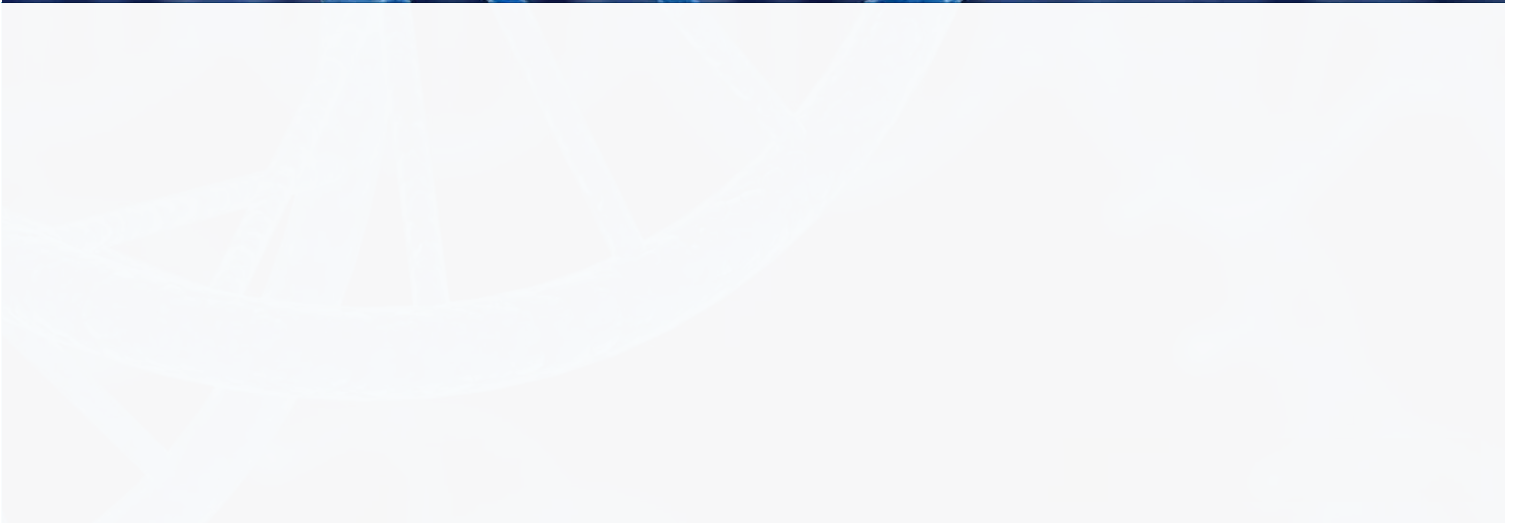


Implementation of SARS-CoV-2 (Coronavirus) detection assays from TIB MOLBIOL on qTOWER³
Pages 3-4

Next-generation sequencing formalin-fixed paraffin-embedded quality control with Agilent
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Focus: qPCR

qPCR, or Quantitative Real-Time Polymerase Chain Reaction and is a technique which monitors, in real-time, the enzymatic amplification of a targeted sequence of DNA. Analysis of the resultant amplification curves informs a researcher of the starting amount of their DNA.

For more information on products that fit each step in this workflow, visit [vwr.com/qpcr](https://www.vwr.com/qpcr).

2020



Implementation of SARS-CoV-2 (Coronavirus) detection assays from TIB MOLBIOL on qTOWER³ for research use

In December 2019 the novel SARSCoV-2 (formerly named 2019-nCoV) was identified in Wuhan, the capital of China's province Hubei. Based on its rapid spreading with more than 950,000 confirmed cases by the beginning of April 2020, the World Health Organization declared the outbreak a public health emergency of international concern.

YOUR BENEFITS

- Ideal real-time PCR signals on qTOWER³
- Instrumentation for detection of SARS, SARS-CoV-2 and other bat-associated SARS-related viruses
- Instrumentation for detection of SARS-CoV-2 specific sequence (via RdRP gene)
- Maximum flexibility on qTOWER³

APPLICATION

Molecular assays to detect SARS-CoV-2 have been developed and are accessible through the homepage of the WHO. Furthermore, several commercial kits based on real-time PCR are available like the Modular Real-time PCR assay from the company TIB MOL BIOL:

- TIB MOLBIOL: LightMix[®] Modular SARS-CoV (COVID19) E-gene
- TIB MOLBIOL: LightMix[®] Modular SARS-CoV-2 (COVID19) RdRP
- TIB MOLBIOL: LightMix[®] Modular EAV RNA Extraction Control

In the scope of general corona virus identification, the assay specific for the E-Gene will be focused on. This assay provides a 76 bp long fragment from a conserved region in the E gene, which is detected with FAM labeled hydrolysis probes (530 channel). This assay will detect SARS and SARS-CoV-2, as well as other bat-associated SARS-related viruses (Sarbecovirus). The first

assay will be followed by confirmatory testing with the RdRP gene assay. The application of the RdRP gene assay detects the specific SARS-CoV-2 sequence; here a 87 bp long fragment from a conserved region of the RNA-dependent RNA polymerase (RdRP) gene, which is detected with a SARS-CoV-2 specific FAM-labeled hydrolysis probes.

Both assays can be combined with the Lightmix[®] MODULAR EAV RNA Extraction control.

The following results show the compatibility of the indicated TIB MOL BIOL assays in combination with Analytik Jena qTOWER³ for the research use-based detection of SARS-CoV-2, SARS and other bat-associated SARS-related viruses (Sarbecovirus).

