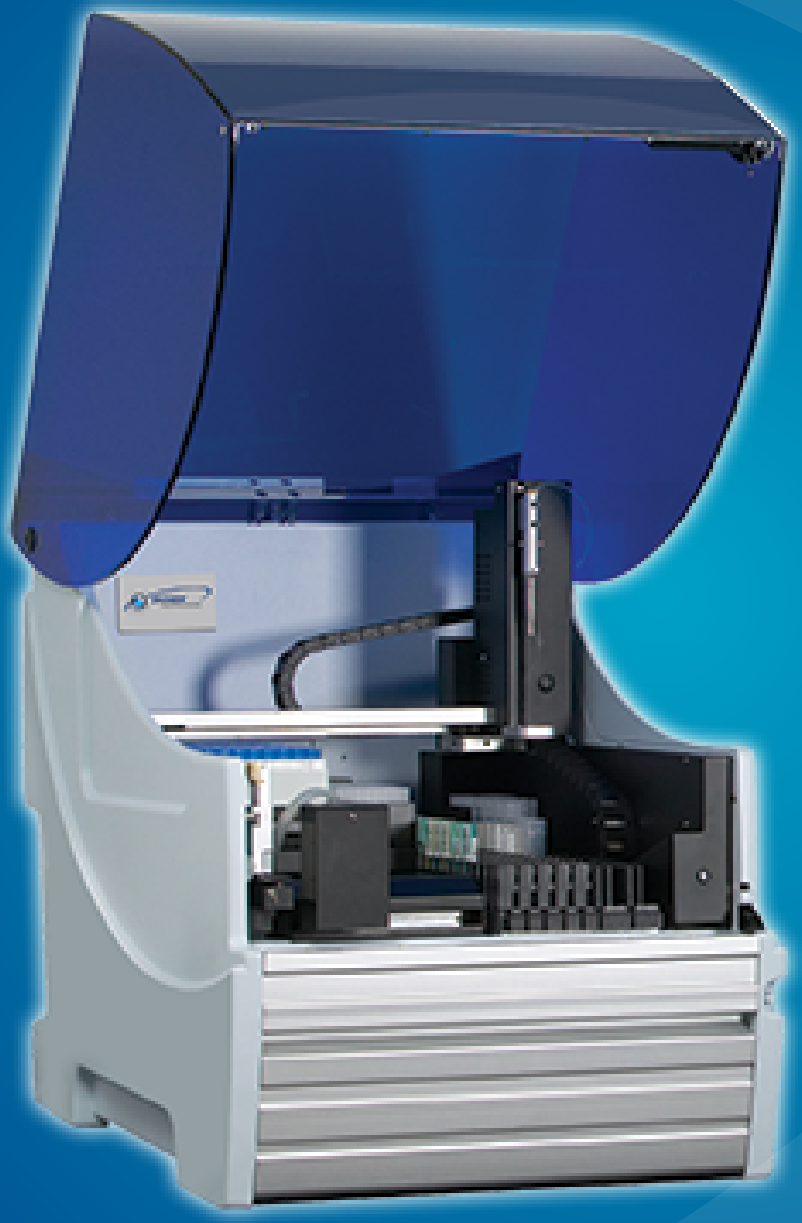
DS2®

BIOHIT HealthCare

Innovating for Health



DS2®
2-Plate ELISA Processing System

Compact.
Easy to Use.
Innovative.

