

Olympus AU480[®]

Chemistry Analyzer

OLYMPUS[®]

Your Vision, Our Future



**FROM THE NAME YOU TRUST IN
LABORATORY EFFICIENCY**

FROM THE NAME YOU TRUST IN LABORATORY EFFICIENCY...

The AU480 is designed to help you exceed productivity standards in your lab with a host of features that cut operating costs and speed turnaround time. The entire Olympus family of chemistry analyzers can help you manage costs and improve efficiency.

... beyond the basics.

- **Fast random access response**
- **Consolidated expansive test menu:**
Convenient, bar-coded, ready-to-use liquid reagents that are standardized across all Olympus instruments.
- **Process tests on demand:**
With true STAT interrupt and primary tube sampling, including pediatric cups.
- **Olympus customer-tailored options:**
Automates specimen handling, reagent management and maintenance.

Expansive Test Menu: Consolidated testing for all clinical chemistry laboratories

- Routine chemistries
- Urine chemistries
- STATs
- Electrolytes
- Therapeutic Drug Monitoring
- Drugs of Abuse
- Specific Proteins
- Esoteric Tests



FLEXIBILITY RELIABILITY



Real-World Efficiency

From specimen loading to final result

Minimized sample volume:

High precision microsampling probe enables sampling that conserves valuable pediatric and geriatric samples.

Primary tube sampling:

3, 5, 7 and 10 mL tubes and pediatric microcups.

Mixed bar-code handling:

Reads multiple standard codes.

Fast STATs:

22-position STAT carousel with real-time data display and priority repeat testing.

True walk-away capability:

80-sample continuous feed rack loader.

Intelligent automation:

Abnormal sample results are handled automatically. Laboratory-definable options for reflex, repeat, pre-dilution, auto-QC, auto-calibration and multi-lot advanced calibration.

Improved safety:

Sample probe has clot detection and auto clot clearing. Both sample and reagent probes have crash prevention to safeguard results and maximize instrument uptime.

Easier communications:

Bi-directional real-time and batch mode host communications via an RS232C serial interface.

Programmable: Start-up and maintenance.





Olympus Reagents

Simple, economical and easy to use

Ready to use: Liquid formulations packaged in bar-coded cartridges for drop-in convenience.

Increased capacity:

When one cartridge is empty the analyzer automatically switches to the next serial cartridge, performing auto-calibration and auto-QC.

Flexible packaging:

Most Olympus reagents are packaged in multiple kit sizes.

Reagent usage monitoring:

Reagent inventory capability tracks and predicts your daily needs and usage.

Minimized reagent usage:

Ultra-efficient spot photometric optics and precision dispensers enable reaction volumes as low as 90 μ L.

Open reagent system allows users to program parameters for customized special tests.

Web-Based solutions:

The Olympus Partner Advantage™ Program where the power of partnership allows you to be more successful in today's demanding lab environment. A unique suite of web-based products and services designed to improve performance, efficiency and productivity in your laboratory through a single PC workstation.

Middleware solutions:

Middleware solutions automate and standardize the many steps required to release results to the LIS.

SIMPLE
STREAMLINED

Simplicity and Efficiency

User-friendly Windows® software:

Reduce training time with customized menus, icons and color-keyed graphics

Single screen system check:

At-a-glance graphic for monitoring temperature, reagents and system status.

Customized user menu:

Step-by-step guide simplifies training and standardizes operation.

On-board data management:

Store and search patient files. Data can also be saved for off-line analysis and archiving.

Timesaving QC:

Westgard multi-rule monitoring, twin plotting for systematic trends and QC review of daily and day-to-day variations through Levey-Jennings charts.

CLIA compliance:

Operator login, multi-level password protection, edit with comments for documentation, and electronic maintenance logs help you comply.

On-line operator's manual and video:

Maintenance videos reinforce training. Integrated operator's manual features quick links, searches and bookmarks.

Remote diagnostics:

Olympus SUPPORTVISION®, a web-based service, communicates to Olympus Technical Services for detailed virtual on-site support.

Reagent tracking and management:

Including reagent name, on-board stability, lot number, cartridge number, and expiration date.

Advanced calibration:

Stores up to five calibration curves per test.

Financial Services:

Olympus Financial Services® delivers solutions that enable all Olympus customers to acquire and utilize the entire portfolio of Olympus products and services through unique, market-leading financial programs. Leveraging the experience of tenured professionals, Olympus financial service solutions consistently provide value to our customers to assist them in serving their communities, patients and customers with leading technology through arrangements that meet their budgetary and cash flow objectives.

