

Advanced
Automation
in
Molecular
Biology



MDXlab

Fully Integrated
All-in-One Molecular System
Nucleic Acid Extraction & Detection

Universal & Compact Platform
for Clinical Diagnostics

- Fully automated, sample-to-result workflow
- Designed for flexible throughput
- Optimise laboratory operations
- High-performance 5-channel PCR
- Complete MDR and IVDR compliance
- State-of-the-art liquid handling and detection

- Nucleic acid extraction
- PCR set-up
- PCR amplification & detection



MDXlab

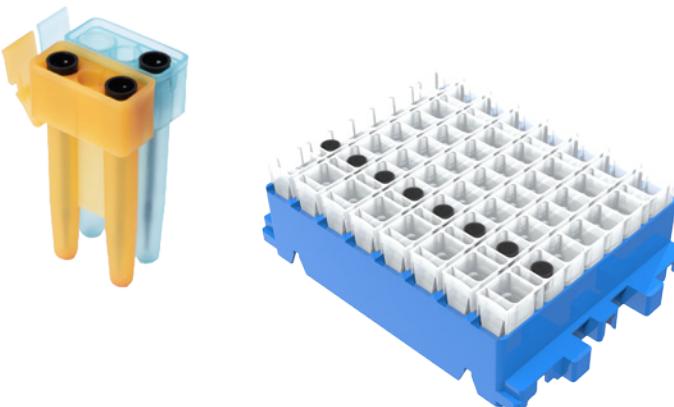
THE NEW APPROACH TO MOLECULAR APPLICATIONS

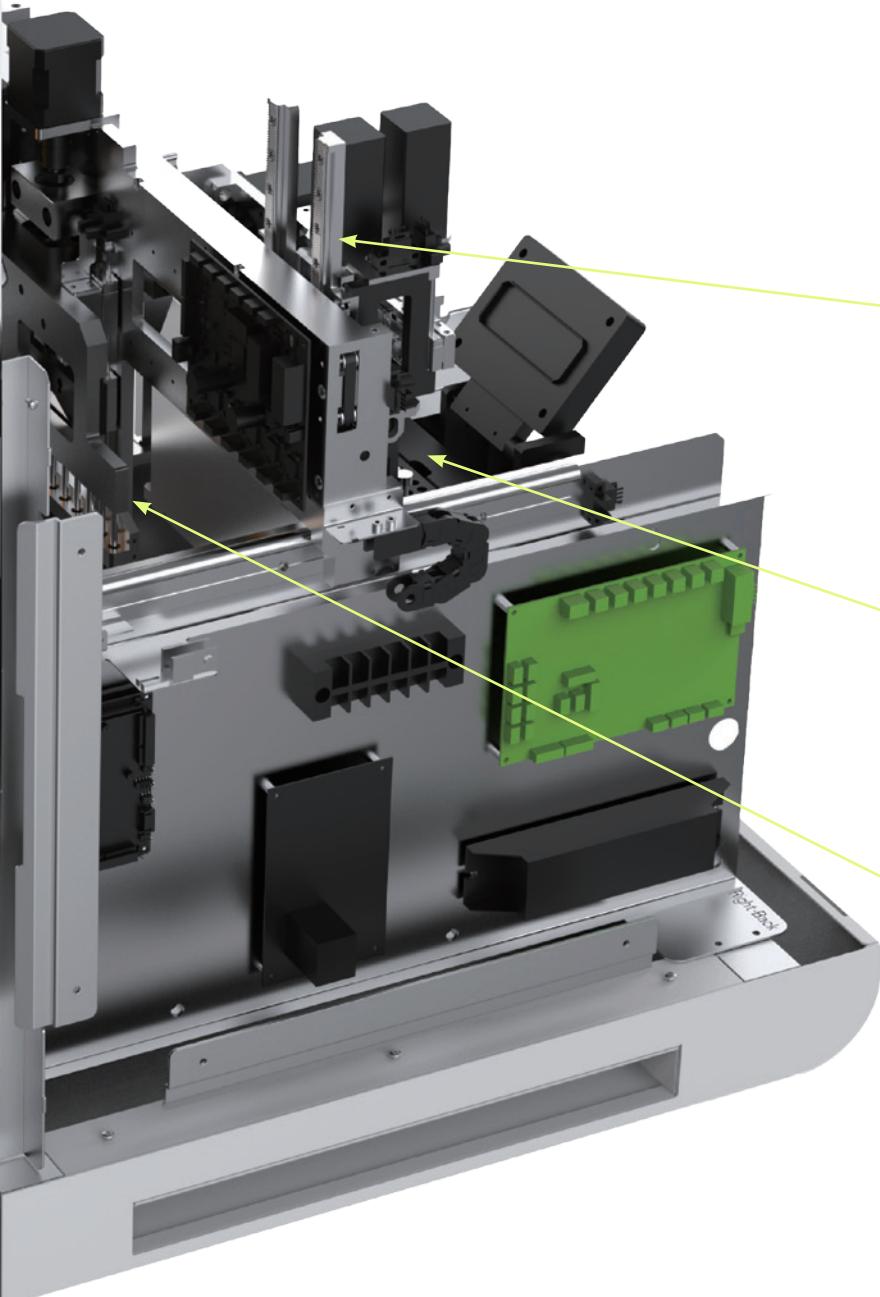
CARTRIDGE TECHNOLOGY – MINIMUM PREPARATION

