Works the way you do

Keep pace with the changing needs of your molecular lab with the flexibility of the ***cobas***® *4800 System*

Roche

cobas®

Life needs answers

More flexibility for your lab

Laboratories today need the flexibility of a broad test menu to manage daily workflow and varying throughput demands. They also need to be able to adapt quickly when those needs change. The modular ***cobas***® *4800 System delivers flexibility and efficiency with walk-away sample preparation, plus the fastest, most trusted real-time PCR amplification and detection available today.*

cobas x 480 Instrument
Automated sample preparation allows you to get more done

Save time:

- Automated PCR setup frees lab personnel for other tasks
- Accepts multiple primary and secondary vial formats
- Flexible batch sizes for efficient reagent usage

Reduce error and prevent contamination:

- Automatic barcode reader and ready-to-use reagents eliminate manual sample processing
- Total aspirate and dispense monitoring (TADM) verifies sample transfer in real time
- CO-RE tip technology helps ensure secure tip attachment, precise tip positioning and reduced aerosol production

Automated nucleic acid extraction
Nucleic acid extraction from multiple types of specimens is fully automated.

Bi-directional LIS connectivity
Test ordering has just become easier—and less prone to transcription errors. Built-in communication components in the **cobas**® 4800 System make it easy to connect to your current LIS. Technicians simply insert barcoded primary or secondary vials into the system, and the system automatically queries your LIS to download testing information.

cobas z 480 Analyzer
Advanced real-time PCR technology for high-quality results

Fast, accurate thermal cycling:

- Unique Therma-Base technology optimizes heat transfer for maximum uniformity and well-to-well reproducibility

High specificity:

- Optimized filter design minimizes spectral cross talk
- Highly efficient signal excitation and data capture reduce signal artifacts and ensure data integrity

Reliable results:

- Automatically checks and validates PCR curve consistency
- Proprietary Kinetic Algorithm removes ambiguity

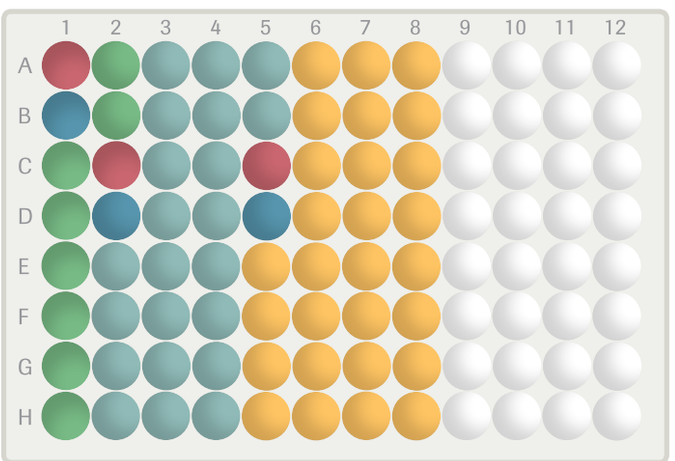
Ready for today, ready for tomorrow

Every Roche assay is backed by extensive experience and expertise in test design and optimization, a commitment to robust performance standards and an unparalleled dedication to thorough data analysis and validation. An expanding assay menu reinforces the flexibility offered by the ***cobas***® *4800 System.*

A broad IVD test menu on a single platform

HIV
HCV GT
BRAF
HSV 1 and 2
HBV
HPV
KRAS
Cdiff
HCV
CT/NG
EGFR v2
MRSA/SA

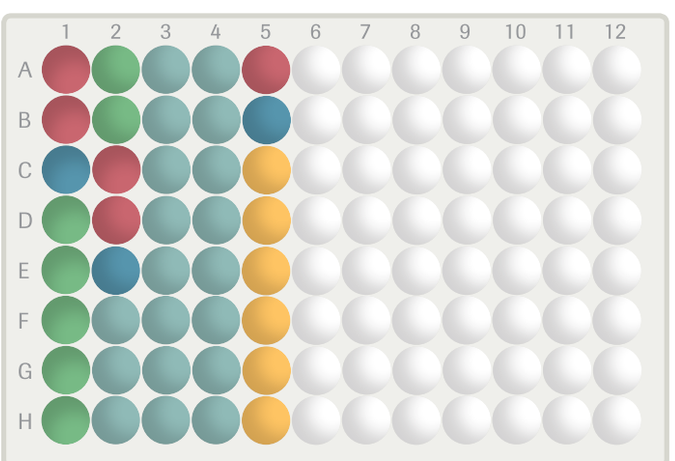
Efficiency to perform more runs of different tests per 8 hour shift