A Perfect Combination

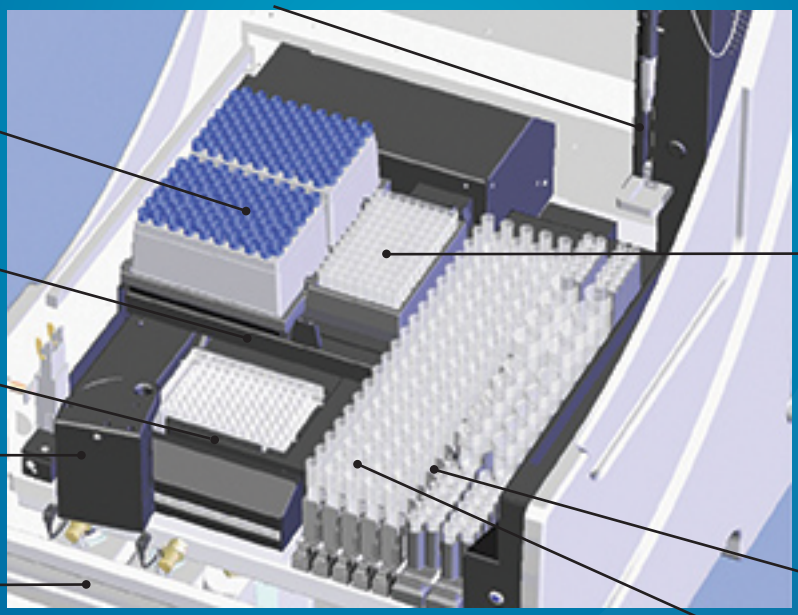
DYNEX™ TECHNOLOGIES

Pioneering Microplate Technology for more than 50 Years

www.biohithealthcare.co.uk

About Dynex Technologies

Dynex™ is a leading manufacturer of microplate instrumentation, seamlessly integrating advanced detection with fully-automated sample handling, consumables and accessories. As of 2014, over 2,800 DSX® systems and 1,600 DS2® systems are in use worldwide in numerous applications including clinical diagnostics, drug discovery, biomedical research and industrial operations, among others. Headquartered in Chantilly, Virginia, Dynex has a proven track record of high quality products and excellent service and support.



Interior view of the DS2®

DYNEX™
Perpetual Innovation

DS2 Makes Automation Easy

Designed with full walkaway capability, DS2® quickly and easily processes two 96-well microplates and up to 12 different assays simultaneously. The system also features a user-friendly control system, chain of custody management and on-board instrument diagnostics.

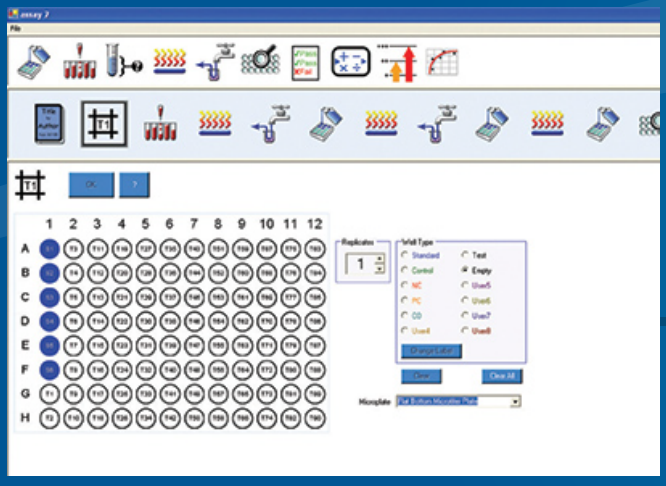
DS2 delivers sample-in/results-out automation of microplate assays:

- Sample dilution and distribution
- Incubation, washing and reagent dispensing
- Reading with automatic data reduction and quality control
- Automatic barcode scanning

