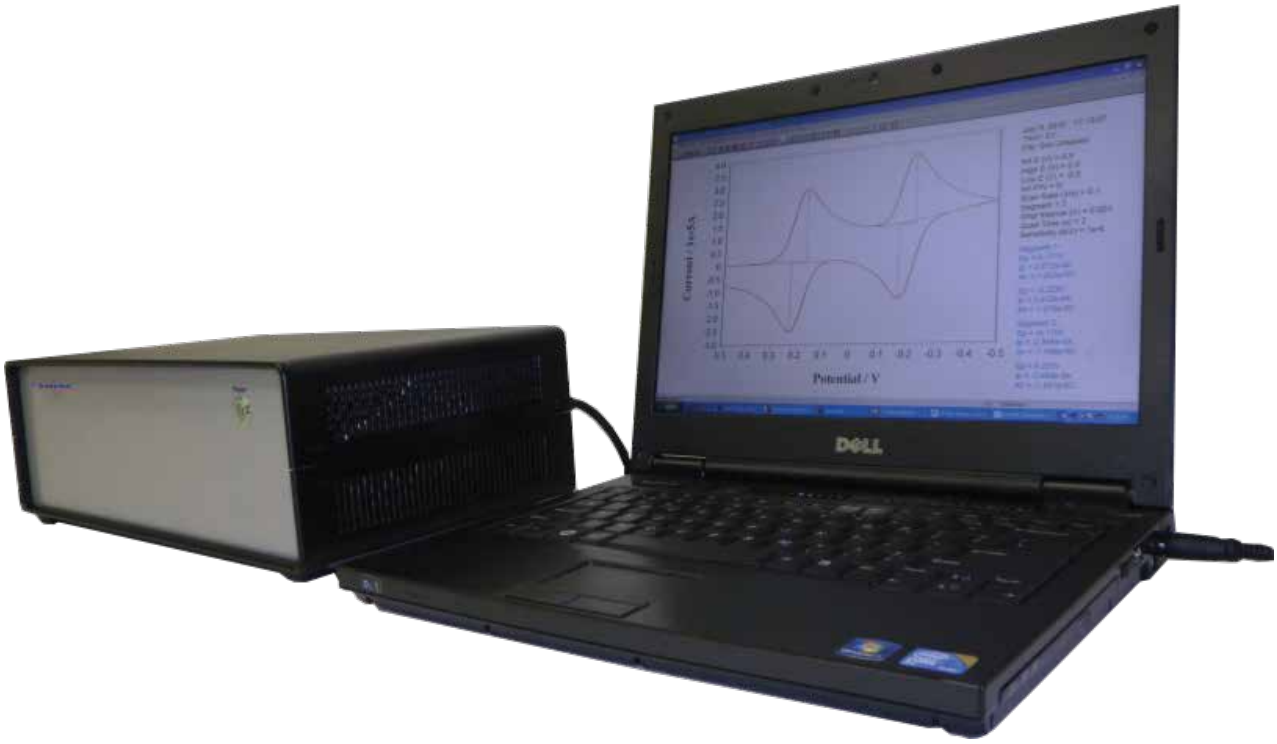
Multiplelabs
Turnkey Laboratories Solutions

