

e-Robot

IFA/ELISA

Flexible Walk-Away System
for ELISA in microtitre plates and
IFA on glass slides

The ultimate design

The e-Robot platforms are state-of-the-art robotic workstations for fully automated ELISA / IFA methods on standard microtitre plates and glass slides. Based on the Sias Xantus platform, eRobot is designed for OEM and Private Label applications. Many innovative solutions such

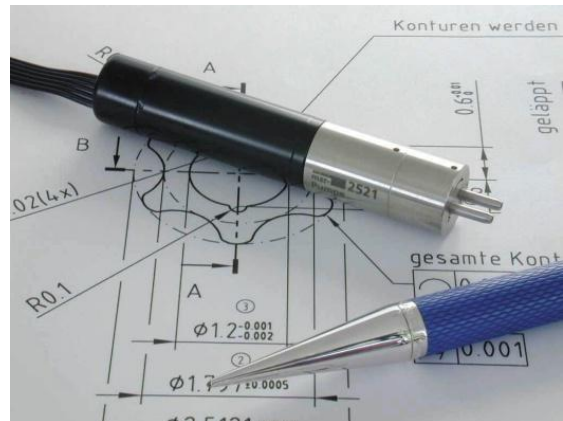
as "micro-annular gear" pumps and 270° rotating microplate gripper, make this system efficient, powerful, fast and efficiently sized. e-Robot is the most reliable solution for the automation of autoimmunity tests. ELISA and IFA test can be executed at the same time.



Total Automation

The **e-Robot** automates complete ELISA protocols, from pipetting through incubation, washing and reading to data reduction. Featuring bar code reading of samples, plates and reagents, comprehensive software tracks sample identification from receipt to result, and enables processing by batch or by WorkList.

- ✓ Sample pre-dilution and dispensing
- ✓ Reagent multi-pipetting
- ✓ Plate/Slide Incubation
- ✓ Plate/Slide Washing
- ✓ Plate /Slide Shaking
- ✓ Plate Reading and real-time data processing / printout
- ✓ Automation of IFA preparation on glass slides
- ✓ Dual processing – ELISA and IFA together

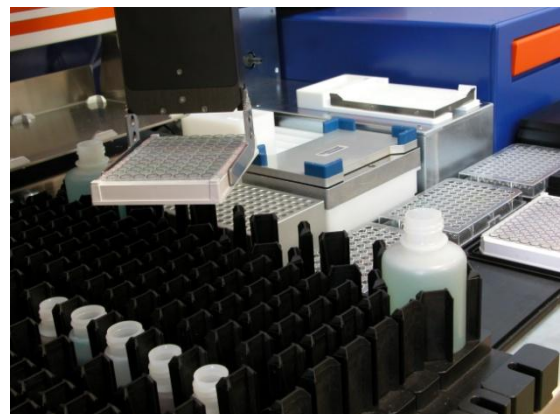


Fast and Flexible

e-Robot is available with 2 or 4 pipetting channels (washable tips) plus a tool arm for plate transport. Other configurations may be available on request. Tips are fully independent in both Y and Z axes.

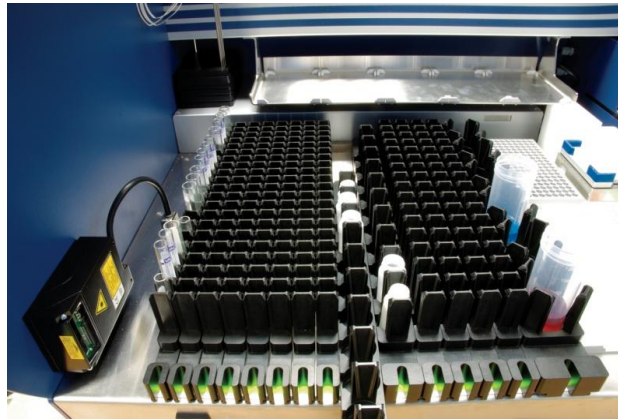
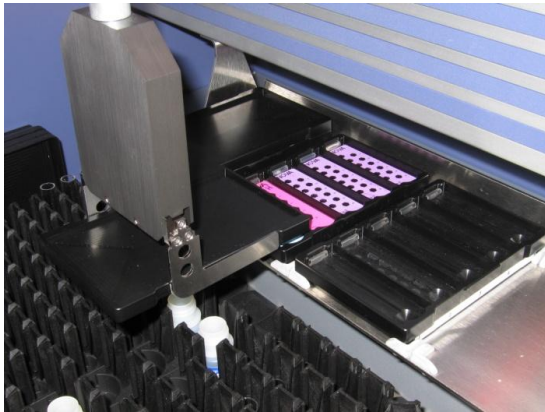
Up to 4 plates and 25 slides can be simultaneously processed in the same run (depending on configuration, and assuming room temperature incubation).

