



For more information, contact your
Roche Diagnostics representative
or call 1-800-852-8766 (option 7).

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cobas c 111 analyzer

Big analyzer performance in a small package



Serum work area solutions

Today's laboratories are challenged with delivering high standards of laboratory services with fewer resources. They face constant pressure to lower operating costs while aspiring to grow their business in new areas. Their concern for patient care is paramount, and they demand only the best in diagnostic testing and services.

Just as every patient requires individualized care, every laboratory is unique. Striking the balance between high standards and efficient operation requires tailor-made solutions. With its **serum work area (SWA) solutions**, Roche has developed a concept of systems that delivers comparable patient results for various workloads and testing requirements.

The **cobas c 111** analyzer is the smallest member of Roche's **SWA** systems. It offers small workload laboratories a compact solution for clinical chemistry, electrolyte and homogeneous immunoassay testing. The system is designed to fulfill the important needs of small-workload laboratories serving out-patient clinics, satellite laboratories and primary care physicians doing on-site testing.

Common reagents

- ▶ Same reagent formulations across platforms
- ▶ Traceability of results to common standards

Extensive menu

- ▶ Access to over 140 assays and formulas
- ▶ Includes innovative tests such as whole blood HbA_{1c}

Comparable results

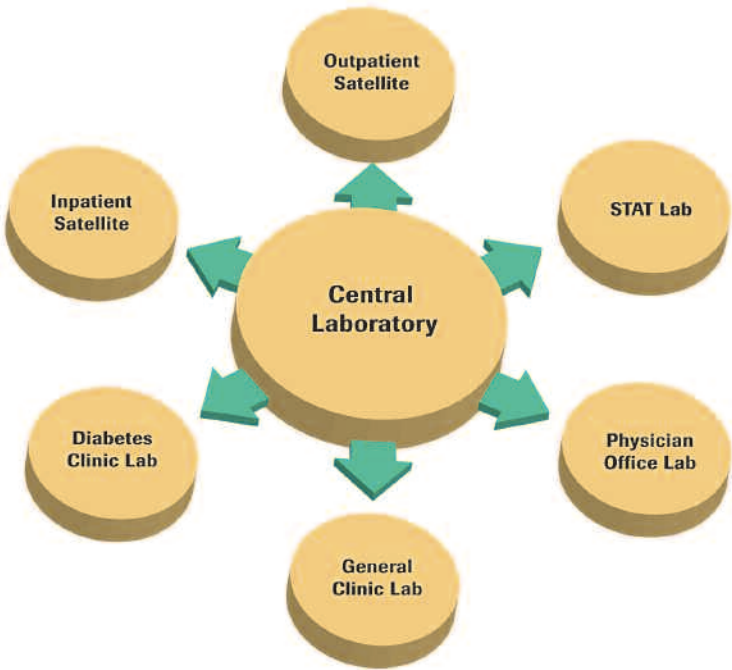
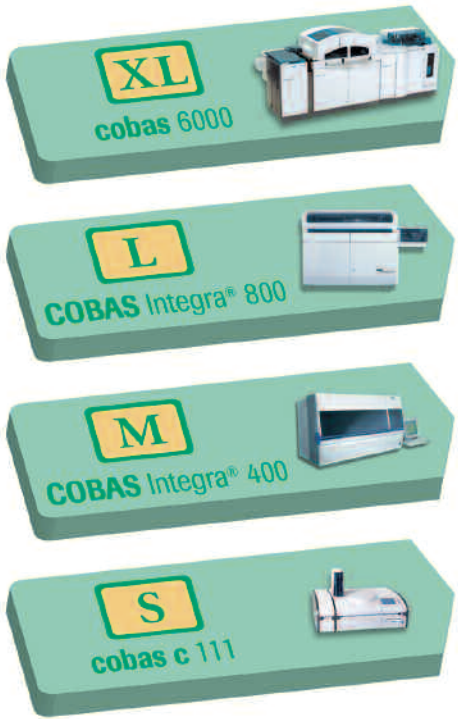
- ▶ Standardizes patient results for laboratory networks
- ▶ Increases flexibility without sacrificing performance

cobas® brand

Roche Diagnostics introduces the **cobas®** brand as the umbrella for products used to complete or expand the screening, diagnostic and monitoring applications of the professional laboratory.

cobas brand includes:

- ▶ serum work area with clinical chemistry and immunochemistry
- ▶ data management and preanalytical solutions
- ▶ products for urinalysis
- ▶ instruments for rapid blood and cardiovascular testing
- ▶ PCR-based applications for virology and women's health testing



cobas c 111 analyzer

Big analyzer performance in a small package



Next-generation technology for small labs

The **cobas c 111** analyzer brings automated sample and reagent pipeting to small labs, helping to improve productivity by allowing operators to walk away and attend to other tasks.