MATERIALS AND REAGENTS

Both LightMix[®] Modular SARS-CoV (COVID19) E-gene and LightMix[®] Modular SARS-CoV-2 (COVID19) RdRP by TIB MOLBIOL were used. For the experiments, Control ivRNA (nCoV-Mix ivRNA) with different dilutions were used for evaluation in qTOWER³. Additionally, LightCycler[®] Multiplex RNA Virus Master by Roche was used, as indicated in respective manuals. Assays were implemented on the qTOWER³ by Analytik Jena. The instrument's setting can be seen in Figure 1.

The setting of qPCRsoft:

6 steps	scan	°C	m:s	goto	loops	ΔT(°C)	Δt(s)	Δ(°C/s)
1		55,0	05:00	--	---	-- _r --	---	8,0
2		95,0	05:00	--	---	-- _r --	---	8,0
3		95,0	00:05	--	---	-- _r --	---	8,0
4	45x	60,0	00:15	--	---	-- _r --	---	6,0
5		72,0	00:15	3	44	-- _r --	---	6,0
6		40,0	00:30	--	---	-- _r --	---	6,0
7								
8								
9								
10								

Pos.	Channel	Excitation	Detection	Dye	Gain	Measurem	Pass.	Ref.
1	Blue	470nm	520nm	FAM	5		◆	
5	Red	630nm	670nm	Cy5	5		◆	

FIGURE 1: Overview in the settings of qTOWER³ by qPCRsoft.

RESULTS

TIB MOLBIOL: LightMix[®] Modular SARS-CoV (COVID19) E-gene and EAV

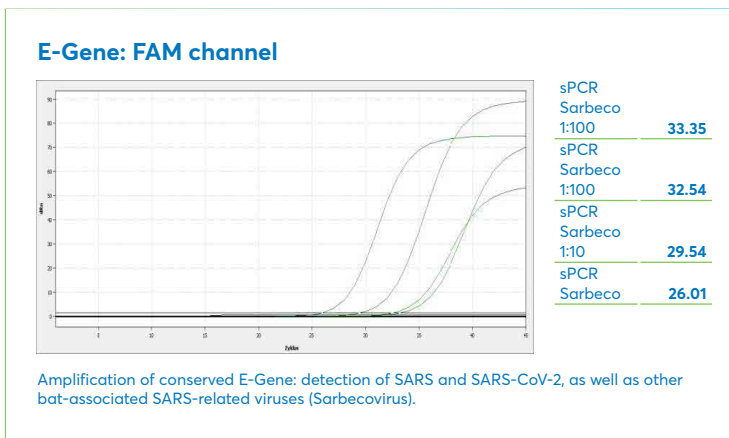


TABLE 1: Detection of Sarbeco control in different dilutions in FAM channel

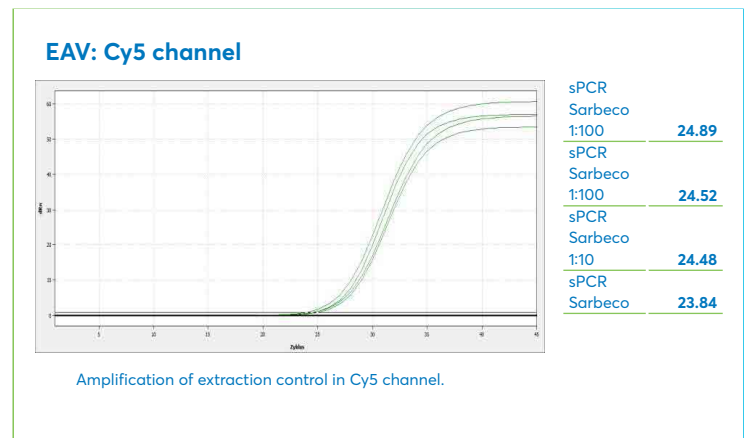


TABLE 2: Detection of EAV in Cy5 channel

TIB MOLBIOL: LightMix[®] Modular SARS-CoV-2 (COVID19) RdRP and EAV

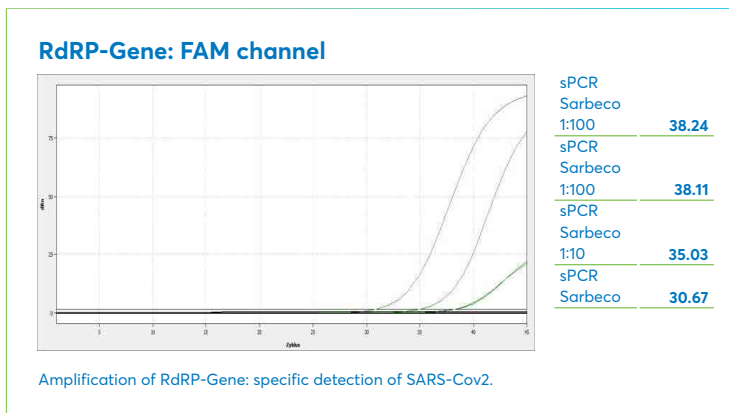


TABLE 3: Detection of Sarbeco control in different dilutions in FAM channel

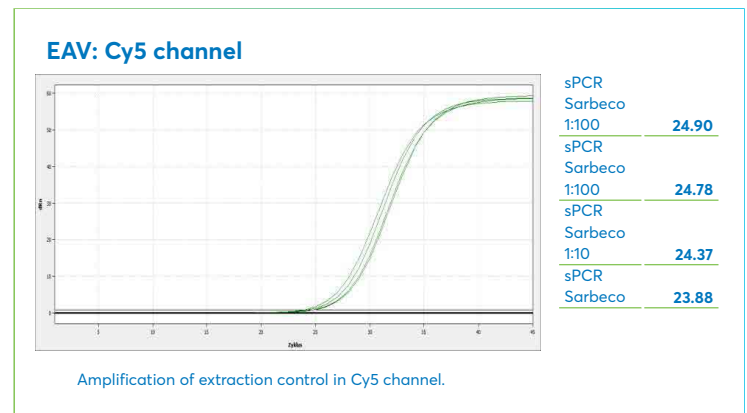


TABLE 4: Detection of EAV in Cy5 channel

CONCLUSION:

Both Genes, E-Gene and the SARS-CoV2-specific RdRP-Gene can be detected by the usage of the indicated assays instrumented

on the qTOWER³. Please note that qTOWER³ is intended for research use only.