The **e-Robot** accommodates 160 or 240 samples, 6 diluents and 90 reagents in modular racks and can process several tests in parallel on the same or different plates. Reagents can be placed in the racks in their original containers.



Safe

- ✓ Barcode identification of samples, reagents, plates (Opt.)
- ✓ Liquid and clot detection independent of each probe
 - ✓ Thorough decontamination of washable tip to prevent sample and reagent carry-over
 - ✓ Safety cover

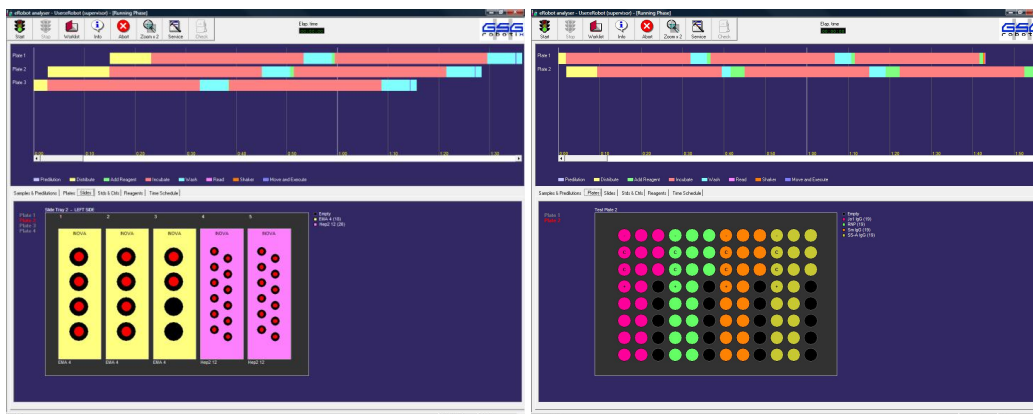


User-friendly

A user-friendly application software interface, **e-Robot SW**, has been designed to facilitate user interaction with the system. The e-Robot "application-oriented" programming interface also simplifies test method implementation, instrument preparation and assay execution follow-up.

Tube	BarCode	Name	ACA_IgG	ANA	Jo-1	SCL-70	SM	SM-Frp	SS-A	SS-B
0001	0934534	IDM001								
0002	9534534	IDM002								
0003	8456456	IDM003								
0004	9845756	IDM004								
0005	7567756	IDM005								
0006	7978967	IDM006								
0007	7686836	IDM007								
0008	7858768	IDM008								
0009	6786788	IDM009								

The Dynamic Run Manager schedules the steps of each assay before the run commences, and also provide a real time update of the test/plate process sequence.



Qualitative and quantitative data reduction.

At the end of each IFA assay, a complete run report is generated containing details of each patient position on the slide. This report can be used to compile and present the results after off-line analysis.

The **e-Robot** software further offers bi-directional connection to Host PC (LIS) by "file transfer" in ASCII or XML format file for worklist download and uploading results. Optional additional Database software with advanced functions (QC and statistics) is also available.



