spread over a larger area, improving subsequent resuspension and elution.
3. Near universal microplate compatibility. Post and bar magnets tend to be customized for specific well geometries.
4. Integrated **spring cushion technology** give way when tips come in contact with a well bottom, thus compensating for physical tolerances between labware and pipettors that can compromise precision aspiration:
    - Maximizes sample recovery & reagent usage
    - Improves pipetting consistency

Magnet Plate 96 MAGNUM FLX®

up to 4.5x faster separation than 96S

Sample volume range 2ml - 10µl



Magnet Plate 96S

Recommended reaction volume up to 1ml

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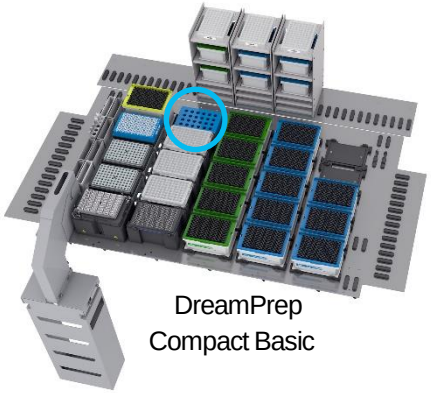
ALPAQUA® POGO

TO SAVE TILL THE LAST DROP OF EXPENSIVE REAGENTS

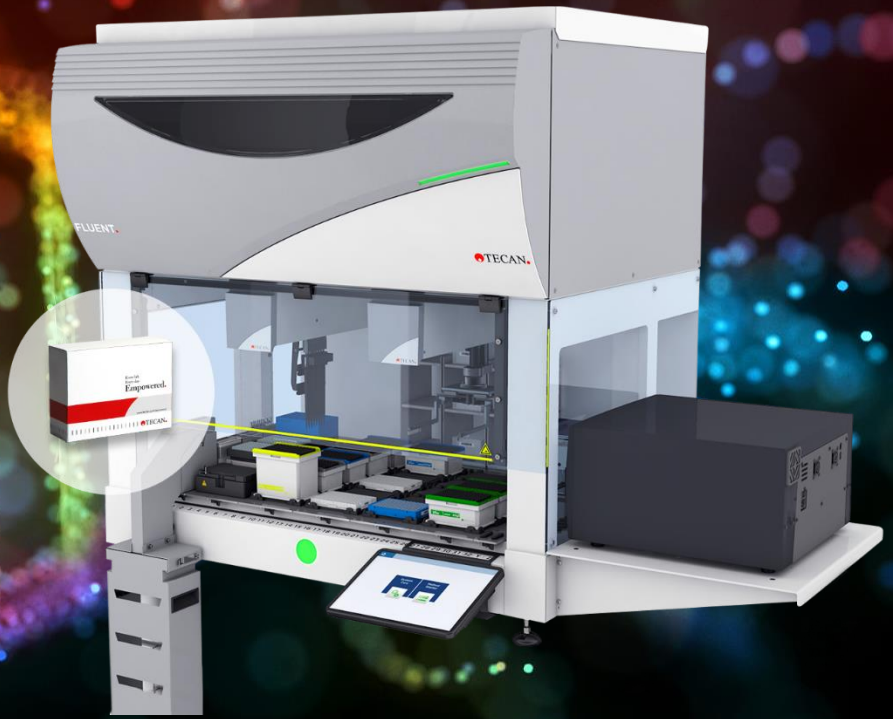
1. Solid aluminum for efficient cooling
2. 24 tube capacity
3. Compatible with many screw top vials
4. Spring Cushion Technology to maximize usage of precious reagents
5. Helps avoid tip crashes and occlusions

POGO 24 POS ADAPTER



DreamPrep
Compact Basic

Consumables



TECAN FCA Tips

1. Conductive & filtered
2. **Tecan Pure**: lot tested to ensure they are free of human DNA, PCR inhibitors, RNase and DNase
3. 2304 PCE. SBS
4. Does not come with SBS box (Boxes need to be purchased separately for 50µL long, 200µL and 1000µL)
5. For 50µl tips, please refer to the short format and you should use the 200µL liconic box (PN 10290318) to support them

DITI LiHa 50µL long (*PN 30057813*)

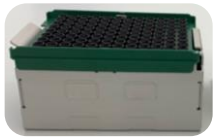
DITI LiHa 50µL short (*PN 30190578*)