Microbiology assays

The **cobas**® 4800 System gives you the flexibility to test MRSA/SA, *C.diff* and HSV 1 and 2 in the same run, prepared from different types of primary vials. You can also run different-sized sample batches.

- HSV 1 and 2
- MRSA/SA
- *C.diff*
- Positive control assay-specific
- Negative control assay-specific



Virology assays

The **cobas**® 4800 System gives you the flexibility to test HIV-1 and HCV viral load assays and the HCV genotyping (HCV GT) assay in the same run, prepared from different types of primary vials. You can also run different-sized sample batches.

- HIV–1
- HCV
- HCV GT
- Positive control
- Negative control

Reduce hands-on time, maximize walk-away time

The **cobas**® 4800 System provides a flexible, automated platform that meets your workflow and throughput demands. Just load your sample vials and walk away. The **cobas**® 4800 System automatically performs the nucleic acid extraction, PCR assay preparation and transfers your samples to 96-well plates, ready for PCR amplification and detection.

Run your own assays

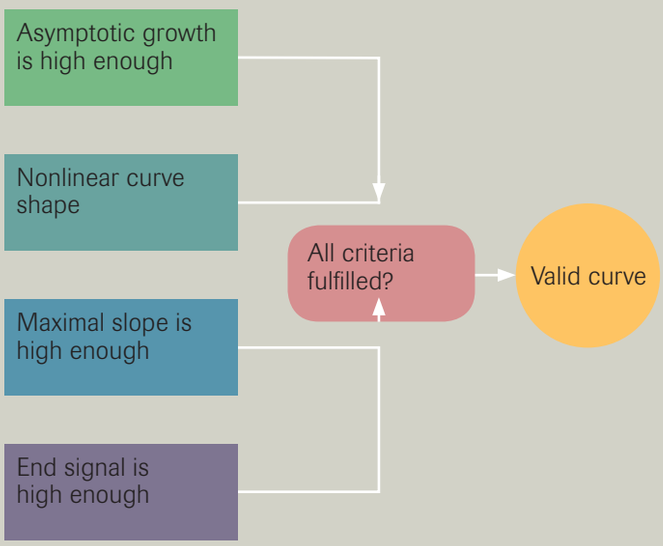
User Defined (UDF) software opens the way for you to set up and automate lab-developed tests (LDTs) independent of the **cobas**® 4800 System assay menus.

Eliminate complex reagent preparation procedures

Load-and-go reagents save time and labor, and help to ensure consistency.

CT/NG results with no grey zone

Each CT/NG test run on the **cobas**® 4800 System is automatically analyzed by a proprietary Kinetic Algorithm that eliminates the need to examine PCR curves. Every curve is evaluated automatically and must meet multiple acceptance criteria to be called valid. Results are presented as positive, negative or invalid, providing clear and precise answers and reducing the need for retesting or interpretation.