Isolate RNA from samples in TRIzol in 7 minutes

DIRECT-ZOL™ RNA KITS, ZYMO RESEARCH

- Extract RNA from any sample (cells, tissues, blood, biological liquids, etc.)
- Easy Handling: No phase separation or precipitation steps
- NGS-ready: Ultra-pure RNA without phenol carryover, no DNA contamination (DNase I included)
- Total RNA Recovery: All RNA >17 nt is recovered

The Direct-zol™ RNA Kits provide a streamlined method for the purification of up to 100 µg (per prep) of high-quality RNA directly from samples in TRI Reagent®. Total RNA, including small RNAs (17 to 200 nt), is effectively isolated from a variety of sample sources (cells, tissues, serum, plasma, blood, biological liquids, etc.).



Description	Format	Sample Size	Elution Volume	Cat. No.
Direct-zol™ RNA Miniprep with TRI-Reagent®	Spin Column	≤5×10 ⁶ Cells	≥25 µl	76211-342
Direct-zol™-96 RNA Kit with TRI Reagent®	Spin Plate	≤1×10 ⁶ Cells	≥10 µl	76211-346
Direct-zol™ RNA Microprep with TRI Reagent®	Spin Column	≤1×10 ⁶ Cells	≥6 µl	76211-326
Direct-zol™-96 MagBead RNA with TRI Reagent®	Magnetic Beads	≤1×10 ⁶ Cells	≥50 µl	76211-350

Safe, room-temperature sample transport and sample processing

DNA/RNA SHIELD™ REAGENT, ZYMO RESEARCH

ENSURES NUCLEIC ACID STABILITY DURING SAMPLE STORAGE/TRANSPORT AT AMBIENT TEMPERATURES

- Nucleic acid preservation (at ambient temperature; cold-free)
- Pathogen inactivation (bacteria, fungus, parasites & viruses)
- RNA Stability: Ambient temperature (4 to 25 °C) >1 month
- DNA Stability: Ambient temperature (4 to 25 °C) >2 years

DNA/RNA Shield™ ensures nucleic acid stability during sample storage/transport at ambient temperatures. There is no need for refrigeration or specialized equipment. DNA/RNA Shield™ effectively lyses cells and inactivates nucleases and infectious agents (virus), and it is compatible with various collection and storage devices (vacutainers, swabs, nasal, buccal, fecal, etc.).



Description	Size	Cat. No.
DNA/RNA Shield™	50 mL	76020-420
DNA/RNA Shield™	250 mL	76020-418
DNA/RNA Shield™ (2X Concentrate)	25 mL	76020-444
DNA/RNA Shield™ (2X Concentrate)	125 mL	76020-440

Automatable method enabling ultra-fast extraction of nucleic acids

QUICKEXTRACT™ DNA EXTRACTION SOLUTION, BIOSEARCH TECHNOLOGIES

SIMPLE, RAPID EXTRACTION (NO PURIFICATION) OF DNA FOR PCR-BASED SCREENING AND GENOTYPING APPLICATIONS

- **Fast:** 8 minute extraction protocol for most sample types
- **Simple:** No centrifugation steps or spin columns required
- **Automation-friendly:** Simple protocol integrated easily into automated workflows
- **Safe:** Uses only non-toxic reagents

The QuickExtract™ DNA Extraction Solution can be used to rapidly and efficiently extract PCR-ready genomic DNA from almost any sample type using a simple, one-tube protocol that takes only 3-8 minutes, depending on the sample

The QuickExtract method allows for the inexpensive processing of one to hundreds of samples simultaneously, without centrifugation, spin columns or the use of any toxic organic solvent. The method is also compatible with robotic automation.



Description	Size	Cat. No.
QuickExtract™ DNA Extraction Solution	50 mL	76081-766
QuickExtract™ DNA Extraction Solution	5 mL	76081-768

This product coming soon to Canada. Please contact your VWR sales representative for information about availability or similar products available in your region.



Help protect your investment

VWR LIFE SCIENCE NUCLEASELIMINATOR™

- Effectively removes and deactivates nuclease contamination even at high concentrations
- Safe on all laboratory glass and plastic ware
- Stable at room temperature for at least two years

DNase and RNase contamination ruins expensive samples and time-consuming protocols in research laboratories every day. NucleasEliminator™ can help protect your investment by removing and deactivating even high concentrations of nuclease contamination from glass or plastic surfaces. Simply wipe, immerse or fill the surface or vessel to be decontaminated with NucleasEliminator™, incubate 5 minutes at room temperature and rinse thoroughly with nuclease-free water. NucleasEliminator™ is safe to use on all surfaces at the laboratory bench ranging from glassware, microcentrifuge tubes, pipette tips and electrophoresis units. NucleasEliminator™ is supplied as a ready-to-use liquid. A 100 ml bottle will treat up to 100 microcentrifuge tubes or 25 agarose electrophoresis casting trays.