DITI LiHa 200µL (*PN 30057815)*

DITI LiHa 1000µL (*PN 30057817)*

TECAN FCA Tip Boxes

1. **Tecan Standard** purity level: manufactured in a controlled environment with premium raw material
2. 10 PCE. SBS
3. Empty box



Liconic Box 200µL

PN 10290318

Empty box for DITI LiHa 50µL short

LiHa DITI SBS BOX Refill Small

PN 30058506

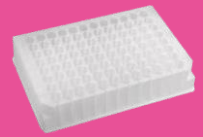
Empty box for 10µL, 50µL long and 200µL LiHa DITI

LiHa DITI SBS BOX Refill Large

PN 30058507

Empty box for 1000µL LiHa DITI

Other non-Tecan needed consumables



Nunc® 96-Well DW 2ml Plate

ThermoFisher Cat. No. 95040452

Nunc® 96-Well DW 1ml Plate

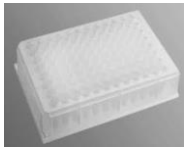
ThermoFisher Cat. No. 260251

Bio-Rad® hard shell PCR plates

Bio-Rad Cat. No. HSP9611

Sarstedt® 2.0ml SC Micro Tube PCR-PT

Sarstedt Cat. No. 72.694.406



Axygen® 96-Well DW 500µL Plate

P-96-450V-C-S:

- *Fisher scientific*
- *VWR*
- *Corning*

TECAN

Other non-Tecan needed consumables

REPLACEABLE SOLUTIONS

Bio-Rad arched auto-sealing lids

Bio-Rad Cat. No. MSL2032

(Re-usable, autoclave ✓)

Replaceable by

4titude/Brooks® lids

4titude/Brooks Cat. No. 4ti-0291

(Non-reusable)

In case of shortages, we can provide alternatives!

But please be aware that re-teaching is necessary and incompatibilities with magnets are also present

Bio-Rad hard shell PCR plates

Bio-Rad Cat. No. HSP9611

Replaceable by

FrameStar® 96 Well Skirted PCR Plate

Azenta Life Sciences®, 4ti-0960/B Blue Frame

Labware re-teaching is necessary
(incompatible with 96S magnet)

