

HAMILTON®

ELISA NIMBUS®



Compact. Affordable. Quality.

ELISA Made Easy

Designed using the Microlab[®] NIMBUS liquid handling platform, ELISA NIMBUS is a complete walk-away solution for automated ELISA processing. Comprehensive yet compact, the small footprint of ELISA NIMBUS is balanced for sample, reagent, and disposable tip capacity, and is capable of processing up to 8 x 96-well microplates in parallel during a run. With 4 independent pipetting channels, a microplate washer, Hamilton Incubator Shaker (HIS), an absorbance reader, and an easy-to-use GUI with a real-time run control dashboard, the ELISA NIMBUS provides Hamilton quality at a competitive price.



Fully automated, walk-away solution



End-to-end sample tracking



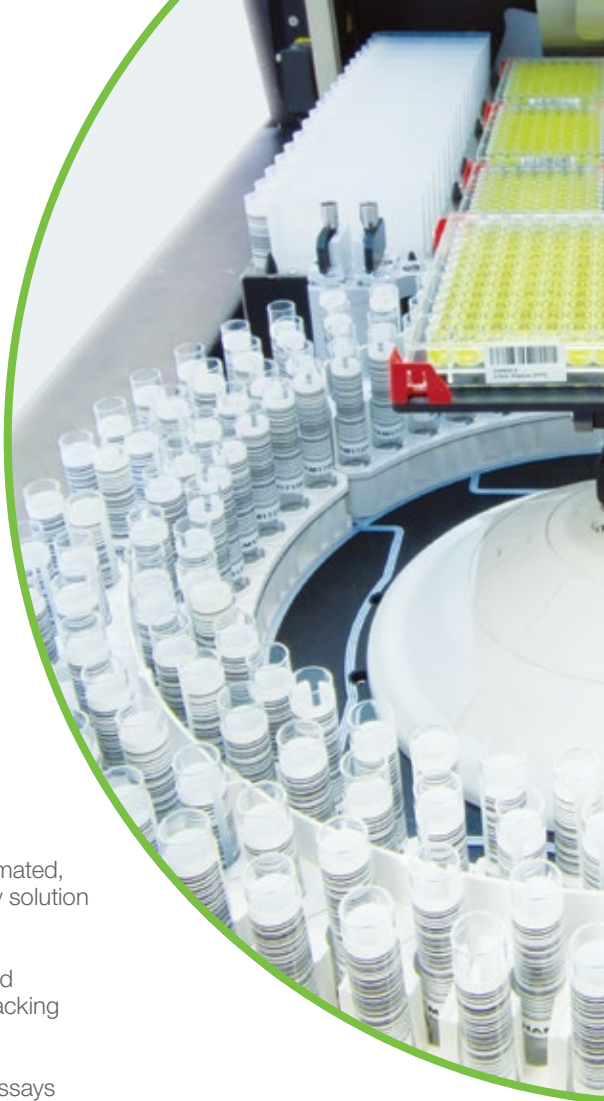
Panel of assays in one run



Automate a multitude of immunoassay kits



Quality service and support



End-to-end sample tracking



Process samples from tubes



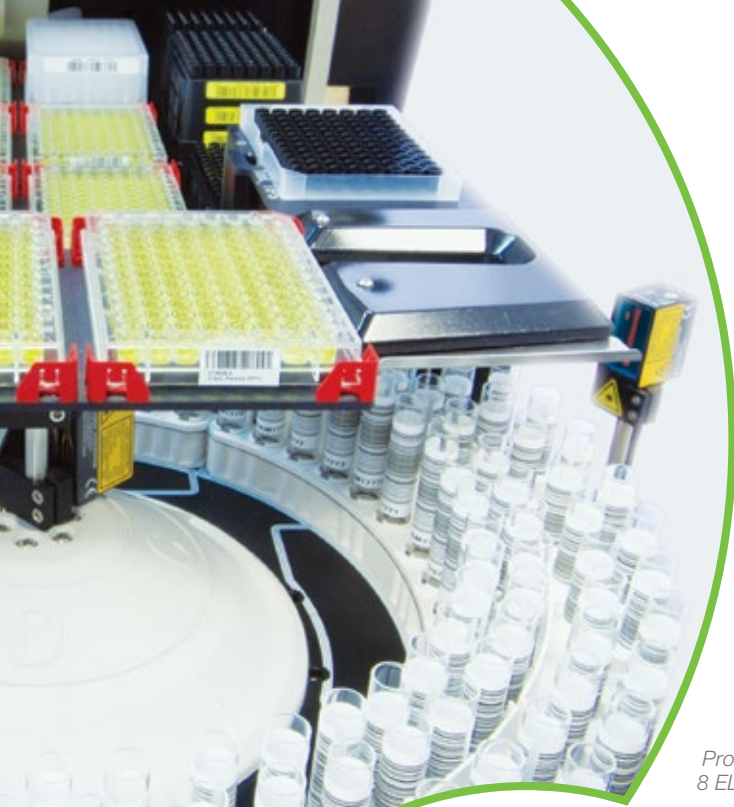
Process samples from microplates or deep-well plates

State-of-the-Art Technology

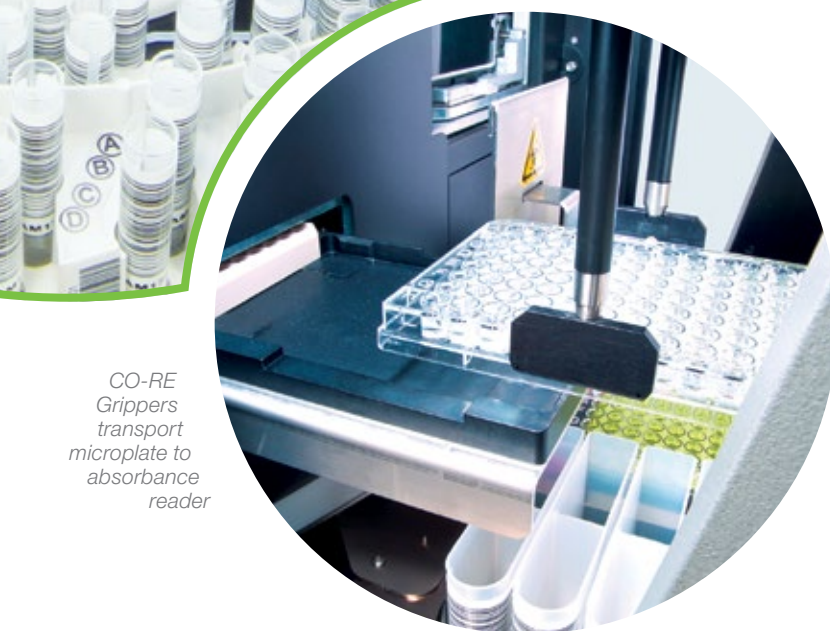
ELISA NIMBUS delivers a plug-and-play automation solution with Hamilton's patented pipetting technology. Automated liquid handling applications require precise tip attachment and positioning, thus ELISA NIMBUS incorporates Hamilton's proprietary CO-RE® technology. CO-RE technology attaches disposable tips and transportation tools to the pipetting channels with a highly robust lock-and-key style mechanism. The system requires no vertical force for tip attachment or tip ejection, thus eliminating mechanical stress and improving overall system reliability, pipetting speed, positional accuracy, and dexterity.

- Eliminates aerosol formation during tip ejection
- Increases process safety by preventing improper tip detachment
- Positive pressure seal provides ability to monitor pressure changes during pipetting for Monitored Air Displacement (MAD)

Using Hamilton's proven air displacement pipetting, ELISA NIMBUS provides high pipetting accuracy and precision. The system includes capacitive LLD (cLLD) to detect conductive liquids. For further process security, the patented MAD technology detects clots, insufficient sample volume, or empty wells in real time during aspiration steps. Providing real-time tracking of potential aspiration errors with MAD offers a high level of confidence, to deliver reliable and consistent walk-away automation for your assays.