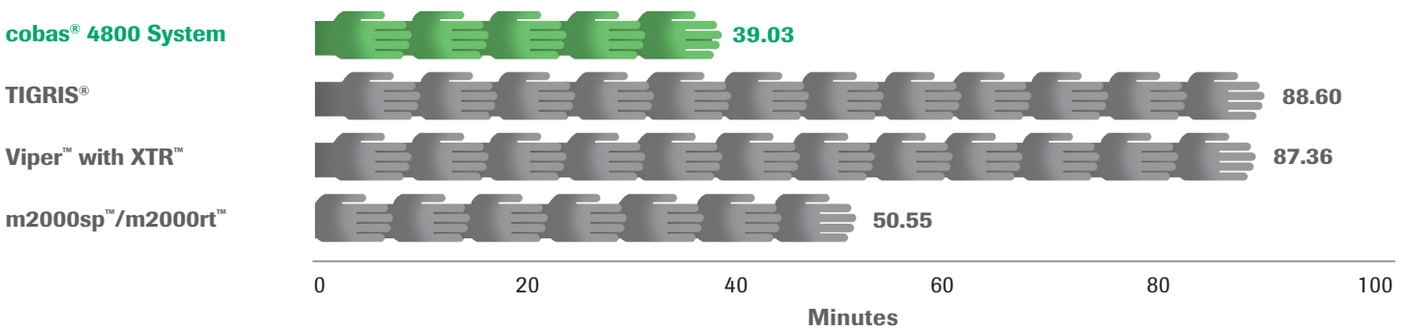
Where performance and reliability meet

Roche introduced PCR and continues to advance real-time PCR through hardware and software innovations that pave the way for new standards of performance and reliability. From sample loading to final result, the ***cobas***® *4800 System delivers a combination of flexibility, speed, ease of use and robust dependability.*

High efficiency, low maintenance

- Less than 20 minutes of setup time for 94 specimens
- Process up to 384 samples per day on a single system
- Only 4 minutes of daily maintenance required
- No post-run decontamination needed

Least hands-on time (run of 96)*



*Roche CT/NG System Comparison Study, presented by Argent Global Services, August 2010

Contamination prevention

Intelligent pipetting

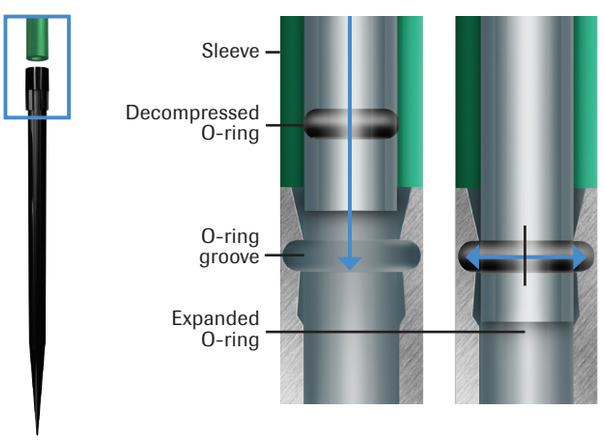
The **cobas**® 4800 System incorporates unique pipette tip locking and monitoring technology, including CO-RE, TADM and anti-droplet control (ADC) for reliable sample transfer.

TADM

TADM monitors the pressure within each pipette tip during each pipetting cycle to verify transfer and flag problems in real time. Any pressure response that falls outside of the expected range is reported and recorded in a traceable digital log.

CO-RE tip technology

CO-RE attachment technology actively locks the pipette tips in place with an expanding O-ring. When the tip is released, the O-ring gently decompresses, avoiding projection of aerosols that could create cross-contamination.



Anti-droplet control (ADC)

The **cobas**® 4800 System automatically compensates for reagent vapor in the pipette tip by continually monitoring the pressure and adding vacuum to the tip when needed.

Results integrity

Before PCR amplification, proprietary AmpErase enzyme degrades previously generated amplicons to reduce the risk of carryover contamination. An internal control is used through the entire process, from sample preparation to amplification and detection, minimizing the risk of false negatives.

Robust amplification and detection

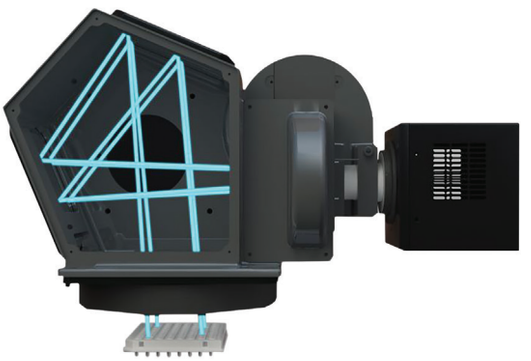
The **cobas z** 480 Analyzer provides unmatched temperature homogeneity and advanced optics for rapid amplification and high quality results.

