

OLYMPUS

THE VISIBLE DIFFERENCE

AU 640

CLINICAL CHEMISTRY
SYSTEM FOR MEDIUM TO
LARGE LABORATORIES



A U 6 4 0 - P R E P A R E D F O R F U T U R E L A B O R A T O R Y N E E D S - A V A I L A B L E N O W

- 1 Refrigerated reagent compartments
- 2 Washing station
- 3 Special coated mixers
- 4 Glass cuvettes
- 5 ISE unit
- 6 Sample probe
- 7 Sample feeder
- 8 Cooled STAT rotor



The Olympus AU 640 analyser system

Your future needs were our challenge

Current laboratories are in a changing phase from the past into the future. The need for top quality results is even more pressing whilst economic pressures constantly challenge lab budgets.

Optimised workflow is the key to the answer to these needs. Optimised workflow means workstation consolidation on a highly reliable system platform

that covers routine and STAT testing in parallel. A system which gives short turn around times and is still capable of performing high throughput workloads.

A logical system that aids training of all staff so that the system can be used 24 hours per day by staff from a variety of backgrounds. A common user interface that means if you use one of our systems you can use them all.

Optimised workflow is not restricted to analysis, it

includes the ability to simplify all analytical stages with online predilution and incorporates quality checks, for example for lipaemia, icterus and haemolysis.

Last but not least your future system should be prepared for lab automation as an open platform.

O U R A N S W E R
T O Y O U R R E Q U E S T

The innovative Olympus AU 640 system platform technology perfectly matched to the state of the art reagents.

- O ne system for STAT and routine testing
- L iquid stable ready to use system reagents
- Y ou may run samples in rerun or reflex mode - its your choice
- M odem control for support and troubleshooting
- P robe crash prevention and clot detection
- U nique high quality photometer design
- S ample predilution for minimum hands on and maximum quality

- A uto calibration - "on the fly"
- U ser definable SW Interface under Windows NT™

- 6 hundred, yes sixhundred tests per hour ISE capability
- 4 minutes STAT capability in parallel to a throughput of up to 1,200 tests per hour
- O (zero) electromagnetic interference for 100% consistent results
24 hours per day

SYSTEM OPTIMISATION IN DETAIL

HIGH QUALITY DIAGNOSTICS M



Olympus spot photometry system



AU 640 sample rack system, already prepared for future automation requests



Olympus AU 640 liquid handling components

Optimum accuracy

The unique Olympus spot photometer in combination with the interference free fibre optic data transfer system gives results which are unmatched in terms of accuracy and precision. Only the combination of both technologies enables the Olympus AU 640 to combine micro reaction volumes with high throughput. The result is a system unmatched in its ability to provide effective analysis that matches your organisation and budget needs.

Valid diagnostics

At Olympus we recognise the importance of producing valid results and interpreting these data accurately for your clinical colleagues. The AU 640 incorporates the ability to recognise interferences that may effect the validity of the data. This alone is not enough and that is why we at Olympus design total systems, a part of which is the design of reagents with advanced characteristics to reduce or eliminate the effect of interferences. The result is to remove hands on time and greatly improve efficiency.

Workstation consolidation to minimise overall hands on time

With as much as 51 different analytes which can be processed simultaneously and a throughput of up to 1200 results/hr the AU 640 is the real platform for workstation consolidation. Hands on time is further reduced when the system is operated in the "Auto-Rerun" mode. This user defined mode enables flexible rules to be applied to samples that require further study including "Reflex" tests or sample re-analysis with the same, reduced or even increased volume ensuring optimum analysis condition for that test.

Carry over free high tech liquid handling system

The combination of computer controlled pipetting speed and a highly efficient triple wash station eliminates any contamination. In addition to this the AU 640 includes clot detection and incorporates probe anti crash systems to avoid invalid test results.

T O G A I N T H E V I S I B L E D I F F E R E N C E : A D E S I M P L E A N D C O M F O R T A B L E



*Refrigerated Olympus AU 640
STAT Rotor*



*User definable touch screen
monitor for even simpler use*

Refrigerated Rotor
for STAT, QC and
Calibrations

The AU 640 holds up to 22 tubes in a refrigerated rotor enabling the system to run calibrations and QC in a user defined way during the whole day. Even auto calibration on the fly i.e. in case of reagent lot change is possible.

STATs can be loaded at any time on the same rotor, sample ID is recognised via an internal bar code reader.

Trouble free maintenance

The maintenance requirements of the AU 640 are reduced to a minimum. This is the result of both hardware and software design being totally systemised with Olympus system reagent usage. The analyser software monitors functions and automates processes taking advantage of the unique benefits supported by the use of permanent cuvettes in the Olympus dry bath system. Our reagents are optimised for best performance on the new platform of Olympus analysers.

Ease of use as maximum

The AU 640 user interface is designed to minimise any training requirements. The user is linked in all cases to a context specific help function within the AU 640 software. The user's ability to define the format of the touch screen removes unwanted icons during routine, thus further enhancing efficiency.

Technical support and troubleshooting are avail-

able from the context related help screens and via modem from your support centre minimising the risk of down time.