Training:

Olympus is dedicated to providing a comprehensive educational experience preparing laboratorians to adapt to the advancing technologies driving improvements in the healthcare industry. This is accomplished through innovative teaching methods designed to engage students through the use of instructor led and internet-based training.



General Characteristics:

Test Menu Selection: >125

On-board Parameters: 60 measured tests + 3 ISEs

On-board Pre-programmed tests: 120

Maximum Tests/Hour: 400 photometric tests/hr and 800 tests/hr with ISE

Analytical System: Fully automated random access chemistry analyzer

Methods:

- Endpoint
- Endpoint with self blanking
- Endpoint with sample blanking
- Kinetic
- Fixed rate
- ISE

Sample Processing Selection: Single, multiple or profile

Sample Volume: 1-25 μL in 0.1 μL steps

Sample Type: Serum, plasma, urine, CSF

Sample Tray Capacity: 80 samples by rack, 22 position STAT carousel

Sample Container:

- 12 x 75 – 16 x 100 mm tubes
- 3, 5, 7, 10 mL primary collection tubes
- Nested micro sample cup

Sample Transport: 10 position bar code racks

STAT Sample Transport: Up to 22 positions user-definable for STAT, QC, Cal, routine samples

Sample Quality Analysis:

- Lipemia, Hemolysis, Icterus
- Clot detection
- Probe crash protection

Sample Identification: Bar code reader [Maximum of 26 digits]

Sample Bar Code Formats: NW7, CODE 39, CODE 128, ISBT-CODE 128, 2 of 5 interleaved, 2 of 5 standard. 2 of 5 is the specified digit number. Mixed readable (maximum of 4 types at the same time)

Reagent Identification: Bar code reader

Reagent Configuration: Normal strength and concentrated

Reagent Volume: R1. 15-120 μL ; R2. 15-250 μL ; (in 1 μL increments)

Reagent Delivery: One or two reagents, probe dispensed with probe crash prevention

Reagent Storage: 4 - 12 $^{\circ}\text{C}$

Reagent Bottle Capacity: 15, 30, 60 mL bottles

Reagent Storage Capacity: R1/R2 = 76 positions

Reaction Mixture: 90-350 μL

Reaction Temperature: 37 $^{\circ}\text{C}$

Reaction Incubation Method: Dry bath

Reaction Cell: Permanent square glass cuvette (inside dimension 5x5 mm)

Reaction Time: 8 minutes, 37.5 seconds

Repeat Run: Automatic with sample volume increase or reduction

Reflex Testing: User defined

Sample Pre-dilution: Dilution factors of 3, 5, 10, 15, 20, 25, 50, 75, 100 fixed

Precision reagent micro probe delivers 15 to 250 μL of reagent per test, in 1 μL increments.

Low maintenance mix bars are coated with a highly resistant fluoropolymer resin for high performance and ease of care.