Processes up to 8 ELISA plates



CO-RE Grippers transport microplate to absorbance reader



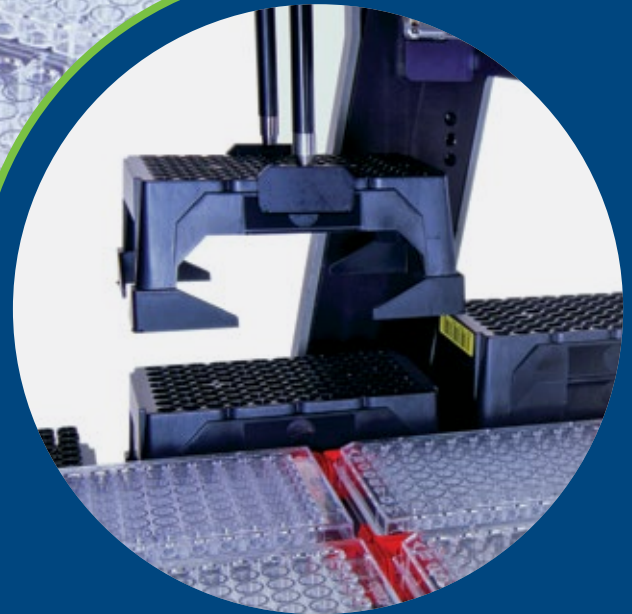
CO-RE Grippers transport microplate to microplate washer



Run different assays in parallel with 4 individually controlled, low evaporation incubator shakers



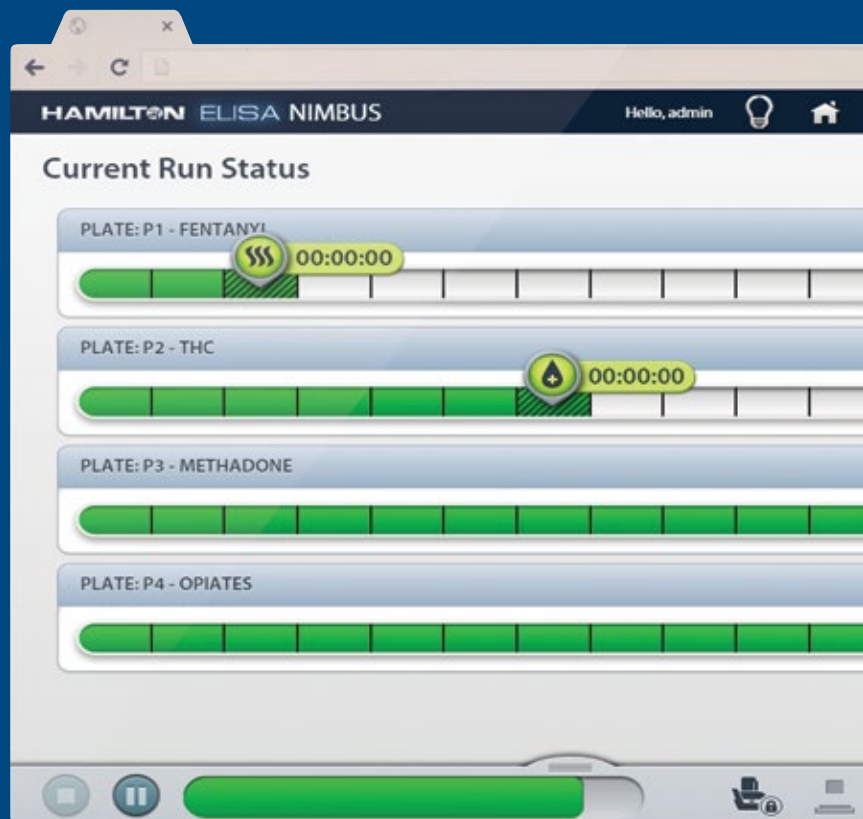
CO-RE technology
attaches disposable tips
and transportation tools



Powerful Software

The easy-to-use and intuitive software GUI guides you through creating assay workflows while providing the option to specify individual sample dilutions in your worklist. Shorten your front-end preparation with automatic calculation of reagent volumes and software prompted deck setup. Then, monitor real-time run status and system controls while you do other work in your lab.