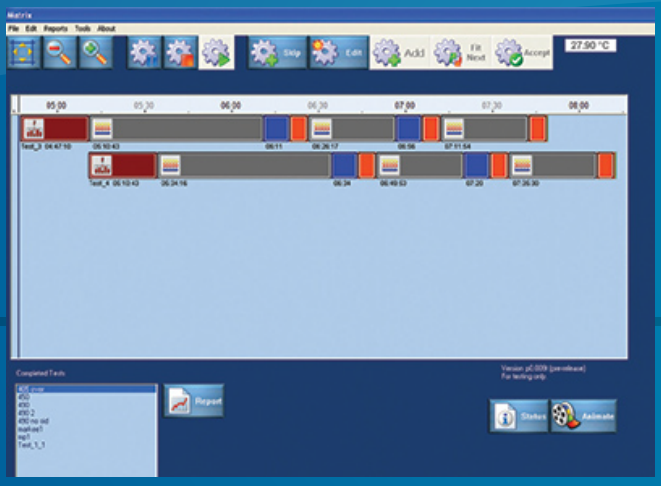
The flexible, open system design of the CE-marked DS2 is ideal for virtually any ELISA application, from clinical diagnostics, such as autoimmune and infectious disease to food safety and drugs of abuse testing. DS2 has the comprehensive capability needed to ensure the rigorous, repeatable analysis required to deliver the most accurate results.

Intuitive, Easy-to-Use DS-Matrix™ Software

Feature rich and groundbreaking in its process simulation and ease-of-use, DS-Matrix software powers DS2 allowing for rapid integration of this automation in the lab. The simple, graphical interface of DS2 can be operated by any lab technician with minimal training.



With over 1,600 DS2 systems in operation worldwide, hundreds of assays are already available for the DS2. Programming new assays is easy using the assay writer with its intuitive drag-and-drop icons.



Once you begin running your assay, the timeline and simulator show you exactly where you are in the process and how much time you have left.

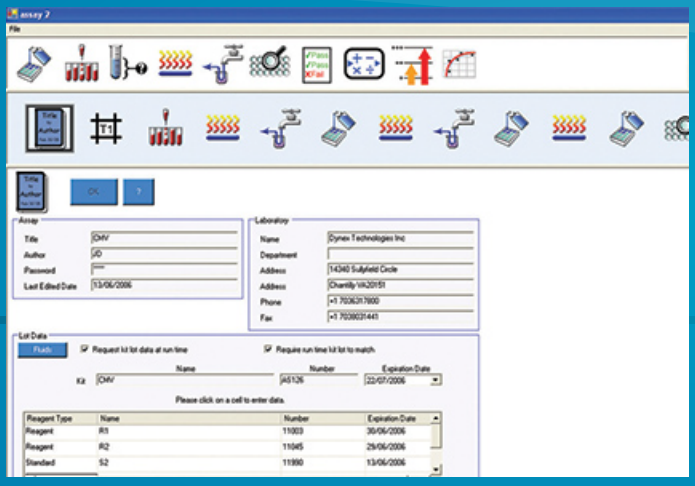
Ingenious Hardware Design

Dynex™ designed DS2® for simplicity, efficiency and reliability. The system uses a multi-function robot arm that does everything from pipetting to operating the barcode reader. In addition, DS2's vertical design and patented multi-plate carrier save space, enabling a minimal footprint, with maximum consumable storage:

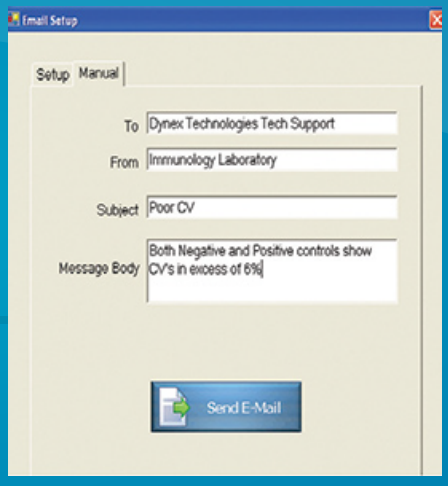
- 216 sample tips
- 96 dilution vessels in convenient 8-way strips
- 20 reagent tips
- 8 large and 10 medium reagent bottles
- 24 standard/control bottles

Worry-Free System assures Accurate Results

The DS2 system prompts you if any additional action is required. For example, if you need to add more reagents or wash fluids, you can set up DS2 to alert you with an audible alarm and/or an email outlining the problem. Integrated self-diagnostics make troubleshooting easy. If needed, you can even send Dynex Technical Support a problem description from within the application, with the appropriate system information automatically attached.