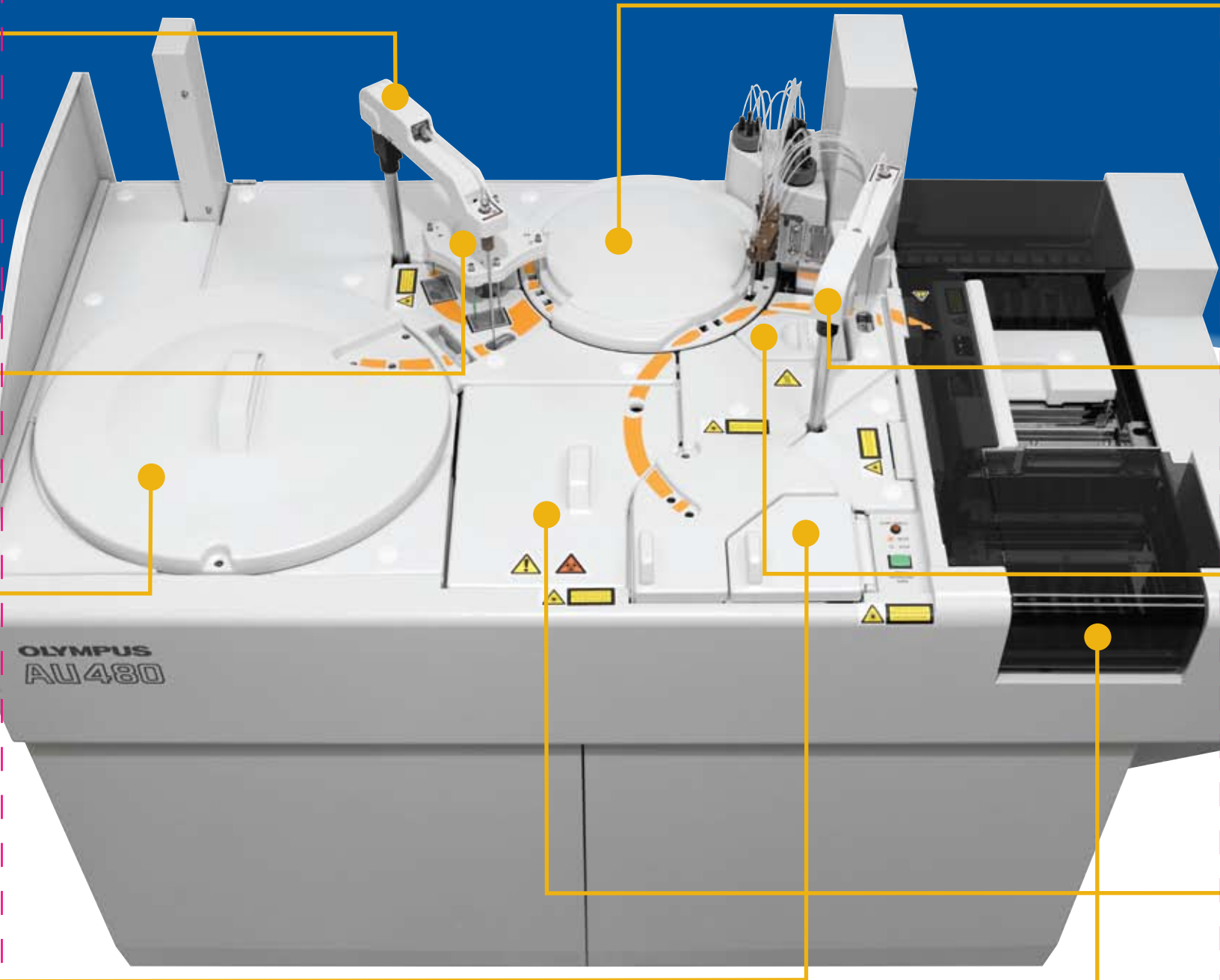
Large on-board reagent compartments provide 76 R1/R2 reagent positions in a refrigerated and light-protected enclosure.



STAT module provides one-button immediate STAT interrupt. On-board calibrator and QC storage for system access during auto-calibration and auto-QC.



Olympus AU480 System Overview



MAXIMIZE
WALK AWAY

High-quality permanent glass cuvettes reduce disposable costs.

High-precision microsampling from 1 to 25 μL , in 0.1 μL increments, with level detection, clot detection and probe crash prevention.



Proprietary precision optics feature Olympus-exclusive spot photometry for optimum photometric readings and greater precision.

Long-life ISEs come with a six-month warranty.



80-sample continuous rack loader maximizes walk-away capacity.



ISE Module:

Analytical System: Vertical block flow ion selective electrode cell

Analytical Tests: Na, K, Cl

Sample Throughput: 200 per hour

Max Tests/Hr: 600 if ISE mode only

Sample Type: Serum, plasma, urine

Sample Volume: 20 μL serum, 20 μL urine

Final Dilution Ratio: 1:32.4 (serum), 1:32.4 (urine)

Measuring Range:

Serum and plasma:

Sodium 50 - 200 mEq/L

Potassium 1 - 10 mEq/L

Chloride 50 - 200 mEq/L

Urine:

Sodium 10 - 400 mEq/L

Potassium 2 - 300 mEq/L

Chloride 15 - 400 mEq/L

Electrode Composition:

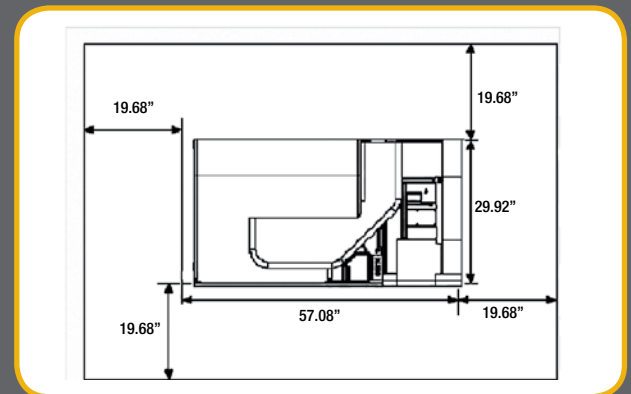
Sodium Crown-ether membrane

Potassium Crown-ether membrane

Chloride Molecular oriented PVC membrane

Reference Liquid on liquid membrane

Installation Requirements:



Standardized Technology

Better results...greater productivity

Hospital lab, core lab, commercial lab...single or multiple locations, Olympus meets your needs with its family of standardized chemistry analyzers...greater efficiency... at speeds ranging from up to 400 to more than 6,000 tests per hour.

- Standardized with the same reliable results and reference ranges.
- Standardized with the same consolidated, expansive test menu.
- Standardized with the same reagents, calibrators, controls, consumables and parts.
- Standardized to provide reduced cross-training time and greater ease of operation with common Windows® user interface.

**...automation that saves you time...
solutions that work for you.**

OLYMPUS

Electrical Requirements:

Electrical Consumption: 3.5 KVA

Current: 20 Amp

Circuit: Dedicated noise free

Voltage: 208/220 VAC [$\pm 10\%$] single phase

Frequency: 60 Hz (within ± 1 Hz)

Ground Requirements: Resistance < 100 ohms

Location: Power cable length 30 ft.

Environmental Requirements:

Average Heat Output: 5500 BTU/Hr.

Ambient Temperatures: 18 ~ 32 °C
(fluctuations during analysis shall be within ± 2 °C)

Ambient Humidity: 40 ~ 80% RH (No condensation)

Water Consumption: 28 L/hour average

Water Type: Deionized CAP Type II, bacteria free

Supply: Continuous flow

Resistivity: Less than 2.0 $\mu\text{S}/\text{cm}$ filtered with a 0.5 μm filter

Pressure: 7 - 57 psi

Control: Shut off valve within 30 ft.

Drain Requirements:

Waste: Maximum height - 59 in.

Dimensions: Overall - 57.1" W x 30" D x 47.5" H

Weight: 926 lbs

Optical Characteristics:

Photometer: Concave diffraction grating
as the dispersive element

Light Source: Tungsten-halogen lamp

Photometric Modes: Monochromatic or bichromatic

Wavelengths: 340, 380, 410, 450, 480, 520, 540, 570,
600, 660, 700, 750, 800 nm

Light Path: 5 mm

Photodetector: Silicone photodiode array
(built-in preamplifier)

Photometric Range: 0 ~ 3.0 Abs
(light path length converted to 10 mm)

Photometric Sensitivity: 0.0001 Abs

Data Processor:

Interface: RS232C, bidirectional

Patient Storage:

- Sample number: 100,000 samples
- Reaction data: 200,000 tests

Data Input: Keyboard, mouse, touchscreen monitor

Display: 19" touchscreen monitor

Printer: Color laser

Operating System: Windows XP®

About Olympus Diagnostic Systems

Olympus Diagnostic Systems provides innovative solutions that meet the high productivity demands of hospitals, integrated healthcare delivery networks, reference labs, blood banks, physicians' office labs, veterinary labs, and pharmaceutical labs. Olympus offers the broadest standardized line of random access chemistry analyzers, along with immunoassay analyzers, lab automation systems, blood bank analyzers and reagents. Olympus solutions save laboratories time, maximize productivity, and deliver fast, reliable results.

To learn more, visit:

www.olympusamerica.com/diagnostics

About Olympus

Olympus is a precision technology leader, creating innovative opto-digital solutions in healthcare, life science and consumer electronics products. Olympus works collaboratively with its customers and its affiliates worldwide to leverage R&D investment in precision technology and manufacturing processes across diverse business lines.

These include:

- Gastrointestinal endoscopes, accessories, and minimally invasive surgical products;
- Advanced clinical and research microscopes;
- Lab automation systems, chemistry, immunoassay, and blood bank analyzers and reagents;
- Digital cameras and voice recorders.

Olympus serves healthcare and commercial laboratory markets with integrated product solutions and financial, educational and consulting services that help customers to efficiently, reliably and more easily achieve exceptional results. Olympus develops breakthrough technologies with revolutionary product design and functionality for the consumer and professional photography markets, and also is the leader in gastrointestinal endoscopy and clinical and educational microscopes.

For more information, visit:

www.olympusamerica.com

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