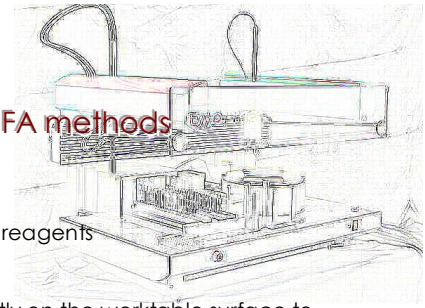
The information contained in this document is for general guidance only. Sias reserves the right to change any specification without prior notice

Configuration examples

<p>4 ELISA plates / 25 IFA slides (2 washable tips)</p>	
<p>6 ELISA plates / 25 IFA slides (4 washable tip)</p>	
<p>6 ELISA plates (IFA slides in separate run) Optional Heating incubator</p>	
<p>30 IFA slides (ELISA plates in separate run)</p>	



Flexible Walk-Away System for ELISA and IFA methods



GENERAL SPECIFICATIONS	
BAR CODE READING (ResaTrax)	Optional CCD bar code reader for sample tubes and reagents Most commercially available bar codes can be read Max digits: 20
SAMPLE CAPACITY	The positive sample identification unit is installed directly on the worktable surface to minimise bench space. Linear racks hold the sample tubes and original reagent containers. 160 or 240 samples tubes (primary tubes) in 8 or 12 linear racks (ResaTrax) with 20 tubes each. Tube size 10 to 16 mm OD
REAGENT CAPACITY	Up to 90 reagent positions with adapters for different size containers: <ul style="list-style-type: none">○ 20 reagents up to 30 mm max. OD○ 6 reagents (high capacity diluent containers) up to 50 mm max. OD○ 64 reagents (Std/Ctrl vials) up to 20 mm max. OD
PLATE CAPACITY	Up to 6 plates
SLIDE CAPACITY	Up to 25 slides in 5 slide trays with 5 slide positions each
PREDILUTIONS	Predilution in DW tubes and serial dilution in microtitre plates. Number of predilution plates depends on the system configuration (2 or 4 Washable Tips). Standard configurations have 2 or 4 positions for 8x12 microtitre plates and 162 deepwell tubes
TIPS DESIGN	2 washable tips upgradable to 4 (disposable tips available as option). Tips are fully independent in Y and Z axis. Independent tip spacing (flexi-span) from 9 to 350 mm.
LIQUID DETECTOR	Capacitance , independent detector for each tip Minimum detectable volume 100µl (with 0.9% sodium chloride in a tube diameter 16mm)
CARRY-OVER PUMPS	Around 10^{-6} depending on the washing cycles and reagent characteristics High precision, no maintenance micro-annular gear pumps for precision liquid handling (one for each tip). Volumes from 1µl to 1ml
VOLUMES	Minimum sample/reagent volume 5µl Maximum sample/reagent volume 1ml (volumes outside this range may be possible)
SHAKER	1 MTP shaker with various shaking modes (orbital, linear, etc.)
TIPS DESIGN	2 washable tips upgradable to 4 (disposable tips available as option). Tips are fully independent in Y and Z axis. Independent Tip Spacing (flexi-span) from 9 to 350 mm.
PLATE READER	8 channels photometer for single, dual or multi wavelength measurement. Range between 400 - 800 nm. 4 standard filters upgradable to 6. Standard wavelength 620 nm, 492nm, 450nm, 405 nm (other values available on request)
PLATE & SLIDE WASHER	8 coaxial channels with 4 software selectable buffer lines
PC REQUIREMENTS	Pentium 4 CPU at 2.4 GHz speed, 512 MB RAM or higher, 15" High Res. display (1280x1024), printer
INTERFACE to PC	CAN bus on standard USB port
PC OPERATING SYSTEM	e-Robot software is fully compatible with Microsoft XP operating system
OPERATING CONDITIONS	Temperature: 15°C to 30°C/60°F to 85°F Relative humidity: 10 – 85% at 30°C/85°F or below
WEIGHTS AND DIMENSIONS	Weight approx 120 Kg Width 112, Depth 800 ,Height 750 mm
CE mark	Instrument bears CE mark

(*) Notice: the **e-Robot** brand and logo is a generic name referring to a wide range of products and applications. The **eRobot** brand can be only used by Sias AG and GSG RobotiX srl in any promotion



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