DS2 Specifications

Physical specifications

Dimensions

Width:	53 cm	21 in
Depth:	65 cm	26 in
Height:	68 cm	27 in
Weight (net):	44 kg	97 lb
Shipping weight:	100 kg	220 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 – 3.0 OD
Spectral range:	400 – 800 nm
Filter slots:	6
Reading channels:	12 plus reference channel
Reading modes:	Single, dual
Read time:	<25 sec (single wavelength) <50 sec (dual 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 – 999 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 users' external bottle, any size
Waste-water container:	1 x 2 L

Incubator specifications

Temperature range:	Ambient +3° C to 40° C
Temperature uniformity:	+/- 1° C across plate
Shaking:	Independent linear motion 15 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 with serum:	<3% CV (10 – 20 µl)
Precision with reagents:	<3% CV (20 – 1,000 µl)

Process security

Liquid-level sensing:	Yes (reagents, controls, and samples)
Level-sensor system:	Pressure differential
Clot detection:	Yes
Foam 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® XP (Contact Dynex for current specs 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
LIMS:	Yes, bi-directional
Password access control:	Yes, multi-level

Ordering information

62000 DS2 system

62700 Bar-code option

Consumables

62910 Deep-well strips (250/box)

62920 Reagent tubes, 25 mL (10/pack)

62930 Reagent tubes, 15 mL (10/pack)

65921 Reagent tips (432/box)

65910 Sample tips (432/box)

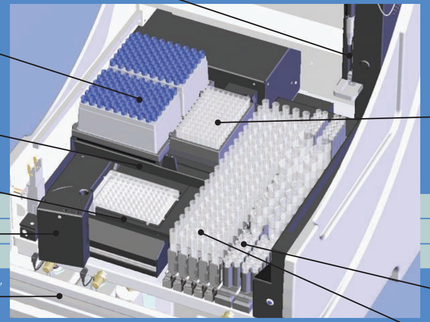
65940 Control vials w/caps (33/pack)

Specifications subject to change without notice

About Dynex

The experts in microplate analysis, Dynex Technologies, Inc. is a leading manufacturer of microplate instrumentation incorporating advanced detection and fully automated sample handling, consumables, and accessories used in clinical diagnostics, drug discovery, biomedical research, and industrial applications worldwide. Founded in 1952, and headquartered in Chantilly, Virginia, Dynex has a proven track record of high-quality products and excellent service and support. Dynex is a Magellan Biosciences company.

The experts in microplate analysis



INTERIOR VIEW OF THE DS2

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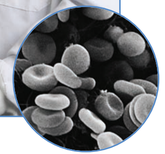
95000190 Rev A

DS2™ ELISA Processing System



Step up to automation with the DS2

DYNEX
MAGELLAN BIOSCIENCES
Improving outcomes from discovery to diagnostics

You want all the benefits that high-performance automation can bring to your lab – improved reliability, accuracy, security, and productivity – but your throughput needs don't justify the expense of large-scale systems on the market.

*Introducing the **DS2™** – a walk-away ELISA processing system by Dynex Technologies, designed specifically for lower-throughput labs.*

*The **DS2** represents a major leap forward in electro-mechanics and software design. Reliable, cost-effective, and easy to use and maintain, the **DS2** packs amazing automation power in the smallest footprint available.*

*Improve your testing capabilities today and deliver better, more-accurate results – the **DS2** offers the performance you demand and the value you expect.*

Immunology • Infectious disease • Auto-immune • Allergy

Food safety • Forensics • Environmental testing

The DS2 makes automation easy

Designed with full walk-away capability, the DS2 quickly and easily processes two 96-well microplates and up to 12 different assays simultaneously and features the most user-friendly control system available, chain of custody, and instrument diagnostics. The 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 bar-code scanning

An open system, the DS2 is ideal for virtually any ELISA application – from clinical diagnostics, such as auto immune and infectious disease – to food safety and drugs-of-abuse testing. Most important, the DS2 has all you need to ensure the rigorous, repeatable analyses required to deliver with confidence the best, most-accurate results.