- Includes data reduction software for comprehensive experimental analysis
- Provides output files for LIMS or existing information systems
- Powerful run and data reporting via the software



Software GUI

Specifications

Physical Specifications

Height (front door closed)	36 in	91.4 cm
Width	57.5 in	146 cm
Depth	26.5 in	67.3 cm
Weight	400 lbs	181.4 kg
Power	100 VAC 50 Hz / 240 VAC 60 Hz, power consumption ≤ 1000 Watts	
Environmental	15 – 35 °C, RH 30 – 85% (non-condensing) up to 2000 m above sea level, indoor use only	
Integrated PC/Software	Microsoft® Windows® 7 (64 bit), WiFi (802.11 g/n) wireless	

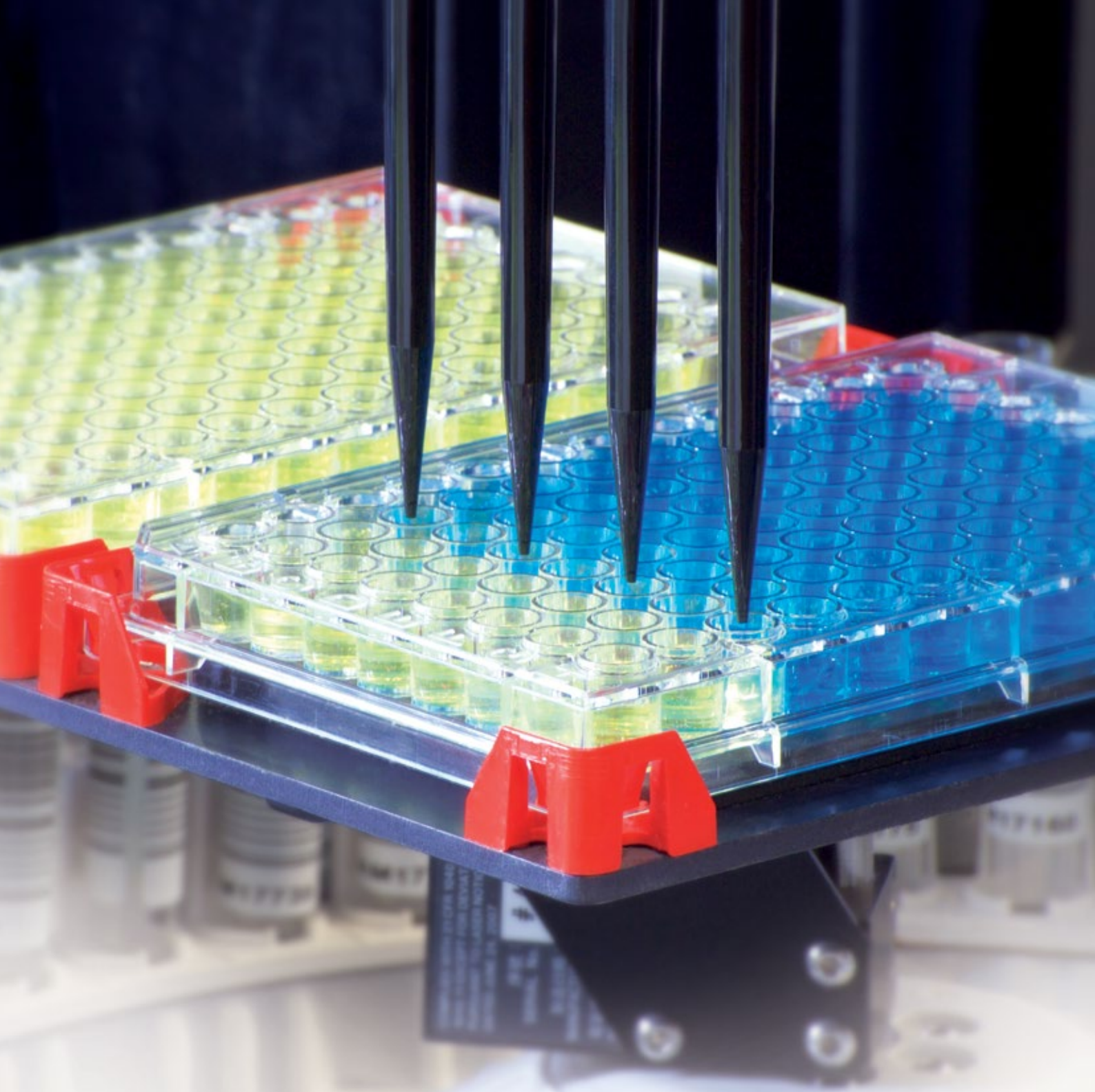
General Specifications

Sample/Control Capacity	Test Tubes: 192 tubes with diameter 12 – 13 mm (60 – 100 mm tall) or 128 tubes with diameter 15 – 17 mm (60 – 100 mm tall) Microplates or Deep-well Plates: 3 x 96-well SLAS ANSI format plates
Number of Assay Plates	Up to 8 SLAS ANSI plates, including dilution blocks, pre-incubation plates, and assay plates, if dilutions and/or pre-incubations are required. Partial plates are possible.
Number of Dilution Blocks	4 x 96-well deep-well blocks with shared dilution for samples across panel of assays
Reagent Capacity	18 x 60 mL reagent troughs or 3 x 12 column SLAS ANSI format reservoirs with 21 mL/column, 252 mL max
Sample-tip Capacity	9 x 96 300 µL tips or 9 x 96 50 µL tips
Reagent-tip Capacity	1 x 96 1 mL tips
Sample Tracking	Barcode reading of sample tubes, sample plates, control tubes, reagent troughs, and assay plates
Pipetting	4 1000 µL Independent Pipetting Channels