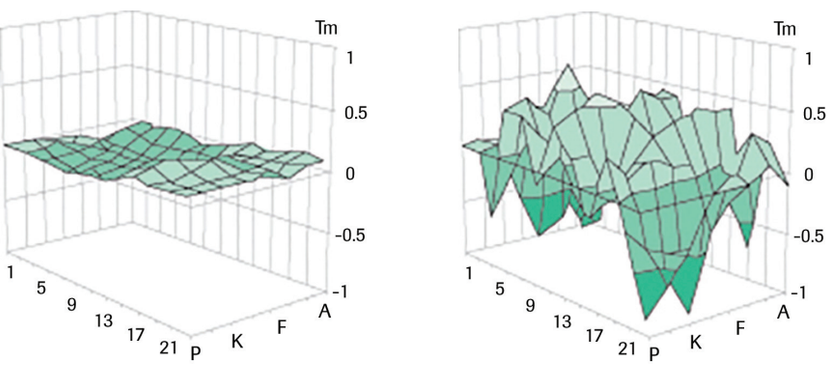
Rapid, uniform thermal cycling

The **cobas z** 480 Analyzer carries over all of the technological advances of the LightCycler® 480 Instrument. The unique Therma-Base layer between the heat block and the cooling element provides optimal heat transfer and distribution to all samples for faster, more reproducible results.

High-performance optics

Optics in the **cobas z** 480 Analyzer are engineered to ensure dye-specific signal excitation and emission, and uniform data collection across the entire PCR plate.





LightCycler® 480 Instrument **Another real-time PCR instrument**

The melting temperature (Tm) of a labeled oligonucleotide was used to demonstrate temperature homogeneity across a multi-well plate. Variation between the measured Tm was plotted for all wells, using the expected Tm as zero.

Reduce workload, simplify workflow

*Automation reduces hands-on time and makes the **cobas**® 4800 System easy to learn and operate. The intuitive graphical interface provides all the necessary instructions. Users are guided through each step, from sample loading to starting a new run.*

Load samples, reagents and consumables	Seal and transfer plate, start PCR run	View results

Simple and efficient

The **cobas**® 4800 System automates your workflow where you need it most.

- Ready-to-use reagents
- Bi-directional LIS connectivity
- Automated sample ID scanning

Proven service and support from a trusted leader

Roche introduced PCR and continues to innovate every day. No company has more experience in molecular diagnostics, or in supporting you.

One call gives you direct access to a world-class support organization. Our technical hotlines connect you immediately to local support teams backed by global experts.

Our Global Customer Support Organization of more than 2,000 technical and field experts serves Roche customers in more than 70 countries.

Contact the Roche Molecular Diagnostics representative nearest you or visit http://molecular.roche.com.

Systems specifications and technical details

cobas x 480 Instrument (Part Number 05200890001):

Power supply	
Power consumption	≤600 W
Voltage	110–120 VAC
	220–240 VAC
Frequency	50/60 Hz ± 5%
Delayed-action fuse	115 VAC: 6.3 A 230 VAC: 3.15 A
Power interruption	≤10 ms (for interruptions exceeding this limit, a UPS is recommended)
Interface	
Data standards	ASTM, HL7
Dimensions	
Instrument dimensions (with full cover)	166 x 90 x 101 cm (W x H x D)
Net weight	~150 kg
Vial types	
Liquid-based cytology, EDTA, PPT, SST for plasma and serum	

cobas z 480 Analyzer (Part Number 05200881001):

Power supply	
Power consumption	1500 VA
Voltage	200–240 VAC
Frequency	50/60 Hz
Dimensions	
Instrument dimensions (with full cover)	57 x 50 x 60 cm (W x H x D)
Net weight	~55 kg
Environmental requirements	
Temperatures allowed during operation	15˚C to 32˚C
Relative humidity allowed during operation	Maximum: 80% at 32˚C, no condensation Minimum: 30% at 15˚C to 32˚C

*Since 1983, we have researched and introduced platforms with one goal in mind: helping you overcome obstacles to the practical use of PCR. The **cobas**® 4800 System brings new levels of automation, flexibility and efficiency to your workflow.*

Because your needs inspire our innovation.

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