Description	Size	Cat. No.
NUCLEASELIMINATOR™ Pump	50 mL	97063-078
NUCLEASELIMINATOR™	100 mL	97064-070
NUCLEASELIMINATOR™	500 mL	97063-076



A comprehensive solution

MONARCH® TOTAL RNA MINIPREP KIT, NEW ENGLAND BIOLABS

QUICKLY AND EASILY PURIFY UP TO 100 µG OF HIGH QUALITY TOTAL RNA FROM MULTIPLE SAMPLE TYPES – ALL WITH ONE KIT

- Successfully used on saliva and buccal swabs as well as simulated nasopharyngeal samples
- Effectively purifies total RNA of all sizes, including small RNAs >20 nt
- Efficient genomic DNA removal (column and DNase I-based)
- Excellent value

The Monarch Total RNA Miniprep Kit is a comprehensive solution for sample preservation, cell lysis, gDNA removal, and purification of total RNA from a wide variety of biological samples, including cultured cells, blood, and mammalian tissues.

Additionally, tough-to-lyse samples, such as bacteria, yeast, and plant, can be processed with additional steps that enhance lysis. Cleanup of enzymatic reactions or purification of RNA from TRIzol® -extracted samples is also possible using this kit.

Description	Size	Cat. No.
Monarch® Total RNA Miniprep Kit	50 preps	103529-148

High-throughput, simple, viral DNA or RNA extraction

QUICK-DNA™ VIRAL KITS, ZYMO RESEARCH

QUICK RECOVERY OF VIRAL DNA FROM A WIDE RANGE OF SOURCES

- Quick recovery of viral DNA from a wide range of sources using Zymo-Spin™ Column and Plate technologies
- Column and plate designs allow DNA to be eluted at high concentrations into minimal volumes
- Eluted DNA is suitable for PCR, Southern blotting, and restriction endonuclease digestion

The Quick-DNA™ Viral Kits provide for the rapid isolation of high-quality viral DNA from a wide range of biological sources. A uniquely designed buffer is included for the efficient denaturation of viral particles in whole blood (fresh and stored), plasma, serum, tissue, ascites, cultured cells, and liquid samples. DNA can be eluted with elution buffer or water, and is ideal for subsequent PCR, nucleotide blotting, and restriction endonuclease digestion procedures.



Description	Format	No. of Preparations	Cat. No.
Quick-DNA™ Viral Kit	Spin Column	50 preps	77001-082
Quick-DNA™ Viral 96 Kit	96 Well Spin Column Plate	2 x 96 preps	77001-088

Next-generation sequencing formalin-fixed paraffin-embedded quality control with Agilent

OVERVIEW

Formalin-fixed paraffin-embedded (FFPE) tissue represents a valuable sample source for molecular cancer research. These samples, which number in the hundreds of millions, provide a contextual snapshot of the tissue at a specific timepoint and stage of normal biology or disease. With today's high resolution technologies, such as next generation sequencing, greater information content may be extracted from these samples, including signals from low frequency alleles that could easily be missed or dismissed as artifact. There are challenges in processing FFPE samples for this type of analysis. DNA derived from FFPE is oftentimes highly fragmented, cross-linked with protein and has a high proportion of single-stranded DNA. These features of FFPE DNA make it challenging for adaptor ligation and amplification, steps that are critical for successful preparation of sequencing libraries, impacting the overall library complexity and in turn, decreasing the sensitivity of variant calling and increasing the rate of false negatives.

ACCURATE QUALIFICATION AND QUANTITATION OF AMPLIFIABLE DNA

The Agilent NGS FFPE QC kit is a qPCR-based assay that enables functional DNA quality assessment of input DNA prior to preparation of next generation sequencing libraries. This kit enables assessment of the integrity of DNA as well as accurate quantitation of amplifiable template going into library preparation. Sample integrity is assessed using two primer pairs that generate differently sized amplicons, a 42bp and a 123bp. This difference in the amplicon sizes allow for discrimination between samples that have sufficient intact amplifiable DNA and those that have a higher degree of fragmentation, effectively eliminating the need for agarose gel electrophoresis. In addition, since the assay is qPCR-based, functionality of the FFPE DNA as template for PCR is also assessed, allowing for the

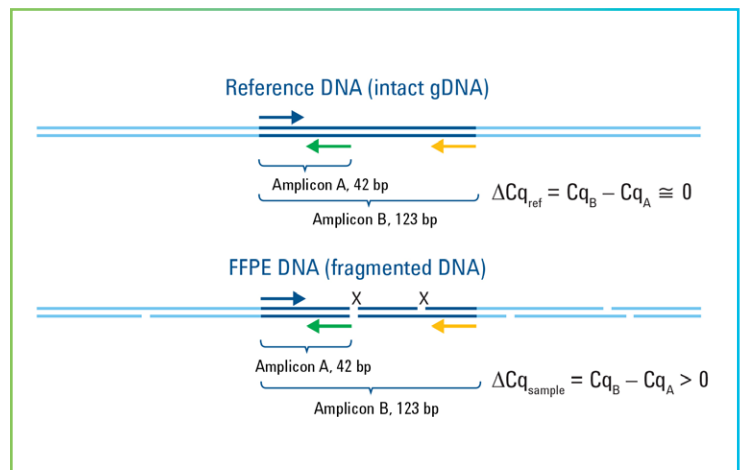


FIGURE 1. Sample quality is determined based on the $\Delta\Delta Cq$ between the sample and the reference. Briefly, amplification of two differentially sized amplicons is assessed. The ΔCq of the sample is the difference between the Cq of amplicon B (123bp) and the Cq of amplicon A (42bp). The quality score or $\Delta\Delta Cq$ is then calculated as the difference between the ΔCq of the sample and the ΔCq of the reference. Quantitation, on the other hand, is based on the Cq of amplicon A alone.

increased probability of successful preparation of next generation sequencing libraries (Figure 1).