Its intuitive user interface is flexible for different skill and access levels.

The **cobas c 111** analyzer provides connectivity options for sample and data management.

Design based on larger cobas systems

The **cobas c 111** design is based on advanced technology used in COBAS Integra 400 plus and **cobas b 221** analyzers – only downsized to meet the needs of small-throughput labs.

The **cobas c 111** analyzer produces results that are comparable to results from larger **SWA** systems.

Convenient and easy to use

The **cobas c 111** analyzer enables continuous loading and unloading of virtually any sample tube or cup.

Its cooled, exchangeable reagent disks make reagent loading flexible and efficient.

Software-driven operation and maintenance minimizes service tasks and maximizes system run time.

Compact yet powerful

The **cobas c 111** analyzer is designed for tabletop use.

It performs up to 65 photometric tests/hour and up to 180 electrolyte tests/hr.

The **cobas c 111** analyzer has onboard capacity for up to 17 tests at a time (3 ISEs and 14 photometric tests)



Roche Instrument Center, Switzerland

Made in Switzerland

- ▶ The **cobas c 111** analyzer is developed and produced at Roche Instrument Center in Rotkreuz, Switzerland, home of state-of-the-art clinical chemistry and molecular diagnostics instruments
- ▶ As the number one *in vitro* diagnostics company in the world, Roche Diagnostics has made significant R&D investments and utilized over 50 scientists and engineers to develop the **cobas c 111** analyzer

Essential elements for high performance

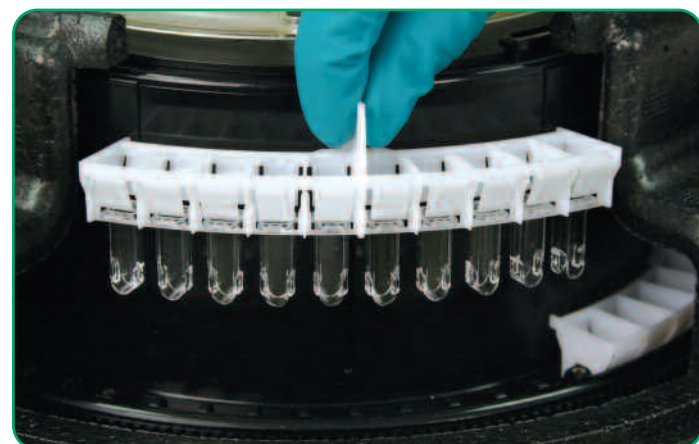
- ▶ **cobas c 111** reagent applications are standardized to COBAS Integra 400 plus for high performance



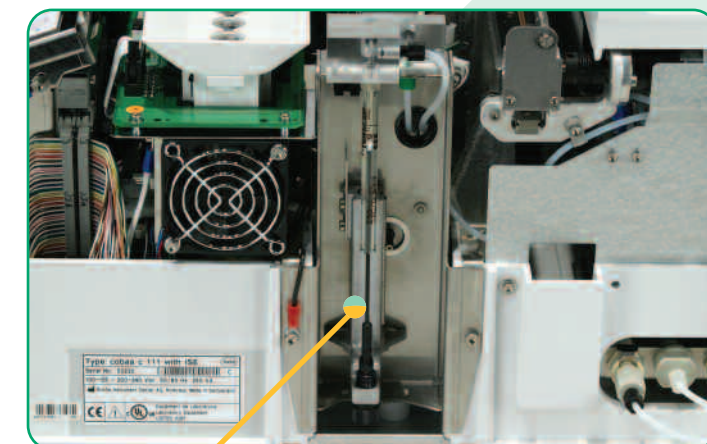
Common reagents between cobas c pack and cobas c 111 reagent bottles



12 wavelength photometer for testing beyond routine assays



Disposable microcuvettes for precise and accurate measurement



Dosing syringe for precision pipetting of sample and system fluids

cobas c 111 analyzer

Big lab analyzer performance –
designed for small-workload labs

Dynamic transfer head

- ▶ Robust design reduces complexity and improves reliability:
 - Left/right-only movement eliminates alignment errors
 - Fluid detection eliminates testing errors due to empty water and wash solution reservoirs
 - Liquid level detection assures accurate pipetting by avoiding foam or clot particles at the surface
- ▶ Pipette needle is washed between steps with system water and wash solution to prevent carryover