Analytical®
Technologies Limited

EWA-3600E Series

ELECTROCHEMICAL WORKSTATION/ANALYSER



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

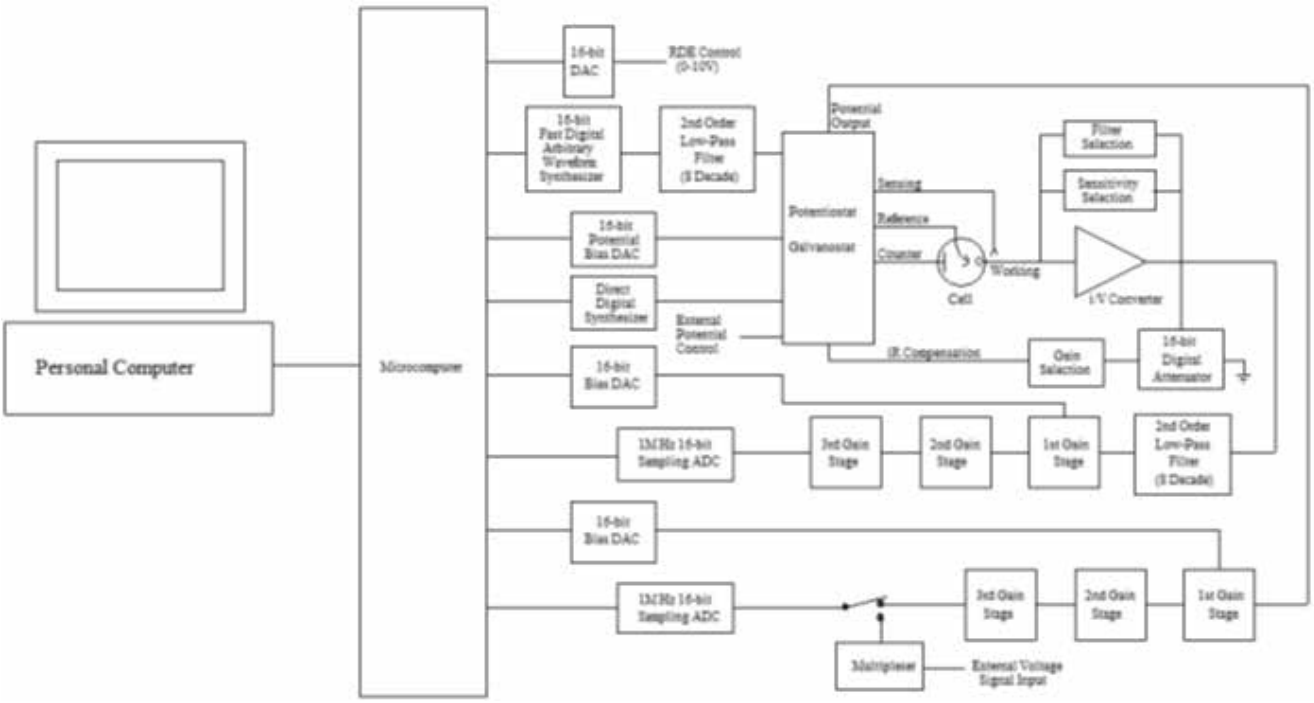
www.analyticalgroup.net

Specification

- Cyclic Voltammetry (CV)
- Linear Sweep Voltammetry (LSV)
- TAFEL – Corrosion, potentiodynamic deactivation, pitting corrosion, corrosion rate, linear Polarisation, Corrosion current etc.
- Chronoamperometry (CA)
- Chronocoulometry (CC)
- Bulk Electrolysis with Coulometry (BE)
- Impedance
- AC Impedance (IMP)
- Impedance –Time (IMPT)
- Impedance –Potential (IMPE)
- Open Circuit Potential-Time (OCTP)
- Galvanostat
- Chronopotentiometry (CP)- Charge/Discharge
- Chronopotentiometry with current Ramp (CPCR)
- Potentiometric Stripping Analysis (PSA)
- Multi- Current step (ISTEP)
- Limited Version of CV Simulation and fitting Program
- Impedance simulation & Fitting Program
- iR Compensation
- External potential input
- Auxiliary Signal Measurement Channel
- Potentiostat
- Galvanostat (Model 440C)
- 2, 3, or 4-electrode configuration
- Potential range: -10 to 10V
- Applied potential accuracy: ±1 mV, ±0.02% of scale
- Potentiostat rise time: < 2 µs
- Compliance voltage: ±12 V
- Maximum current: ±250 mA continuous, ±350 mA peak
- Reference electrode input impedance: 1×1012 ohm
- Sensitivity scale: 1×10-12 - 0.1 A/V in 12 ranges
- Input bias current: < 50 pA
- Current resolution: 0.0015% of current range, minimum 0.3 fA
- Minimum potential increment in CV: 100 µV
- Fast waveform update: 10 MHz @ 16-bit
- Data acquisition: 16 bit @ 1 MHz
- External signal recording channel