Olympus system reagents

The analytical unit itself is only one component of a system solution. Quality, costs and ease of use are effected greatly by reagents as well. Therefore Olympus Diagnostica has developed a complete range of system reagents specially designed to match our new AU 400/600/640 system platform requirements. Over 90 different applications already available, additional tests are under development.

The Olympus system reagents are

- designed and manufactured under ISO 9001 certified processes for continuous quality improvement
- liquid stable for convenient handling
- ready to use to minimise handling errors
- barcoded for a positive reagent ID
- configured in pack sizes for differing usage requirements
- exhibit extended on board stability to avoid any waste

OLYMPUS SYSTEM REAGENTS - SPECIFICALLY MATCHED



*The Olympus System Reagents -
an expanding range of reagents*

OLYMPUS SYSTEM REAGENTS

Substrates

Albumin
Alpha Amylase
Bicarbonate
Bilirubin total
Bilirubin direct
Calcium
Calcium Arsenazo
Cholesterol
Creatinine
Glucose
Glucose HK
HDL-Cholesterol
Iron
LDL-Cholesterol
Magnesium
Phosphate
Phospholipide
Total Protein
Triglycerides
Urinary Protein
UIBC
Urea
Uric Acid

Homogeneous Immuno Assays

Apo A1
Apo B
ASL
C3
C4
CRP
IgA
IgG
IgM
Ferritin
RF
Transferrin

DAU

Amphetamine
Barbiturates
Benzodiazepines
Beta Blockers
Cannabinoids
Cocain
Cotinine
EDDP
Methadone
Methamphetamine
Opiates
PCP
Thiazides
Sample check
Urine pH

Enzymes

ACP
ALP
CHE
CK
CK-MB
GGT
GOT (AST)
GPT (ALT)
HBDH
LDH
Lipase

ISE

Chloride
Potassium
Sodium

Specific Proteins

alpha-1-Antitrypsin
alpha-1-Glycoprotein
β-2-Microglobulin
Ceruloplasmin
Haptoglobin
Microalbumin
Myoglobin
Prealbumin

TDM

Amikacin
Carbamazepine
Digitoxin
Digoxin
Gentamicin
NAPA
Phenytoin
Phenobarbital
Procainamid
Theophylline
Tobramycin
Valproic Acid

**Additional parameters are planned to be released
in the coming month**

OLYMPUS SYSTEM SUPPORT - A RANGE OF CUSTOMER SERVICE



The combination of Olympus analysers and the specially matched Olympus System Reagents represent only a proportion of Olympus Diagnostica. Our commitment to the provision of a total system and the increasing demands of the modern major laboratory has led to the development of a comprehensive range of services.

Application consultancy

We provide help for requests concerning reagents or on how to conduct tests through our application specialists. In cases where an application problem cannot be solved over the telephone, we give direct assistance in your laboratory.

Operator training

Our specialists will teach you all the necessary basic knowledge about operation, application and user maintenance. In addition customised on-site training is of course available.

Delivery service


Your order is handled by us immediately. Reagents delivery within 24 hours is possible and in true "emergencies" priority dispatch ensures the best possible delivery time.

Technical equipment service

Our support team of field based engineers and specialists is further enhanced by expert telephone assistance from a specialist who can provide immediate advice on technical problems and how to get the best out of your Olympus system.

Individual laboratory and contract concepts

The sales representative, assigned to you, will structure made-to-measure system solutions for you.



AU 640 Specifications

Analytical system	Fully automated, for routine, STAT, urine and homogeneous immunoassays
Analytical methods	Clinical chemistry and immunological parameters. End point, kinetic assays, fixed-time-kinetics, optionally ISE
Simultaneously processed analytes	48 photometric tests, 51 with ISE
Throughput	800 photometric tests/hour; maximum of 1,200 with ISE
Sample feeder	Racks with 10 samples each (bar codes on primary tubes and on racks); capacity of 150 samples; continuous loading
Sample tubes	In primary and secondary tubes; diameter between 11.5 and 16.5 mm; height between 55 and 102 mm
STAT samples	Up to 22 positions for STAT samples, bar coded primary tubes
Sample volume	2 – 50 µl in 1 µl steps (1 – 50 µl for repeats)
Reagent supply	48 positions for R1 and R2; refrigerated (4 °C – 12 °C)
Reagent volume	1. reagent: 25 – 300 µl; 2. reagent: 25 – 300 µl; (in 1 µl steps)
Total reaction volume	150 – 550 µl
Reaction cuvette	Quartz cuvettes
Reaction time	Up to 8 minutes, 40 seconds
Reaction temperature	37 °C
Mixing method	With rotating paddles after dispensing sample and reagent
Photometry system	Direct assay through the reaction cuvette (0 – 2.5 OD) mono, bichromatic measurements possible
Wavelength	13 different wavelengths between 340 – 800 nm
Cuvette cleaning	Comprehensive cleaning with detergents
Calibration	Auto calibration, cooled calibrator positions
Quality control	Auto QC, cooled QC positions
Test requisition	Individual and profile test requisition via on line, mouse, functions keys or touch screen
Safety	Clot detection and crash prevention for sample and reagent dispenser
On-line	Full uni- and bidirectional communication possible
Software	Windows-NT
Dimensions (W x H x D) mm	ANL 1,850 x 1,210 x 800; DPR 700 x 1,430 x 700

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