Sample loading area

- ▶ Up to eight samples can be loaded and unloaded continuously
- ▶ STAT processing prioritizes urgent samples for next pipetting cycle
- ▶ Tube bottom detection enables use of virtually any sample tube or cup and eliminates probe crashes
- ▶ Onboard sample and calibrator dilution available

User interface

- ▶ Daily setup, loading samples and ordering tests, and daily shutdown are easy, thanks to step-by-step software wizards
- ▶ Short daily setup time enables testing in less than 10 minutes after system start-up
- ▶ Access codes safeguard system operation by authorized users only
- ▶ Help function provides a quick reference guide for system operation

Integrated ISE unit

- ▶ Advanced design includes clot detection and removal for reliability and uninterrupted workflow
- ▶ Indirect measurement of chloride, potassium, and sodium extends ISE life
- ▶ Proven performance of optimized **cobas b 221** blood gas analyzer electrodes and peristaltic pump, including easy replacement of electrodes and tubing by the operator



Peristaltic Pump Electrodes Tubing

Reagent and cuvette rotor

- ▶ Reagent disk is refrigerated for extended onboard stability and less frequent calibrations
- ▶ Cuvette integrity is checked by the analyzer to safeguard accuracy
- ▶ Two-dimensional reagent barcodes save time and eliminate error from manual entry. Software-directed reagent placement eliminates setup errors

Reagent concept

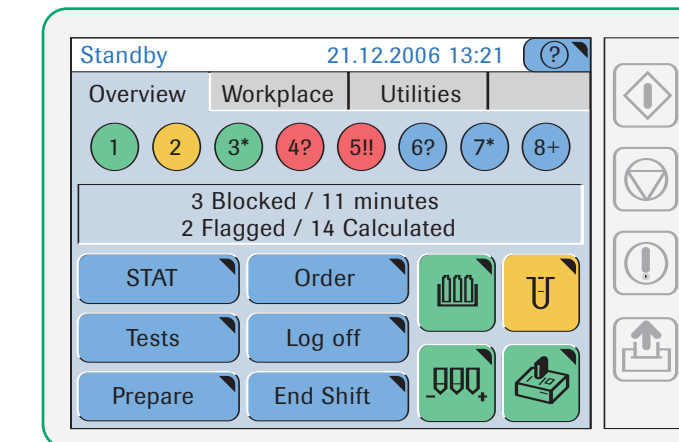
- ▶ Unique **cobas c 111** reagent bottles are available in 50-200 test configurations (assay-dependent)
- ▶ System reagent disk (right) has 27 bottle positions for up to 14 photometric tests
- ▶ Reagent disks can be exchanged quickly and easily for additional testing
- ▶ Most reagents require only two-point, lot-based recalibration for efficient operation