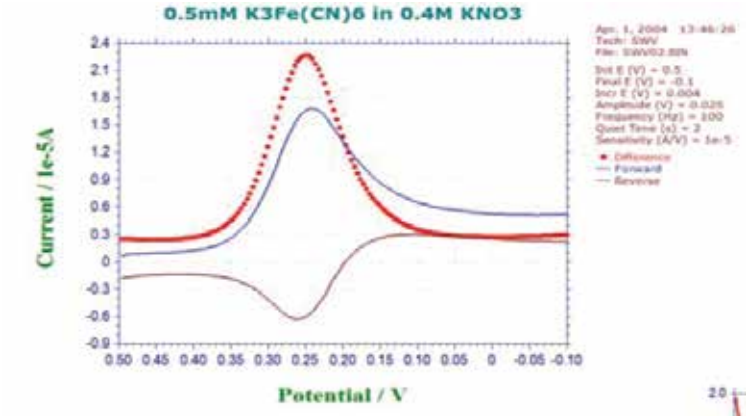
- QCM Frequency resolution: < 0.1 Hz
- QCM maximum sampling rate: 1 kHz
- Automatic and manual iR compensation
- CV and LSV scan rate: 0.000001 to 5000 V/s
- Potential increment during scan: 0.1 mV @ 1000 V/s
- CA and CC pulse width: 0.0001 to 1000 sec
- CA and CC pulse width: 0.0001 to 1000 sec
- CA and CC Steps: 320
- DPV and NPV pulse width: 0.001 to 10 sec
- SWV frequency: 1 to 100 kHz
- i-t sample interval: minimum 1 µs
- ACV frequency: 0.1 to 10 kHz
- SHACV frequency: 0.1 to 5 kHz
- Low-pass signal filters, automatic and manual setting
- Potential and current analog output
- RDE rotation control output: 0 - 10 V (430C and up)
- CV simulation and fitting program
- Cell control: purge, stir, knock
- Data length: 128K – 16384K selectable
- Dimension: 14.25”(W) × 9.25”(D) × 4.75”(H)
- Oscillator Box (external): 4.75"(L) × 2.6" (W) × 1.55" (H)
- Weight: 12 Lb.

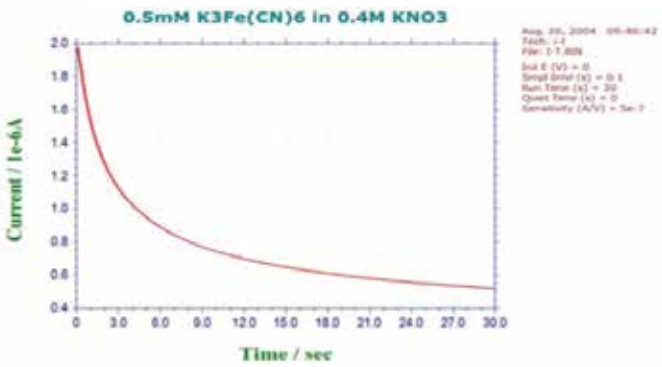
The Model 3600E series is designed for general purpose electrochemical measurements. The figure below shows the block diagram of the instrument. The system contains a fast digital function generator,a direct digital synthesizer for high frequency ac waveforms, a high speed dual channel data acquisition circuitry, a potentiostat, and a galvanostat (available only in select models).The potential control range is ±10 V and the current range is ±250 mA. The instrument is capable of measuring current down to picoamperes. With the CHI200B Picoamp Booster and Faraday Cage (fully automatic and compatible with the CHI3600E series), currents at sub-picoamperes can be measured. The instrument is very fast. The function generator can update at a 10 MHz rate. Two high speed and high resolution data acquisition channels allow both current and potential (or external voltage signal) to be sampled simultaneously at 1M Hz rate at 16-bit resolution. The instrument provides very wide dynamic range on experimental time scales. For instance, the scan rate in cyclic voltammetry can be up to 1000 V/s with a 0.1 mV potential increment or 5000V/s with a 1 mV potential increment. The potentiostat / galvanostat uses a 4-electrode configuration, allowing it to be used for liquid/liquid interface measurements and eliminating the effect of contacting resistance of connectors and relays for high current measurements. The data acquisition systems also allow an external input signal (such as spectroscopic signals to be recorded simultaneously with the electrochemical data).