- Ready-to-use, pre-filled extraction cartridges for contamination-free extraction
- Reliable magnetic bead-based nucleic acid purification
- Universal reagent for DNA and RNA extraction from diverse sample matrices

AUTOMATED PCR MANAGEMENT

- PCR Setup cartridges include Capacitive TIP and PCR tube/cap
- Automated PCR setup and capping system
- Refrigerated reagent area for mixes, standards or controls
- Lyophilised area for ready to use STRIP format reagents





- ✓ Nucleic Acid Extraction
- ✓ PCR-Set-up
- ✓ PCR Amplification & Detection

- ✓ Rapid sample-to-result turnaround in less than two hours
- ✓ Genuine walk-away platform maximizing lab efficiency
- ✓ Pre-filled extraction plates for simplified preparation
- ✓ Seamless, automated PCR setup and workflow management
- ✓ Easy-to-use interface designed for operator confidence
- ✓ End-to-end traceability with flexible LIS integration
- ✓ Small footprint ideal for any laboratory environment

ADVANCED LIQUID HANDLING

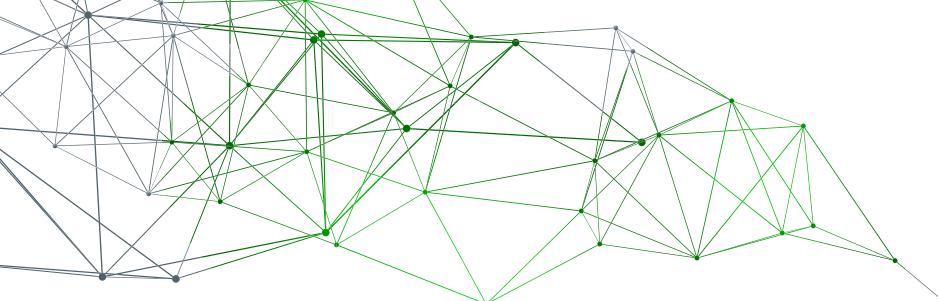
- Rapid and accurate liquid handling
- PCR setup management
- Unique design enables capping and transfer of PCR reaction tubes to PCR module

PCR UNIT

- 5-channels PCR module
- Fast cycling capability

EXTRACTION UNIT

- Magnetic bead based extraction, High yield and purity
- Fast and contamination-free nucleic acid extraction in 20 minutes



Simplify your lab workflow

The MDXlab is designed to optimise nucleic acid isolation and amplification procedures into a single fully integrated platform.

Nucleic acid isolation is automated, via pre-filled cartridges, utilising magnetic bead technology allowing for contamination free extraction with high yield and purity from a number of sample types.

PCR setup is managed by the liquid handling module that can manage a variety of master mixes, controls and standards from the refrigerated reagent module.

The integrated 5 channel PCR thermocycler allows for multiple protocols and PCR modes including Melting curve, SNP and touchdown step.

All functions are managed by the on-board processing system through the intuitive touchscreen interface. Advanced analysis settings allow the laboratory professional to evaluate the results in detail and link to any laboratory information system via LAN or Wi-Fi.

With its compact benchtop design and fast processing capability this fully integrated platform is ideally suited to every laboratory settings with a desire for maximum flexibility.

MDXlab

TECHNICAL SPECIFICATIONS

Multifunction robotic arm

Sample capacity	1 – 16 samples / run
Sample input volume	50 – 300 µl
Elution volume	50 – 200 µl
Extraction time	10 – 40 minutes / run (dependent on protocol used)
Liquid handling tool	≥ 98%
UV Decontamination	Build-in

Liquid handling

Pipetting Volume	10-200 µl
Pipette Accuracy	CV < 5% at 15 µl CV < 1% at 200 µl

Dead Volume	5 µl
Liquid Level Detection	Capacitive (cLLD)

PCR setup platform

PCR Reagent Capacity	Max 9 tube, Cooling
Cartridges	16 sample cartridges, 6 dispensing cartridges