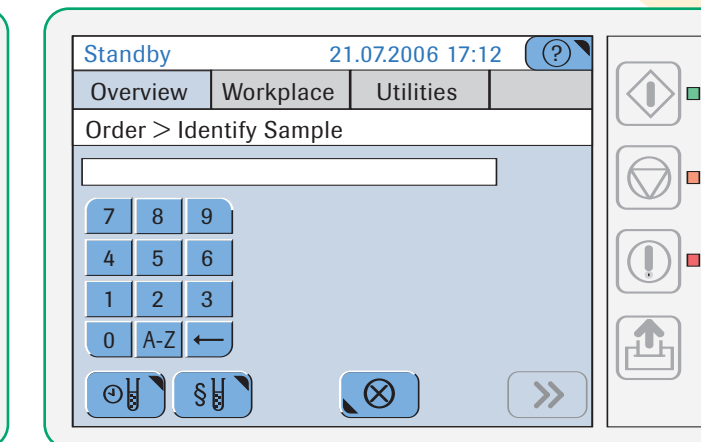
Cooled, exchangeable reagent disc

Software functionality

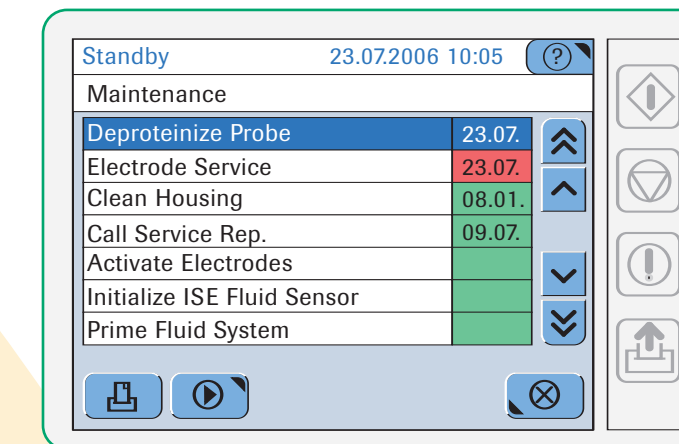
- ▶ The user interface of the **cobas c 111** analyzer is designed for simplicity in performing routine tasks while offering more sophisticated capabilities for advanced users.



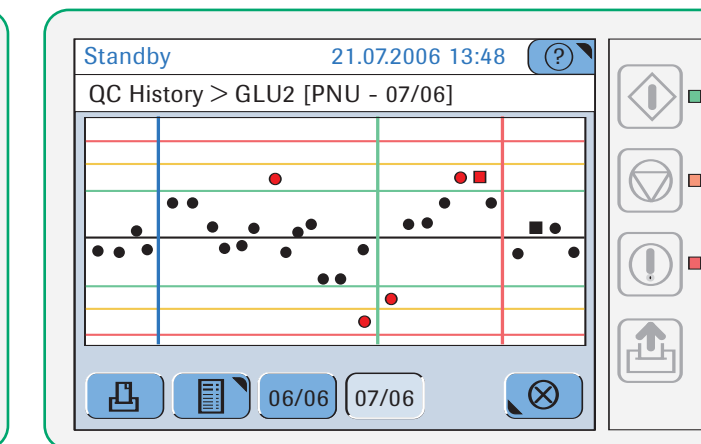
Perform routine tasks via the Overview screen



To begin a test, simply press ORDER and identify the sample



Keep track of all service actions through the Maintenance screen



Monitor quality control over time with the QC History screen

cobas c 111 analyzer

System specifications

| | | |
|------------------------------------|---|--|
| Test Throughput (Theoretical Max) | 65 tests/hour for photometry tests only 180 tests/hour for ISE tests only Up to 100 tests/hour for mixed requests | |
| Number of Channels (Reagent Slots) | 27 slots (or approximately 14 assays) per reagent disk, up to 8 disks 3 channels on ISE module | |
| Programmable Parameters | Maximum 25 photometric with software ver 1.0 3 ISE tests, 10 profiles | |
| Sample Types | Serum, plasma, urine, whole blood (HbA1c) | |
| Sample Input (Sample Disk) | Load capacity: STAT: Continuous operation: Sample cooling: | 8 positions, continuous loading Real STAT interrupt is available Additional sample setting during operation Not available |
| Sample Container Types | Primary tubes: Sample cup: Micro cup: Cups on tube: | 5 – 10 mL; 16 x 100; 16 x 75; 13 x 100; 13 x 75 mm 2.5 mL 1.5 mL Cup on top of a 16 x 75/100 mm tube |
| Sample Volume | 2.0 – 16.5 µL in 0.25 µL steps | |
| Sample Dilution | 1.5 – 100 times | |
| Sample Clot Detection | Not available | |
| Minimum Sample Volume | Primary tubes: Sample cup: Micro cup: | 500 µL 40 µL 40 µL |
| System Interfaces | RS 232 serial interface, bi-directional | |
| Sample Data Base | 300 test results | |
| QC Analysis | QC history provides QC results of previous 60 days Graphic analysis of results over time | |
| Rerun | Manual rerun with predefined dilution | |
| Electrical Requirements | Power requirements: Frequency: | 100 – 125V and 200 – 240V (-15% to +10%) 250 VA (320 VA with ISE) 50 Hz or 60 Hz ± 0.5% |
| Water/Waste Requirements | Minimum: Recommended: Water consumption: Water temperature: Biohazards waste: | Reagent Grade NCCLS Type II Reagent Grade NCCLS Type I 2.5 – 3.0 L/day 15° – 32° C Separate container |
| Operating Conditions | Ambient temperature: Ambient humidity: Heat output: Noise output: | 15° – 32° C 30 – 80% (RH, without condensation) Maximum 320 W/hr or 270 Kcal/hr <60 dB |
| Physical Dimensions | Width: 28.4 in Depth: 21.7 in Height: 18.9 in | (720 mm) (550 mm) (480 mm) |
| Weight | 85.1 lbs (38.6 kg) | |