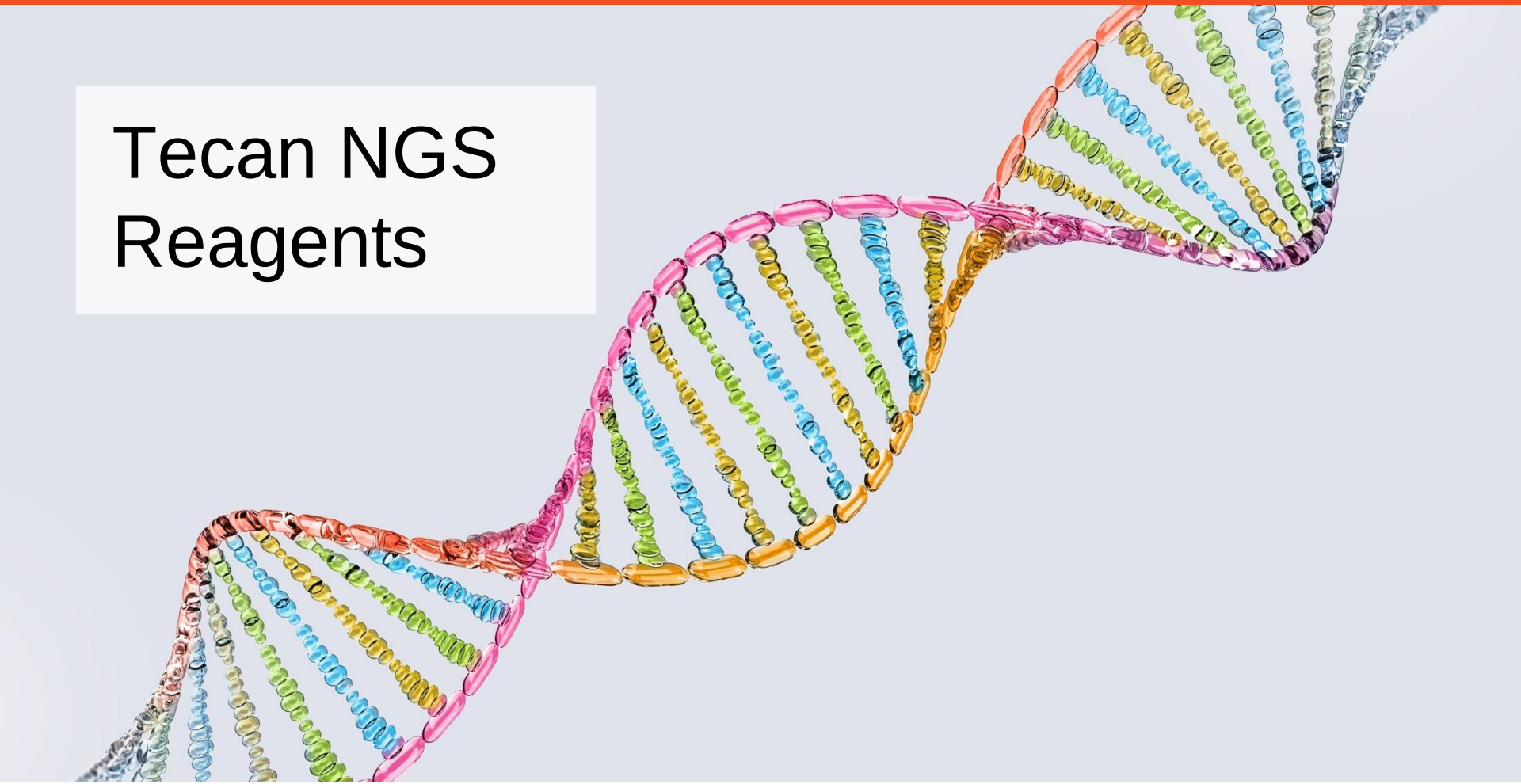
OR

Eppendorf® Twin.tec® PCR Plate 96 (skirted, colorless)

Eppendorf, Catalog No. 951020401

Labware re-teaching is necessary
(incompatible with 96S magnet)

Tecan NGS Reagents



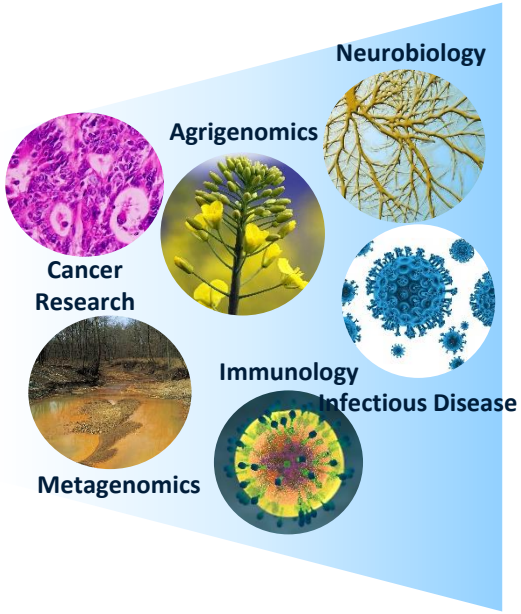
Innovative technologies for NGS library preparation kits

Any sample type

- Purified Nucleic Acids
- LCM
- Liquid Biopsy
- Fresh and Frozen Tissues
- FFPE
- Cell-free Nucleic Acids
- Single and Sorted Cells
- Cell Lines

Innovative solutions

Highly informative data for your research



TECAN.

Tecan provides library preparation solutions

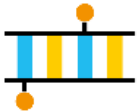
FOR A BROAD RANGE OF SAMPLE TYPES AND APPLICATIONS