PCR module

Sample Input Volume	25 – 50 µl
Reaction Temperature	40 – 99 °C
Light Source	High-Brightness LED
Excitation Wavelength	470 nm – 678 nm (± 10 nm) [FAM, HEX/VIC, ROX, CY5, CY5.5]
Detection Wavelength	520 nm – 695 nm (± 10 nm) [FAM, HEX/VIC, ROX, CY5, CY5.5]

Platform dimensions

Dimensions (WxDxH)	610 x 670 x 660 mm
Weight	76 kg

ADVANCED TECHNOLOGY

- Integrated 5-channel fluorescence PCR module
- Magnetic bead extraction technology
- Advanced liquid handling

CARTRIDGE SYSTEM

- 16 Cartridge capacity
- No manual preparation of reagents
- Pre-sealed reagents
- Internal liquid handling and PCR tube management

FLEXIBLE THROUGHPUT

- DNA/RNA Extraction only mode
- DNA/RNA Extraction and PCR Amplification
- PCR Only mode
- PCR Only mode
- Syndromic Panel testing

COMPATIBILITY

- Multiplexing tests are available
- Positions for standards and controls

EASE OF USE, USER-FRIENDLY OPERATION

- Integrated PC and touch UI
- LIS connection
- Maintenance software

FULL TRACEABILITY

- Sample ID tracking via barcode
- Reagent management via barcode

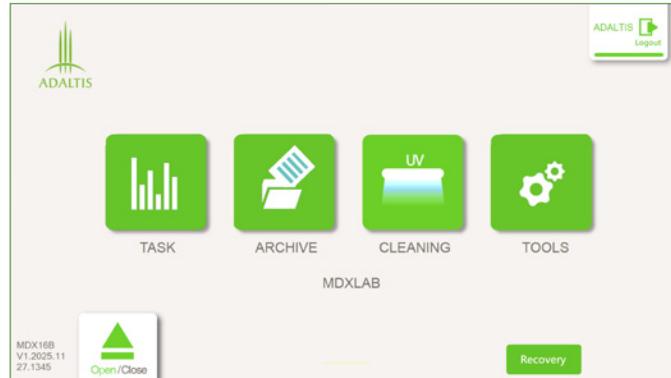




MDXlab SOFTWARE

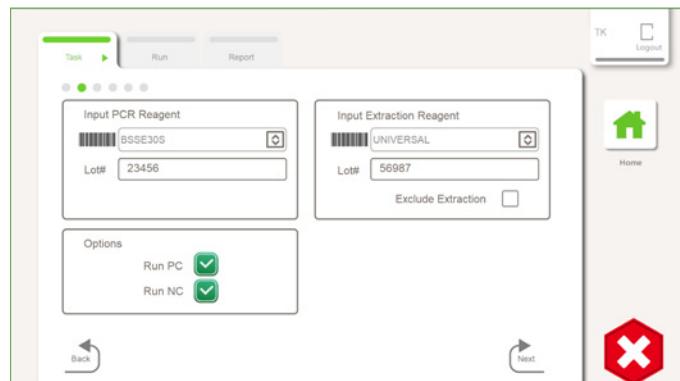
STREAMLINED, INTUITIVE INTERFACE FOR SECURE & EFFICIENT WORKFLOWS

- Touchscreen-optimized interface
- Full data archiving and review
- LIS connectivity
- Integrated maintenance and cleaning functions
- User level entry