OPTIMIZED LOW INPUT LIBRARY PREP WORKFLOW FOR IMPROVED COMPLEXITY AND TARGET COVERAGE

Sample pre-qualification is not sufficient to increase the probability of successful preparation of sequencing libraries. To maximize the information output from FFPE samples, the SureSelect^{XT} protocols have been optimized, providing specific recommendations on amplification of pre-capture libraries, as well as the amount of sequencing to allocate per library based on the sample quality. These modifications ensure that there is sufficient representation of the molecules present

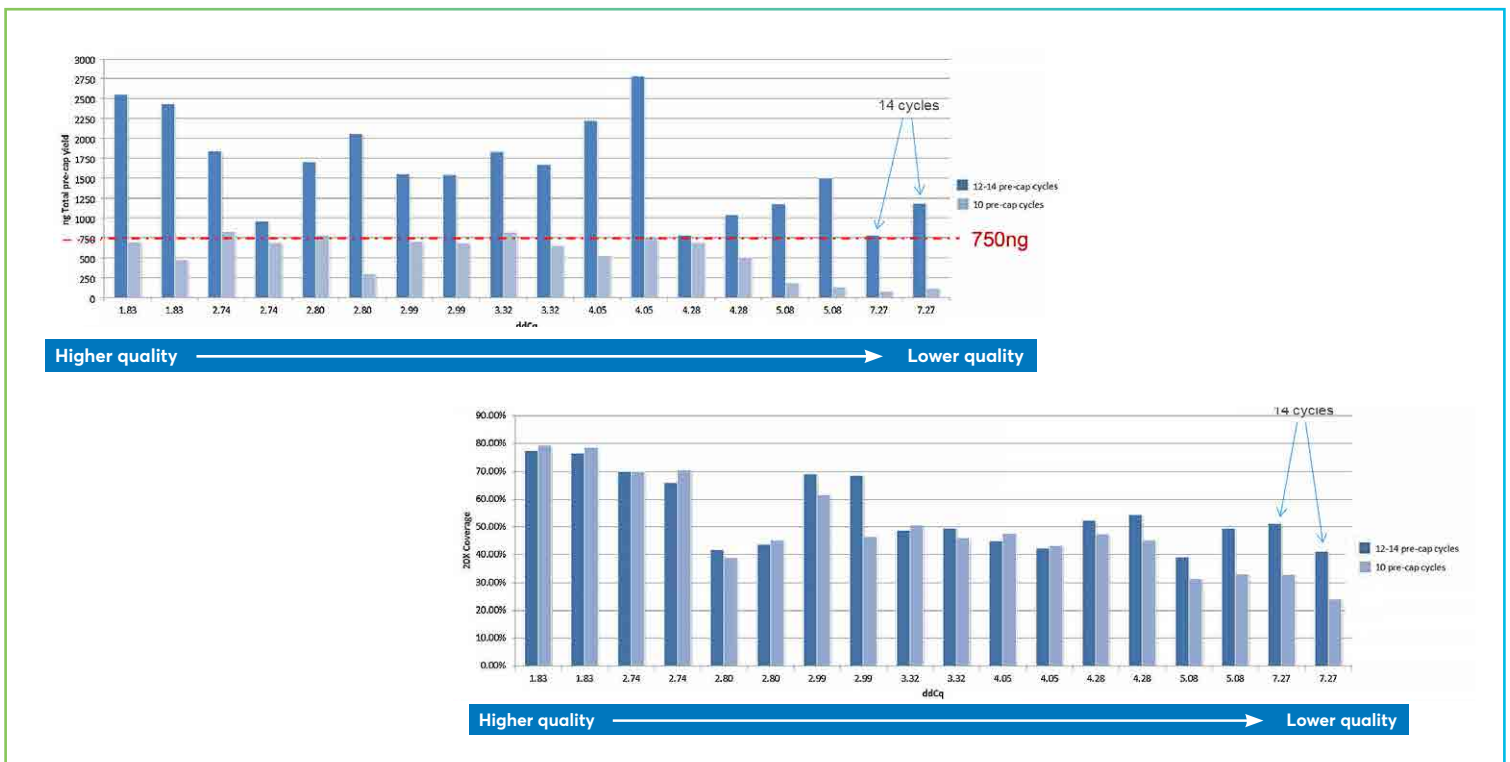


FIGURE 2. The Agilent NGS FFPE QC protocol provides recommendations to optimize preparation of enriched libraries for sequencing based on the quality score ($\Delta\Delta Cq$). Optimizations for lower quality FFPE samples include increasing amplification cycles for the pre-capture library to ensure sufficient template molecules are introduced into the hybridization, and increasing sequencing depth to enable better target coverage.

in the starting sample going into the hybridization step which is critical to efficient enrichment of the targets. In addition, once these targets are enriched, the recommendations on sequencing depth should enable enough reads to ensure deep target coverage whether the starting sample is of

higher or lower quality, for sensitive and accurate variant detection (Figure 2).

COMPLETE CANCER RESEARCH SOLUTIONS FROM SAMPLE TO DATA

Optimized workflows are critical to providing comprehensive variant detection and reduced turn-around time from sample to data. The Agilent NGS FFPE QC kit completes the sample-to-sequencing workflow for FFPE samples.