DNA/SEQ

Simple workflow for any DNA sample

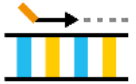
RNA/SEQ

Any RNA sample type with integrated AnyDeplete rRNA depletion



METHYL-SEQ

Methylomics simplified

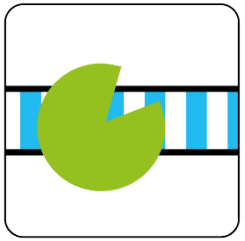


TARGETED GENOTYPING

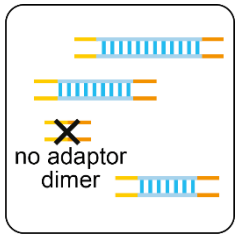
Cost-effective SNP genotyping

Combining core technologies in innovative products

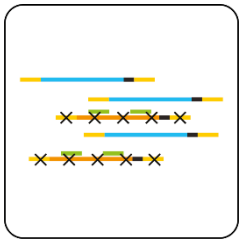
TO DELIVER MARKET LEADING SOLUTIONS



Enzymatic Fragmentation

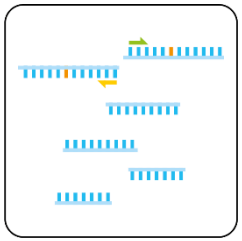


DimerFree®

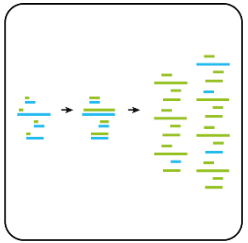


AnyDeplete®

NuQuant®



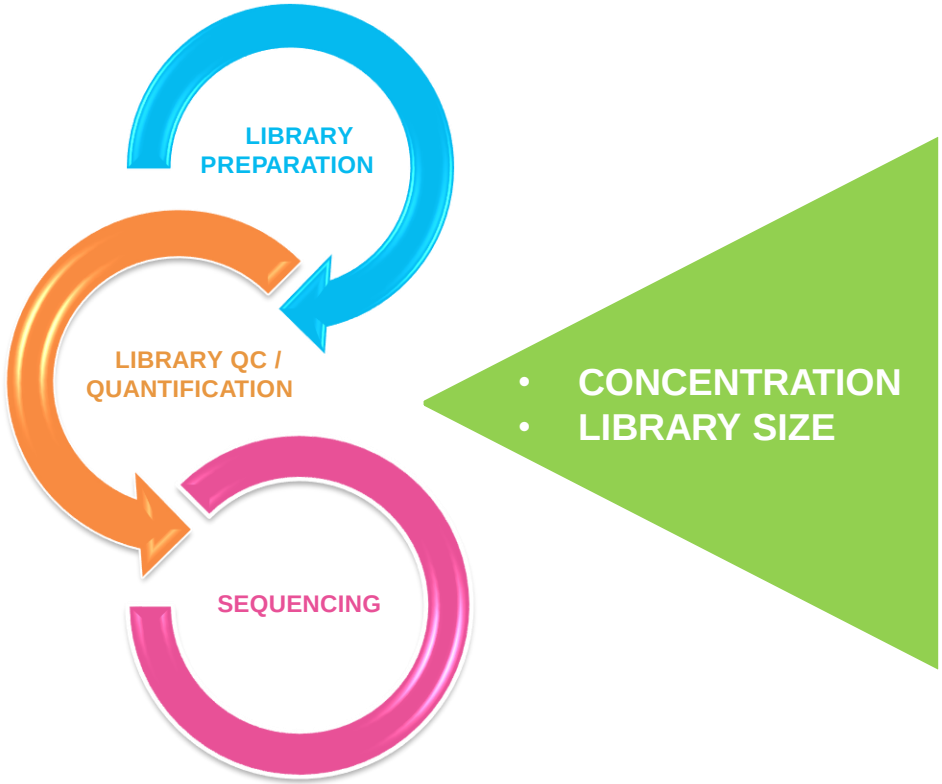
SPET™: **S**ingle **P**rimer **E**nrichment **T**echnology



SPIA™: **S**ingle **P**rimer **I**sothermal **A**mplification

TECAN.

NGS workflow for sequencing



QUBIT®

- Simple and fast
- Does not differentiate adaptor dimers
- Requires average library size in order to calculate molarity

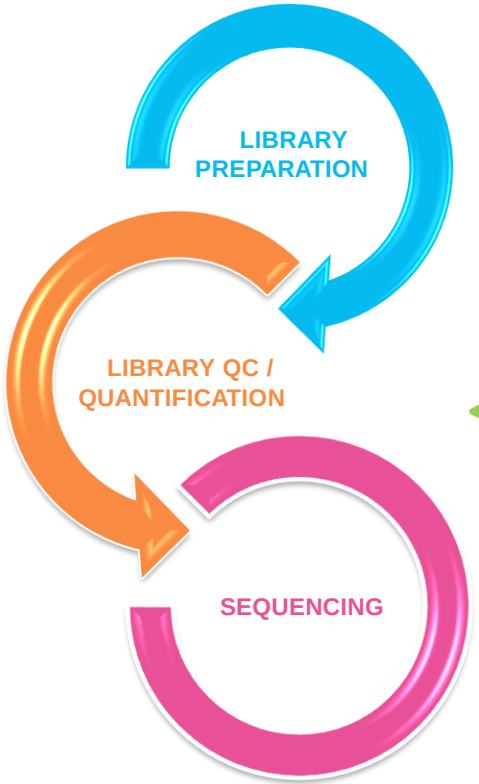
BIOANALYZER®

- Gives average size
- Can calculate molarity but can be variable

QPCR

- Calculates mass with intercalating dye
- Error prone with dilution of sample and standards
- Requires average library size to calculate molarity