The system enables recording and assurance of lot-specific data.



Dynex support is just an email or phone call away:
techservice@dynextechnologies.com
800.288.2354 or 703.631.7800
press option 4

Dynex Certified Consumables and Service

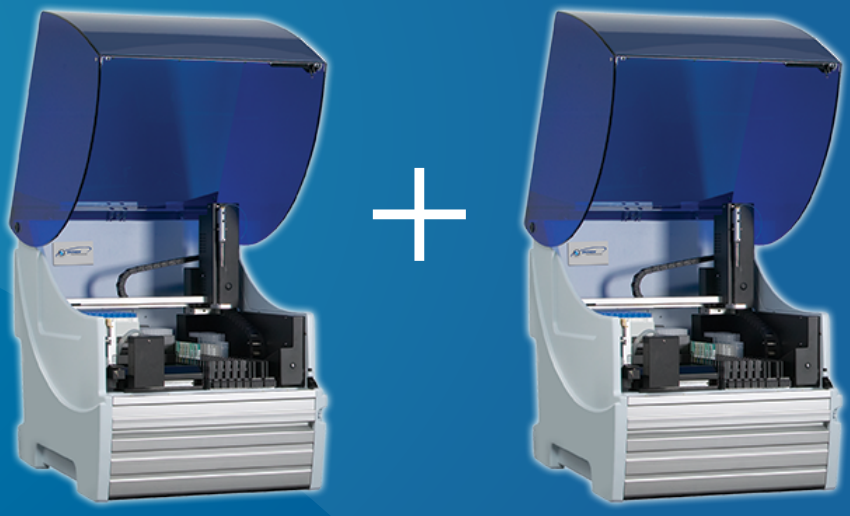
The DS2® system's innovations include more than just the instrument – the controlled system also includes the sample and reagent tips used. ONLY Dynex Certified Consumables are specifically designed and produced for Dynex instruments, ensuring proper tip fit with superior accuracy and performance. Beware of imitators who have tried and failed to replicate Dynex's CE-marked tips, leading to unreliable results.

Dynex is known for building robust systems built to last many years with frequent use, but regular maintenance and servicing are also essential to sustain peak performance. Dynex offers several tiers of service contracts to help keep your DS2 running like new for years to come. Contact Dynex or your authorized Dynex distributor for more details.

DS2 x 2 for even Greater Flexibility

The DS2 system can grow with you as your lab's throughput needs increase. Having two DS2 systems in your lab can provide you with even more benefits including:

- Double sample capacity – 200 samples and four plates
- Backup system – Ensure your assays keep running even when one system is undergoing maintenance or repair
- Small footprint – Greater throughput and flexibility in a footprint smaller than most self-contained four-plate systems



DYNEX™ TECHNOLOGIES

DS2® Specifications

Physical Specifications

Dimensions

Width:	54 cm	21 in
Depth:	68 cm	27 in
Height:	66 cm	26 in
Weight (net):	48 kg	105 lb
Shipping weight:	78 kg	170 lb

Power Supply

Voltage:	100 – 240 V auto-switching
Frequency:	50/60 Hz
Power consumption:	<300 VA

General Specifications

Number of plates:	2
Sample capacity:	100 per load
Continuous load:	Yes
Sample-tube size:	10 – 16 mm diameter 40 – 100 mm height
Reagent-fluid capacity:	8 x 25 mL bottles 10 x 15 mL bottles
Control-fluid capacity:	24 x 2 mL vials
Dilution capacity:	(96) 12 x 8 deep-well strips
Sample-tip capacity:	216 tips
Reagent-tip capacity:	20 tips
Assays per plate:	Up to 12
Selftest at startup:	Yes