Accurate quantitation of amplifiable templates

NGS FFPE QC KITS, AGILENT

ENABLES FUNCTIONAL DNA QUALITY ASSESSMENT OF INPUT DNA PRIOR TO NEXT-GEN SEQUENCING (NGS) LIBRARY PREP

- Accurately qualify and quantify amplifiable DNA in challenging formalin-fixed, paraffin-embedded tissue samples
- Includes an optimized low input library prep workflow for improved complexity and target coverage
- Provides complete cancer research solutions from sample to data
- Includes a full qPCR-based QC and Quant kit with reagents for processing samples, including reference and standard DNAs in triplicate



Formalin-fixed, paraffin-embedded tissue represents a valuable sample source for molecular cancer research but is highly challenging to analyze. Our FFPE DNA NGS QC helps achieve this, enhancing research and analysis efficiency. In addition, optimizations to the SureSelectxt workflows based on the sample quality score are enabled.

Description	Cat. No.
NGS FFPE QC Kit, 16 Reaction	76335-750
NGS FFPE QC Kit, 96 Reaction	76335-752

Generate repeatable, reliable results



BIOMEK® 4000 AUTOMATED WORKSTATION, BECKMAN COULTER

COMPACT, SEMI-AUTOMATED LIQUID HANDLER IDEAL FOR STANDARDIZING DAILY ROUTINES AND GENERATING RELIABLE, REPEATABLE RESULTS IN SMALLER LABORATORIES

- Ideal for low to medium-throughput workflows
- 12 Deck positions
- Flexible pipetting with interchangeable pipetting tools and gripper
- Fits in laminar flow hood
- Optional enclosure to protect samples from airborne particles

The Biomek® 4000 Automated Workstation features liquid-level sensing, windows 7 operating system, and a 22" display control screen.



Description	Volume	Cat. No.
Biomek® 4000 Automated Liquid Handler	1 - 1000 µl	75816-488
Biomek® 4000 Automated Liquid Handler for PCR Set-up*	1 - 1000 µl	75816-480
Biomek® 4000 Automated Liquid Handler for Genomics*	1 - 1000 µl	75816-486

*These pre-built application packages are coming soon to Canada. Please contact your VWR sales representative for availability or help putting together a custom package to meet your needs.

Keeping your genetic work safe

VWR® PCR WORKSTATION PRO HEPA

PROVIDES AN IDEAL ENVIRONMENT FOR PCR SAMPLE PREPARATION AND OTHER SENSITIVE PROTOCOLS

- Active decontamination of work surface during non-working time by UV irradiation
- Additional inactivation of aerosol-bound contaminants by shielded UV Air Recirculator during operation
- Contaminant prevention thanks to antimicrobial stainless steel work surface
- Carbon filter to remove ozone and gases
- The HEPA system provides an ultra-clean particle free ISO-Class 5 working space according to the EN 1822-1 standards.
- Adjustable laminar airflow for effective protection against sample contamination from outside
- Displays operating time of UV tubes and Filters to enable well-timed replacement for constant UV intensity and filter efficiency
- Removable shelves provide additional storage space for reaction tubes, pipettes or racks at the rear panel
- Four internal power outlets allow the combination of several working steps without interruption of the workflow
- Electromagnetic safety mechanism stops UV irradiation if front panel is opened

Construction: Housing in stainless steel, front and side panels made of 8 mm Makrolon® protects from UV irradiation.



Description	Cat. No.
Workstation	
PCR Workstation Pro with HEPA, US	76289-386
Filters*	
Carbon Filter for PCR Workstation with HEPA	76289-390
HEPA Filter for PCR Workstation with HEPA	76289-392
Pre-Filter for PCR Workstation with HEPA	76289-388

*Additional filters are not yet available in Canada. Please contact your VWR sales representative for information about similar filters available in your region.

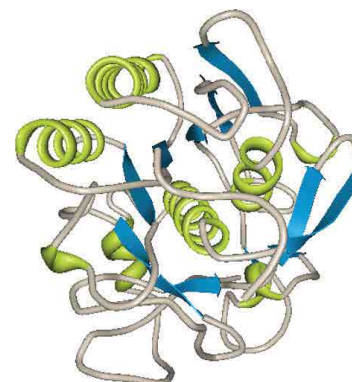
Active over a broad pH range

PROTEINASE K, BIOTECHNOLOGY GRADE

Lyophilised powder



Size	Cat. No.
100 mg	97062-238
500 mg	97062-242
1 g	97062-240



Making purification samples fast and easy

ABSOLUTELY TOTAL RNA FFPE PURIFICATION KITS, AGILENT TECHNOLOGIES

ABSOLUTELY RNA PRODUCT PORTFOLIO MAKES RNA PURIFICATION FROM TISSUE AND CELL SAMPLES EASY AND FAST

- Absolutely RNA FFPE Kit delivers a simple and reliable, non-toxic method to isolate quality RNA from paraffin embedded tissue sections

No heating, no long centrifugation, and no repurification is required. Each absolutely RNA purification kit has been optimized for a specific range of sample sizes and elution volumes.



Description	Size	Cat. No.
Absolutely RNA FFPE Kit	50 reactions	99901-678
Absolutely RNA FFPE Kit (without deparaffinization reagents)	50 reactions	ST400811

Extremely fast while maintaining sensitivity

BRILLIANT III PROBE MM, AGILENT TECHNOLOGIES

INCREASES OVERALL SENSITIVITY AND SPEED THROUGH THE NOVEL, QUICK-ACTIVATING HOT START AND THE ENGINEERED TAQ-MUTANT

- Extremely fast while maintaining sensitivity
- Greater resistance to common qPCR inhibitors (whole blood or NaCl)
- Optimized fast cycling formulation ensures reliable and reproducible data with shorter run times
- Convenient pre-blended formulations compatible with any sequence-specific probe detection chemistry

Brilliant III Ultra-Fast maintains amplification efficiency, R2, dynamic range and detection sensitivity all while shortening the total cycling time by approximately 60% compared to standard cycling.