Re-imagining the NGS workflow for sequencing



NUQUANT

- Integrated into the library preparation workflow
- Simple and fast fluorometric assay
- Direct calculation of library molarity
- Accurate multiplexing of libraries for sequencing

NuQuant

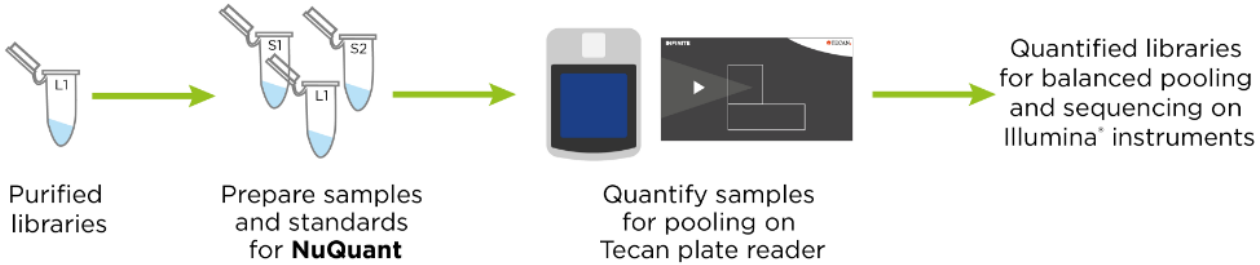
LIBRARY QC IN UNDER 6 MINUTES

Measures only sequenceable molecules unlike Qubit or Bioanalyzer

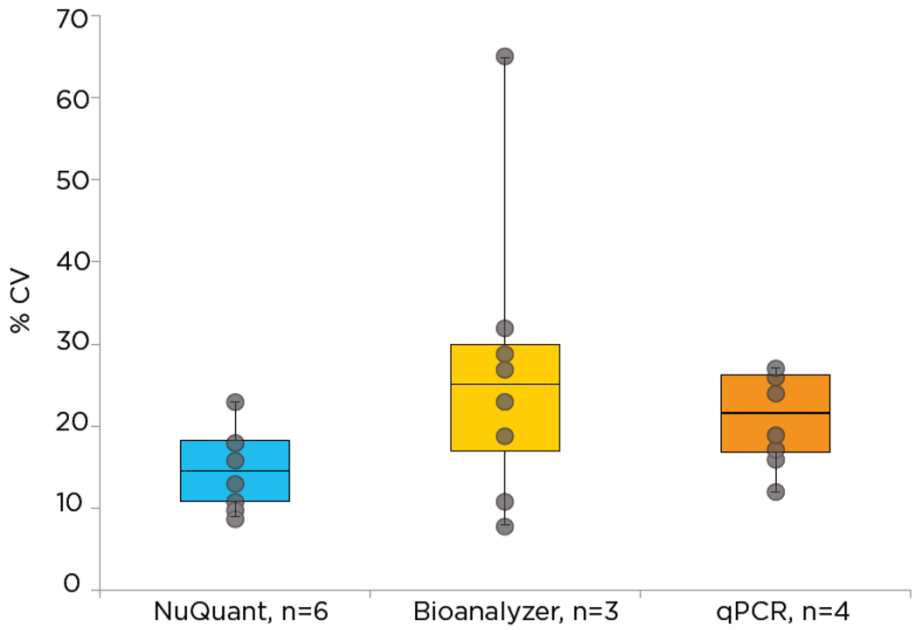
No serial dilution steps like qPCR, no additional reagents

Does not interfere with other quantitation methods and does not affect sequence clustering

Compatible with fluorometers like Qubit and standard plate readers



Accuracy of NuQuant library quantification



- Eight libraries quantified at external sites
- Molar concentrations of library compared to qPCR and Bioanalyzer