Ingenious hardware design

Dynex designed the DS2 for efficiency and reliability. The simplified system has few moving parts – one multi-function robot arm does everything from pipetting to operating the bar-code reader. In addition, the DS2's vertical design and patent-pending 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 & 10 medium reagent bottles
- 24 standard/control bottles

Powerful data-reduction options

- Sigmoid, polygon fit
- Linear, quadratic, cubic, and quartic-regression fits
- Cubic-spline, sigmoid, akima, and loglogit fits
- Automatic quality-control equations
- Levey-Jennings charts with Westgard rules
- Thresholding for qualitative assays
- Ratio equations for complex calculations

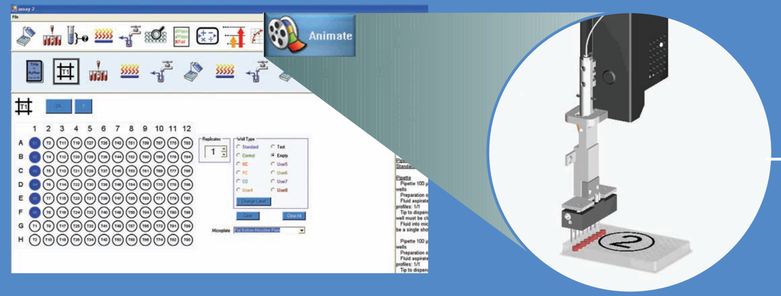
The experts in microplate analysis

Intuitive, easy-to-use DS-Matrix™ software for DS2

Dynex invested three years and millions of dollars to develop DS-Matrix™ software for DS2. Feature-rich and groundbreaking in its process simulation and ease of use, DS-Matrix allows you to rapidly integrate automation in the lab with confidence. The simple, graphical interface means that any lab technician can use the DS2 with minimal training.

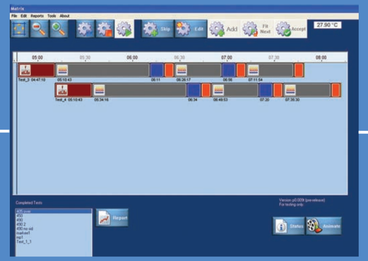
Worry-free system assures accurate results

The DS2 system prompts you if action is required, for example, if you need to add more reagents or wash fluids. You can set up the DS2 to deliver an audible alarm, and/or send you an e-mail outlining the problem. Integrated self-diagnostics make troubleshooting easy. You can even send Dynex technical support a problem description from within the application, with the system information automatically attached.

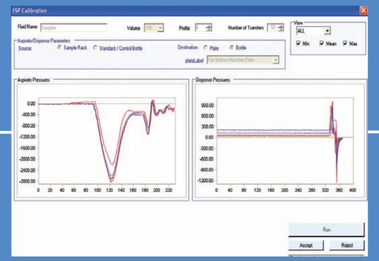


The assay writer, with drag-and-drop icons, walks you through the entire programming process, prompting you step by step, making set-up of your assay a breeze. Did you miss a critical process step in your assay? The DS2 will let you know before you can move on.

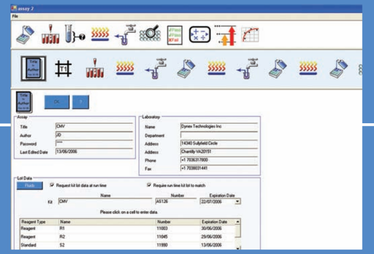
No need to waste precious reagents or consumables with multiple test runs to validate your assay. Activate the process simulator, and the system shows you a full animation of the assay steps you've outlined. Want to adjust the assay parameters? You can visualize exactly how it will work before you implement the change.



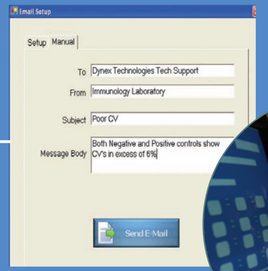
Once you begin running your assay, the process timeline and simulator show you exactly where you are and how much time you have left.



Patent-pending ESP provides in-process verification of critical fluid and sample transfer.



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



Dynex support is just an e-mail or phone call away: techservice@dynextechnologies.com; +1.800.288.2354, or +1.703.631.7800, press option 3.