Description	No. of Reactions	Cat. No.
Brilliant III Ultra-Fast qPCR Master Mix	400 reactions	97066-524
Brilliant III Ultra-Fast qPCR Master Mix	10×400 reactions	97066-526
Brilliant III Ultra-Fast qRT-PCR Master Mix	400 reactions	97066-532
Brilliant III Ultra-FastqRT-PCR Master Mix	10×400 reactions	97066-534

Dual control of enzyme for optimal one-step RT-qPCR

LUNA® UNIVERSAL PROBE ONE-STEP RT-qPCR KIT, NEW ENGLAND BIOLABS

RAPID, SENSITIVE AND PRECISE PROBE-BASED qPCR DETECTION AND QUANTITATION OF RNA TARGETS

In the Luna Universal One-Step Probe RT-qPCR Kit, Hot Start Taq DNA Polymerase is combined with a novel WarmStart-activated reverse transcriptase, allowing dual control of enzyme activity via reversible, aptamer-based inhibition. The Luna Universal Probe One-Step Reaction Mix is supplied at 2X concentration and contains Hot-Start Taq DNA Polymerase, dNTPs, and all required buffer components. It is formulated with a unique passive reference dye that is compatible across a variety of instrument platforms, including those that require a high or low ROX reference signal. The Reaction Mix also features dUTP for carryover prevention and a non-fluorescent visible dye for monitoring reaction setup. This visible dye does not overlap spectrally with fluorophores commonly used in qPCR and does not interfere with real-time detection.

Description	Size	Cat. No.
Luna® Universal Probe One-Step RT-qPCR Kit	200 Reactions	103307-254
Luna® Universal Probe One-Step RT-qPCR Kit	500 Reactions	103307-252
Luna® Universal Probe One-Step RT-qPCR Kit	1000 Reactions	103501-460



Optimized to deliver maximum RT-qPCR efficiency

ULTRAPLEX 1-STEP TOUGHMIX (4X), QUANTABIO

A READY-TO-USE MASTER MIX FOR REVERSE TRANSCRIPTION QUANTITATIVE PCR (RT-qPCR) OF RNA TEMPLATES

First-strand cDNA synthesis and PCR amplification are carried out in the same tube without opening between procedures. It is designed for highly sensitive quantification of RNA viruses or low abundance RNA targets in uni- or multiplexed RT-qPCR applications as well as high throughput gene-expression studies.

The system has been optimized to deliver maximum RT-qPCR efficiency, sensitivity, and specificity in reduced reaction volumes and fast cycle times.

Description	No. of Reactions	Cat. No.
UltraPlex 1-Step ToughMix	100	10804-944
UltraPlex 1-Step ToughMix	500	10804-946
UltraPlex 1-Step ToughMix	1000 × 20 µl reactions	76121-382
UltraPlex 1-Step ToughMix ROX	100	10804-948
UltraPlex 1-Step ToughMix ROX	500	10804-950
UltraPlex 1-Step ToughMix Low ROX	100	10804-952
UltraPlex 1-Step ToughMix Low ROX	500	10804-954

High sensitivity and specificity

QSCRIPT LYO 1-STEP, QUANTABIO

OPTIMIZED FOR HIGHLY SENSITIVE AND REPRODUCIBLE ONE-STEP RT-qPCR USING HYDROLYSIS PROBES

- Dry, stable, easy and better 1-step RT-qPCR
- Lyophilized single tube format is easy to use, reduces cross-contamination
- High sensitivity and specificity, detect as low as 0.5 pg RNA
- Wide dynamic range from 0.5 to 500 pg RNA
- Superior multiplexing, plex up to 5 targets per reaction
- Eliminate freezer storage up to 9 months stability room temperature



US ONLY

The reagent contains a hot-start thermo-stable polymerase, a genetically engineered reverse transcriptase as well as other components to ensure higher performance detection of up to 5 targets with maximum sensitivity and specificity. The enhanced stability of the freeze-dried master mix enables convenient shipping and storage at room temperature. The single tube reaction facilitates easy reaction set up while preventing potential cross-contamination.

Description	No. of Reactions	Cat. No.
Qscript lyo 1-Step Kit	8	76312-728
Qscript lyo 1-Step Kit	24	76312-730

These products are not yet available in Canada. Please contact your VWR sales representative for information on similar products available in your area.



Simple, colorimetric detection for LAMP or RT-LAMP reactions

WARMSTART® COLORIMETRIC LAMP 2X MASTER MIX (DNA AND RNA), NEW ENGLAND BIOLABS

SIMPLE, ONE-STEP SOLUTION FOR LAMP OR RT-LAMP REACTIONS

- Fast, clear pink-to-yellow visible detection of amplification
- WarmStart feature inhibits activity at room temperature

The WarmStart Colorimetric LAMP 2X Master Mix is an optimized formulation of Bst 2.0 WarmStart DNA Polymerase and WarmStart RTx in a special low-buffer reaction solution containing a visible pH indicator for rapid and easy detection of Loop-Mediated Isothermal Amplification (LAMP) and RT-LAMP reactions.

This system is designed to provide a fast, clear visual detection of amplification based on the production of protons and subsequent drop in pH that occurs from the extensive DNA polymerase activity in a LAMP reaction, producing a change in solution color from pink to yellow. This mix can be used for any LAMP or RT-LAMP reaction and requires only a heated chamber and samples, with readout of positive amplification judged by eye in 15 to 40 minutes.