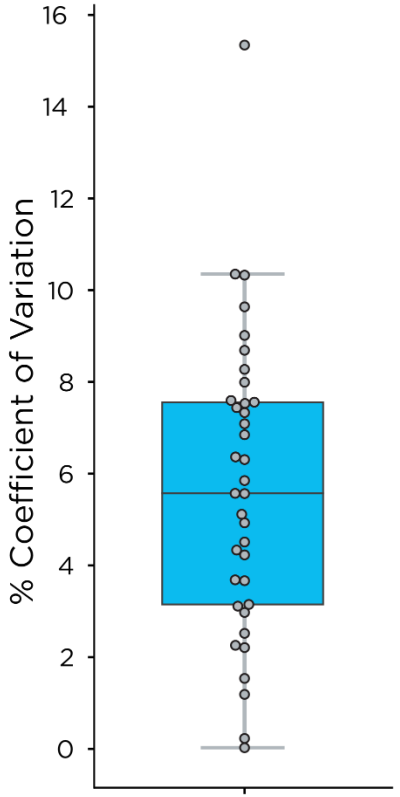
NuQuant showed the lowest variability and highest consistency between the different quantitation methods.

Consistent library quantification using NuQuant

- 147 libraries were generated using Celero DNA-Seq and quantified using NuQuant*
- Quantified libraries were multiplexed into 37 pools and sequenced

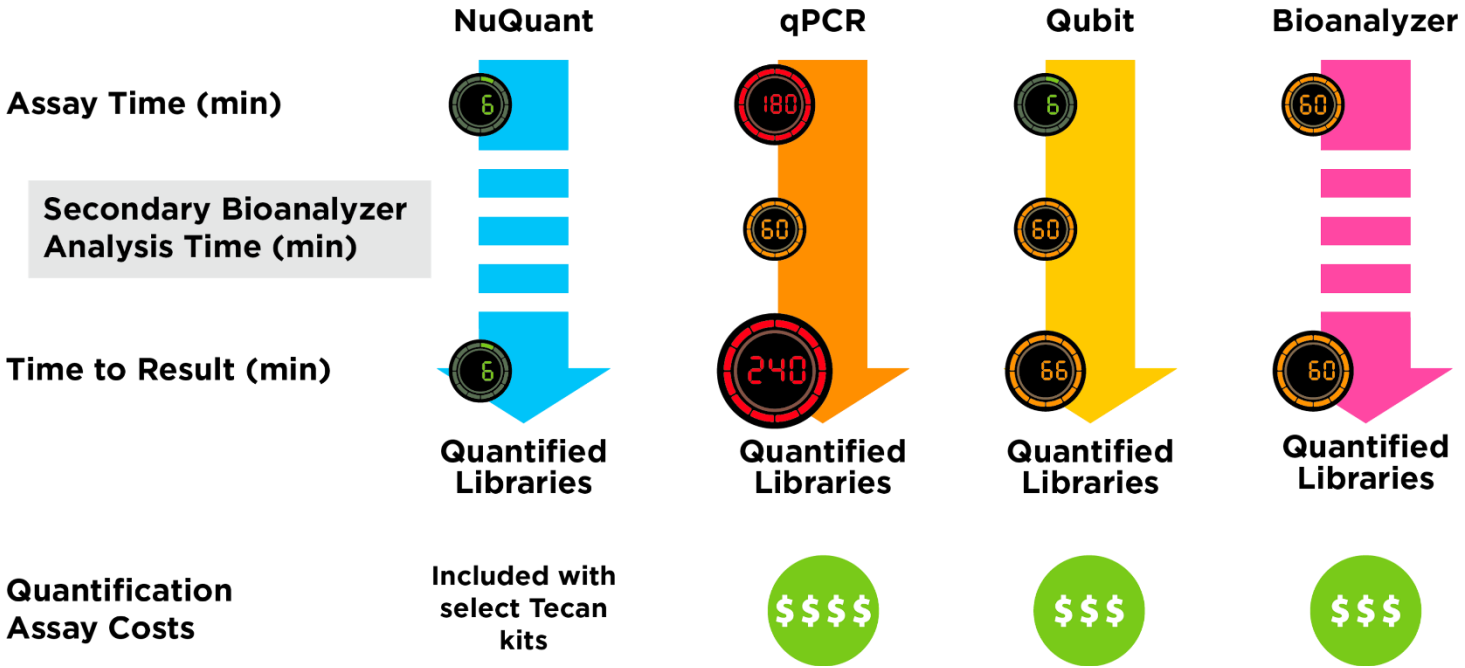
NuQuant delivers consistent library quantification across multiple samples and library pools.

*Data on file at Tecan.