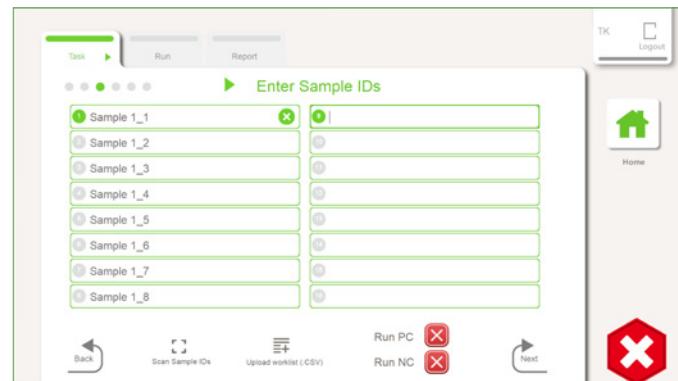


EASY 3-STEP PROCESS: LOAD & BEGIN

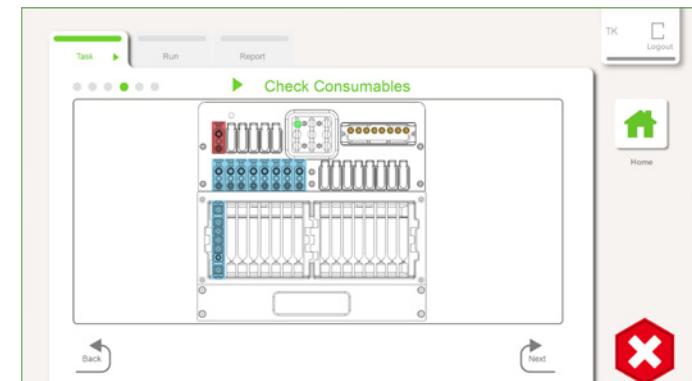
1 Scan Products



2 Scan / LIS Sample ID

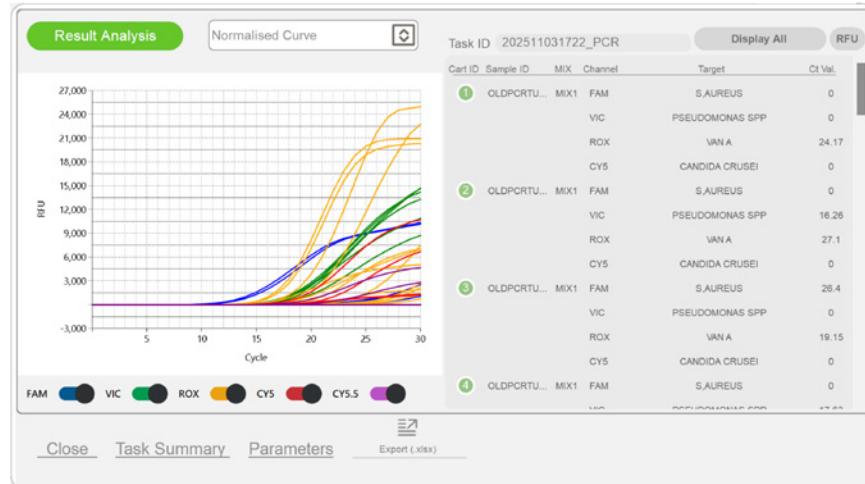
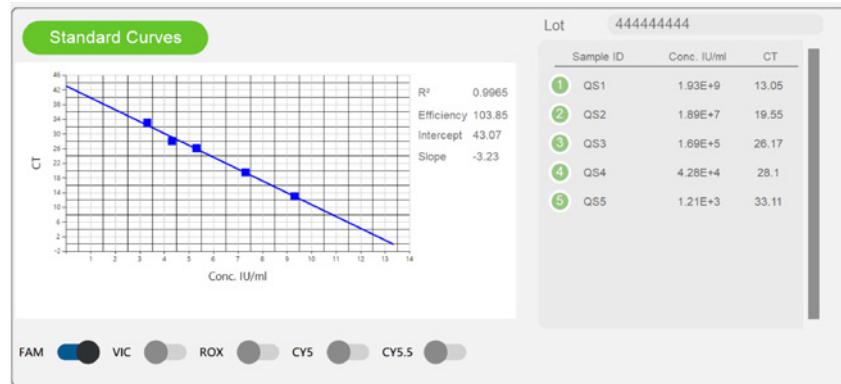


3 Confirm Consumable





POWERFUL SOFTWARE - SEAMLESS PCR WORKFLOW



ADVANCED TECHNOLOGY

Experience complete control and confidence with intelligent, real-time analysis

- **Real-Time PCR Output** Monitor amplification as it happens for faster, more informed decisions
- **Smart Threshold & Baseline Management** Ensures accurate, reproducible results every run
- **Advanced Target Filtering** Focus on relevant targets

COMPREHENSIVE OPTIONS

Designed to integrate effortlessly into modern laboratory environments

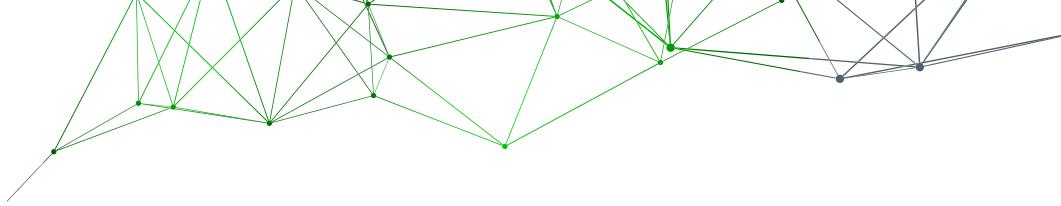
- **Standard Curve storage** Enables precise quantification and assay validation
- **LIS & USB Data Export** Simple, secure data transfer and reporting
- **Integrated Maintenance Tools** Built-in diagnostics to maximize uptime and reliability

UNMATCHED FLEXIBILITY

Adapt the system to your workflow - today and tomorrow

- **Multiple Protocol Options** Supports a wide range of applications
- **PCR-Only or Extraction-Only Modes** Use exactly what you need, when you need it
- **Multiple Reagent Formats** Compatible with liquid and lyophilised reagents

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For more information

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ADALTIS is certified in compliance with ISO9001 and ISO 13485.
Our products are CE-IVD.