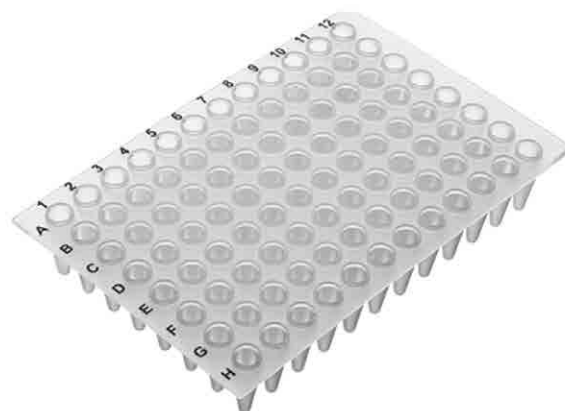
Description	Size	Storage Temperature	Cat. No.
WarmStart® Colorimetric LAMP 2X Master Mix (DNA and RNA)	100 Reactions	-20 °C	103258-592
WarmStart® Colorimetric LAMP 2X Master Mix (DNA and RNA)	500 Reactions	-20 °C	103258-594

Ideal for high-throughput screening thermocycler applications

VWR® 96-WELL PCR AND REAL-TIME PCR PLATES

COMPATIBLE WITH MOST THERMAL CYCLERS AND IDEAL FOR HIGH-THROUGHPUT SCREENING THERMOCYCLER APPLICATIONS

- Smooth, thin, uniform well walls ensure accurate thermal transfer
- Wells are slightly raised to accommodate sealing mats, films, and foil
- Printed alphanumeric labeling simplifies plate and sample identification (raised well plates do not feature printed alphanumeric labels)
- All plates are autoclavable and certified free of RNase, DNase, and human DNA (lot-by-lot certificates available)



Description	Working Well Volume	No. of Wells	Color	Cat. No.
Flat Plates	200 µl	96	Natural	82006-636
Raised Well Plates	200 µl	96	Natural	37001-272
Half-Skirted Plates	200 µl	96	Natural	83007-374
Half-Skirted, Low Profile Plates	200 µl	96	Natural	82006-664
Raised Lip Plates	200 µl	96	Natural	93001-100
Silicone Sealing Mat	200 µl		Natural	82006-692
Skirted Plates	200 µl	96	Natural	89218-292

For additional sizes, visit vwr.com.

A faster, smaller, better way to qPCR

Q qPCR INSTRUMENT, QUANTABIO

A FASTER, SMALLER, BETTER WAY TO qPCR

- **Ultra-Fast Data Acquisition** - 35 cycles in 25 minutes
- **Unrivaled Performance** - Detect 2-fold expression level differences
- **Portable & Compact** - 4.5 lbs - transport without ever calibrating
- **Scalable & Wireless** - Connect up to 10 instruments (48 samples/instrument)
- **Magnetic Induction Technology** - Eliminate variability vs. block-based cyclers

Q uses a patented magnetic induction technology to rapidly heat samples coupled with fan-forced air for cooling to acquire data in only 25 minutes. Available in 2- or 4-channel models, the robust optical system acquires all channels simultaneously and allows for running the fastest multiplexed assays.



Description	Size	Cat. No.
Q 2-channel qPCR Instrument	1 instrument	76175-392
Q 4-channel qPCR Instrument	1 instrument	76175-394
20 racks/ box	1 box	76202-252

Intuitive operation for a smoother path to results

AriaMx REALTIME PCR SYSTEM, AGILENT TECHNOLOGIES

FULLY INTEGRATED QUANTITATIVE PCR AMPLIFICATION, DETECTION, AND DATA ANALYSIS SYSTEM

- **Speed** — Fast scan times, reliable and reproducible data
- **Agility** — Modular design, ready-to-use, lower lifetime costs
- **Precision** — Tight and accurate thermal control, validated on over 100,000 samples

The system design combines a state-of-the-art thermal cycler, an advanced optical system with an LED excitation source, and complete data analysis software.



Description	Cat. No.
Base Instrument	
AriaMx Real-Time PCR System	76193-704

Base instrument does not include any optical cartridges. Purchase of at least one optical cartridge is required for a functional instrument. For a listing of all available optical cartridges, visit vwr.com.

analytikjena
 An Endress+Hauser Company

The most advanced qPCR for throughput, precision, and speed

qTOWER³ PRODUCT FAMILY, ANALYTIK JENA

THE TOP PERFORMER AMONG REAL-TIME PCR THERMAL CYCLERS

- **Powerful** – ideal real-time PCR signals
- **Unrivaled** – fast and precise results
- **Flexible** – open platform for plasticware and reagents
- **Practical** – easier and universal operating concept
- **Versatile** – 96- or 384-well formats

The qTOWER³ product family is a real-time PCR system in both 96 and 384 formats. It is an open platform qPCR system, both with regard to plasticware as well as kits/mastermixes.



Description	Details	Block Format	Cooling Rate	Cat. No.
qTOWER³				
qTOWER ³ G	No screen	Gold-coated solid silver sample block	Up to 6.0 °C/sec	76414-160
qTOWER ³ G touch	10" touchscreen interface	Gold-coated solid silver sample block	Up to 6.0 °C/sec	76414-164
qTOWER³ 84				
qTOWER ³ 84 G	No screen	Aluminum block with special alloy	Up to 6.0 °C/sec	76414-156

These exact models are not available in Canada. Please contact your VWR sales representative for help ordering a similar model in the qTOWER³ family that is available in your region.