The 3600E series is the upgrade to our very popular 3600/3600A/3600B/3600C/3600D series. The major improvements of this series are very stable and accurate potential and current control, and dual channel data acquisition at high speed. The 3600E series has a USB port (default) or a serial port for data communication with the PC. You can select either USB or serial port (but not both) by changing the switch setting on the rear panel. The 3600E series also includes a true integrator for chronocoulometry. Two 16-bit highly stable bias circuitries are use for current and potential bias. This allows wider dynamic range in ac measurements. It can also be used for re-zero the dc current output. The model 3600E series can be upgraded to the model 700E series bipotentiostat. The model 700E series add a board that contains the second channel potential control, current measurements including sensitivity switching, two low pass filters, three gains stages, and channel selection. It is therefore identical to the 3600E series when used for single channel measurements. When it is used as a bipotentiostat, the second channel can be controlled at an independent constant potential to scan or step at the same potential as the first channel, or to scan with a constant potential difference with the first channel. The second channel is available for many voltammetric and amperometric techniques.

The instrument also provides various electrochemical techniques, Windows-based software, and integrated digital CV simulator and fitting, impedance simulation and fitting program. These features provide powerful tools for both electrochemical mechanistic studies and trace analysis. We provide several different models in the 3600E series. The following table compares the different models. Other than what is listed, the specifications and features of these models are identical. Models 3600E and 3610E are basic units for mechanistic study and electrochemical analysis, respectively. They are also great for teaching purposes. Models 3602E and 3604E are for corrosion studies. Models 3620E and 3630E are comprehensive electrochemical analyzers. Models 3650E and 3660E are advanced electrochemical workstations.





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HPLC Servicing, Validation, Trainings and Preventive Maintenance :

HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

Trainings :We also take up preventive Maintenace to reduce downtime of HPLC's Trainings.

AMC's/CMC :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

Instruments :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.

About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufaturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

Our Products & Technologies

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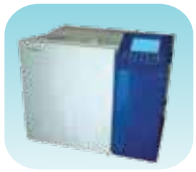
Infra FTIR

Optima Gas Chromatograph 3007



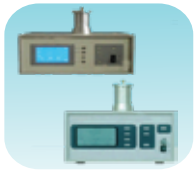
Optima Gas Chromatograph 2979 Plus

Flash Chromatograph

Atomic Absorption Spectrophotometer

Liquid Partical Counter

Optical Emission Spectrophotometer



DSC/TGA

Semi Auto Bio Chemistry Analyzer

HEMA 2062 Hematology Analyzer

Micro Plate Reader/Washer

URINOVA 2800 Urine Analyzer

Total Organic Carbon 3800

Fully Automated CLIA

NOVA-2100 Chemistry Analyzer

PCR/Gradient PCR/ RTPCR

TOC Analyzer

Laser Particle Size Analyzer

Ion Chromatograph

Water purification system

Regulatory compliances

Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:

1.Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personallities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at Info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXIFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

Reach us @

Analytical®
Technologies Limited

HPLC Solutions | MultipleLabs | Analytical Bio-Med | Analytical Distributors | Analytical Foundation (Trust)

Corporate & Regd. Office:
Analytical House, # E67 & E68,
Ravi Park, Vasna Road, Baroda,
Gujarat 390 015. INDIA

T: +91 265 2253620
+91 265 2252839
+91 265 2252370
F: +91 265 2254395

E: info@hplctechnologies.com
info@multiplelabs.com
info@analyticalgroup.net
info@analyticalbiomed.com

W. www.analycalgroup.net
www.hplctechnologies.com
www.multiplelabs.com
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