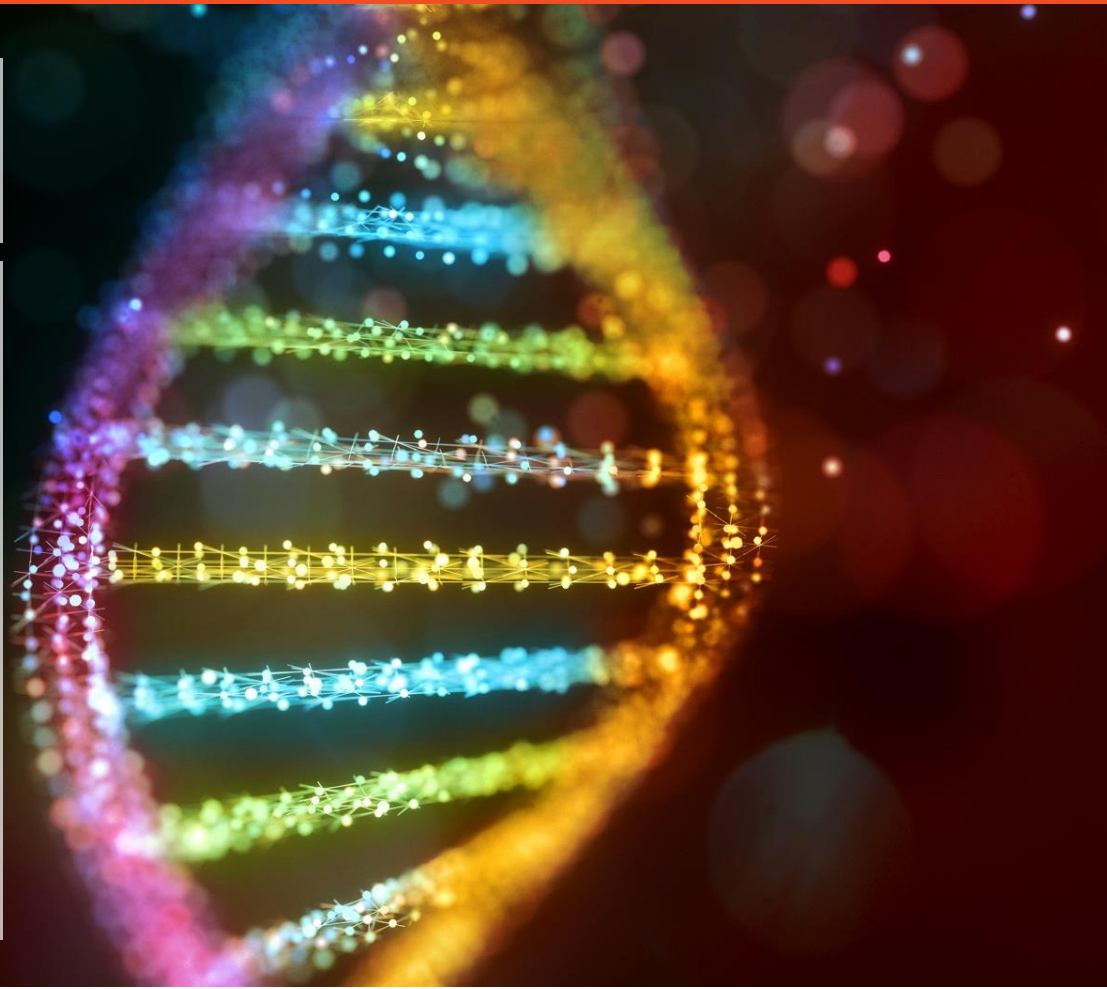
Reduce the time and cost associated

WITH LIBRARY QUANTIFICATION



Summary

- DreamPrep NGS Compact is the only low-mid-throughput solution that automates library preparation, quantification, normalization and pooling in a single workflow (full configuration)
- Minimal to no manual interaction for library prep and QC (full configuration)
- Library QC done in less than 6 min with no sample loss (full configuration)
- NuQuant quantitation method eliminates Bioanalyzer and qPCR for multiplex pooling
- Robust pooling with NuQuant validated by sequencing results
- Additional NGS library preparation kits will be available for the DreamPrep NGS Compact



Disclaimer:
For research only. Not for use in diagnostic procedures.

Example methods have not been validated.
Please make a copy of this method in order to customize it to accommodate your workflow according to your desired intended use and laboratory protocols.
Tecan makes no claims regarding the performance of example methods.
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