Pipetting Specifications for Disposable Tips	Disposable Tip Size	Volume	Accuracy [R] (%)	Precision CV (%)
1000 µL Independent Channels	50 µL	1 µL	5.0%	5.0%
	50 µL	5 µL	2.5%	2.0%
	50 µL	50 µL	2.0%	1.0%
	300 µL	10 µL	5.0%	2.0%
	300 µL	50 µL	2.0%	1.0%
	300 µL	300 µL	1.0%	1.0%
	1000 µL	10 µL	7.5%	3.5%
	1000 µL	100 µL	2.0%	1.0%
	1000 µL	1000 µL	1.0%	1.0%

For pipetting of less than 10 µL Hamilton recommends 50 µL volume disposable tips to achieve highest pipetting precision

Microplate Washer	Manifold type: 8-channel strip washer Supply bottle: 3 x 2 L wash buffer plus one 2 L rinse bottle Waste bottle: 6 L Liquid level monitoring: Weight sensing for all buffer, rinse, and waste bottles Dispense volume range: 5 – 1000 µL/well Residual volume: ≤ 2 µL Shaking: Linear Dispense accuracy: 5% Precision: 3% CV well to well
Microplate Reader	Optical system: 8-channel photometer (absorbance reader) Light source: LED Wavelength range: pre-installed 405, 450, 492, 620 nm, optional 340 – 750 nm also available Measurement mode: single/dual Shaking: Linear, 4 speeds Resolution: 0.1 mOD Precision: < 1%
Hamilton Incubator Shaker	Capacity: One Incubator tower with 4 independent shaking incubators Temperature: Ambient + 4 °C to 60 °C ±1 °C Shaking: Orbital (3 mm), 40 – 1200 RPM Low evaporation rate: < 2 µL/well per hour; mitigates the need for lidding or sealing plates Microplate height supported: ≤ 15.25 mm Microplate weight supported: ≤ 140 g
Waste	Large tip waste with tip waste slide prevents waste backups; sensor ensures tip waste container is present



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