Reader Specifications

Dynamic range:	-0.100 – 3.0 OD
Spectral range:	405 – 690 nm
Filter slots:	6
Reading channels:	12 plus reference channel
Reading modes:	Single, dual
Read time:	<30 sec (single wavelength)
Precision:	<1% CV (<2.0 OD) <2% CV (2.0 – 3.0 OD)
Accuracy:	+/- 0.005 OD or 2.5% (whichever is greater)

Washer Specifications

Manifold configuration:	8-way
Dispense-volume range:	50 – 1000 µL
Wash cycles:	1 – 9 (repeatable)
Residual volume:	<3 µL
Super aspirate mode:	Yes
Wash-buffer capacity:	2 x 2 L
Low-buffer alarm:	Yes
Soak time:	0 – 999 seconds
Dispense pressure:	Pre-set
Rinse function:	Input connector for user's external bottle, any size
Waste-water container:	1 x 1.5 L

Incubator Specifications

Temperature range:	Ambient + 4° C to 40° C
Temperature uniformity:	+/- 1° C across plate @ 37° C
Shaking:	Independent linear motion 14-20 Hz (periodic or continuous)
Incubation time:	Programmable
Time to set temperature:	<1 min
Temperature monitoring:	Yes

Pipetting Specifications

Type:	Disposable tips (2 types)
Sample-tip range:	Tip type 300 µL (10 – 250 µL dispense range)
Reagent-tip range:	Tip type 1,300 µL (20 – 1,000 µL dispense range)
Maximum dilution:	1 to 5,000
Serial dilutions:	Yes
Replicates:	Up to 96 samples, standards and controls)
Precision, sample tip:	<3%CV at any operating volume above 10ul (single shot mode)
Precision, reagent tip:	<3%CV at any operating volume above 20ul (single shot mode)

Process Security

Liquid-level sensing:	Yes (reagents, controls and samples)
Level-sensor system:	Pressure differential
Clot detection:	Yes
Dispense-anomaly detection:	Yes
Tip detection:	Yes
Well-fill verification:	Yes
Alarms:	Yes

Software

Computer (not included): Current model desktop or laptop PC running MS Windows® Professional. Contact Dynex for current supported version(s) prior to purchase.

Controlling software:	DS-Matrix™
Work protocols (assays):	Unlimited
Data processing:	Quantitative and qualitative
Levey-Jennings:	Yes
Westgard rules:	Yes
Process reporting:	Event log + error log
Automatic error recovery:	Yes
Password access control:	Yes

Ordering Information

62000 DS2 System
62010 DS2 System w/Barcode Scanner
62700 Barcode Scanner

Consumables

62910 Deep-well strips (250/box)
62920 Reagent tubes, 25 mL (10/pack)
65950 Reagent tubes, 25 mL (24/Pack)
62930 Reagent tubes, 15 mL (10/pack)
65920 Reagent tips (432/box)
65910 Sample tips (432/box)
65940 Control vials w/caps (33/pack)

DYNEX™ TECHNOLOGIES

OEM capability for assay development

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IEC/EN 61010-2-010:2003
IEC/EN 61010-2-081:2002
IEC/EN 61010-2-101:2002
UL 61010-1:2001
CSA C22.2 No. 61010-1
EMC: IEC 61326-1:2005(EN 61326-1:2006)
IEC61326-2-6:2005(EN61326-2-6:2006)

Intertek ISO 13485 CERTIFIED. SFDA REGISTERED

Specifications subject to change without notice.

* Factory calibration of the pipette module are carried out using a calibration fluid.

DS2 is a general purpose microplate processor. It is the customer's sole responsibility to determine the DS2 system's suitability for a particular application, including any clinical application, and validate the product for that use in compliance with all applicable legal requirements and policies.

Dynex makes no representations, warranties, or performance claims with respect to the performance of DS2 for any specific application, including clinical application, or for the use of the DS2 system with any reagents, assays, or other products.

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