

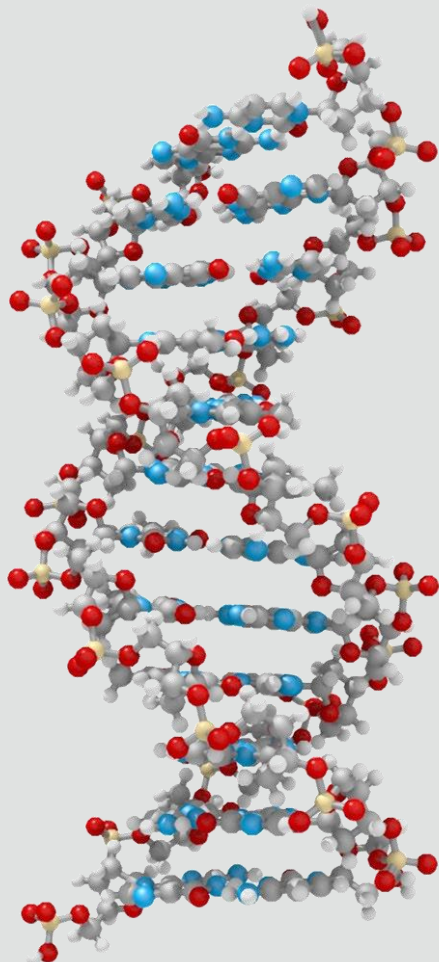


RELIABILITY & INNOVATION

EXTRAlab

Automation in Molecular Biology





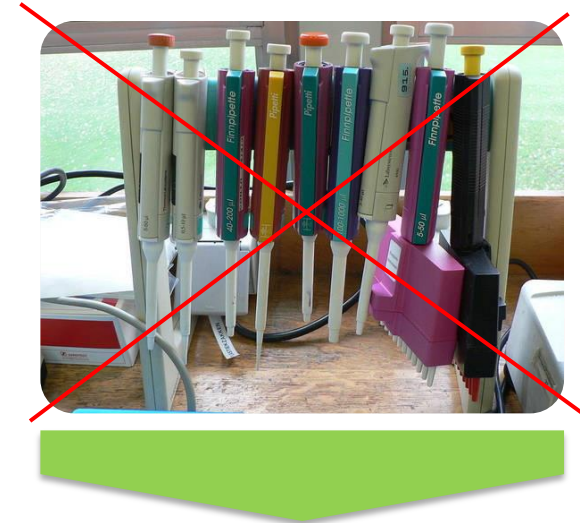
From genome sequencing to personalized medicine

Sample processing, nucleic acid extraction
and downstream analysis in one step

Automation in Molecular Biology

Main Benefits

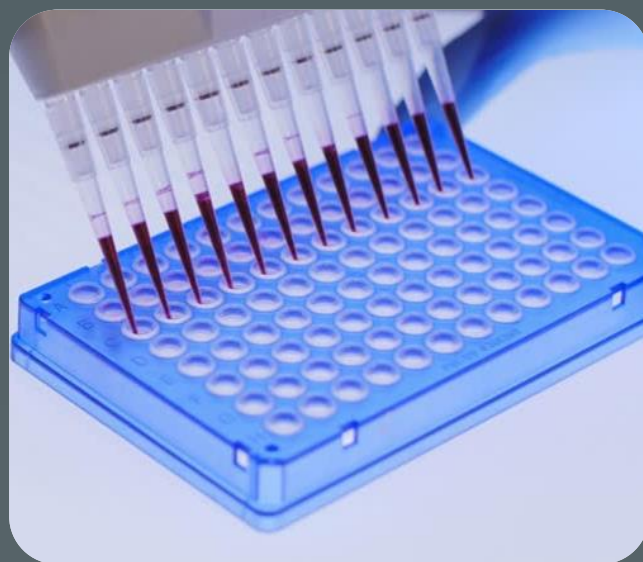
- Increase the reproducibility and precision of the process
- Increase throughput in your lab (more samples in less time)
- Reduce from the process the possibility of human error
- Reduce the risk of contamination
- Use only one instrument for multiple protocols



DNA or RNA extraction is a crucial and complex phase.

The process requires extreme precision and can be long and heavy for the operator, if done manually.

Among the various methods of nucleic acids extraction, magnetic beads based can be automated.



New generation methods require laboratory operators to have the utmost precision in preparing reagents and starting materials.

Automation in high-throughput mode reduces liquid volumes and avoid mixing tasks difficulties and reproducibility.

Because any human error affects the whole chain and the final result could be unacceptable for the diagnostic scope.



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Fully-automated Molecular Diagnostics
Instrument for Clinical Diagnostics

A Workstation for Nucleic Acid Extraction and PCR Setup



An automated working platform for liquid handling, extraction/purification of nucleic acids and PCR setup



- Nucleic acids DNA-RNA extraction
- Purification of amplified PCR
- Setup PCR/qPCR
- Setup reverse transcriptase
- Setup sequencing NGS



Advantages

- Easy programming Modular Design
- User friendly software
- Wide range of customizable protocols
- Remote monitoring of activities
- Sample traceability with bar-code reader
- Precision and repeatability of dispensing
- No cross contamination
- Usage of primary barcoded tubes
- High-throughput
- Decrease of human errors and infectious risk
- CE-IVD process



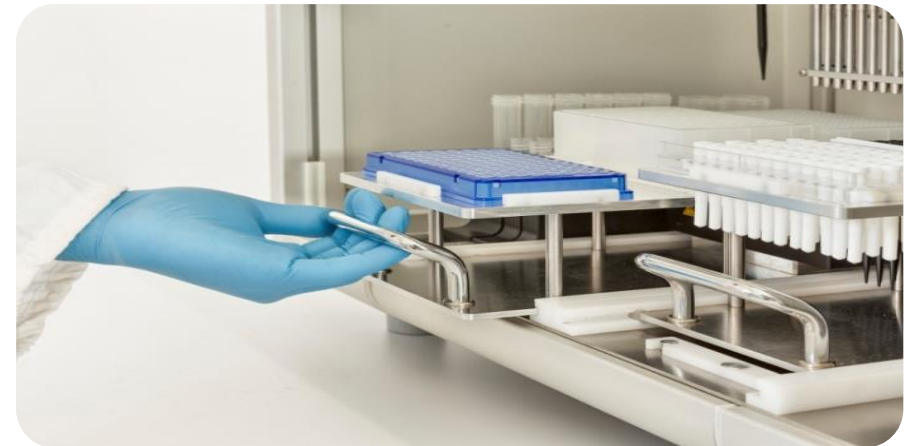
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Main features

- From 1 to 24/48 samples without any waste of reagent
- Time for the extraction:
24 samples - 59 minutes, PCR set up - 11 minutes
- Possibility to use different protocols with auto-sampling, aliquoting and PCR set up
- Samples tracking with barcode and integrated database
- Easy to clean and disinfect steel surface working area (UV lamp)
- User friendly Software



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Main Specifications

Integrated Liquid Handling System:

- Aspiration with disposable conductive tips (with aerosol barrier)
- Magnetic tool with 24 channels
- 1 dispensing channel / 2 optional
- Volume range : 1÷1000 µl

Integrated devices

- Thermal shaker (RT÷95C°; 100 ÷2000 rpm)
- Cooling units (4÷70C°)
- Bar code
- UV lamp



Consumables

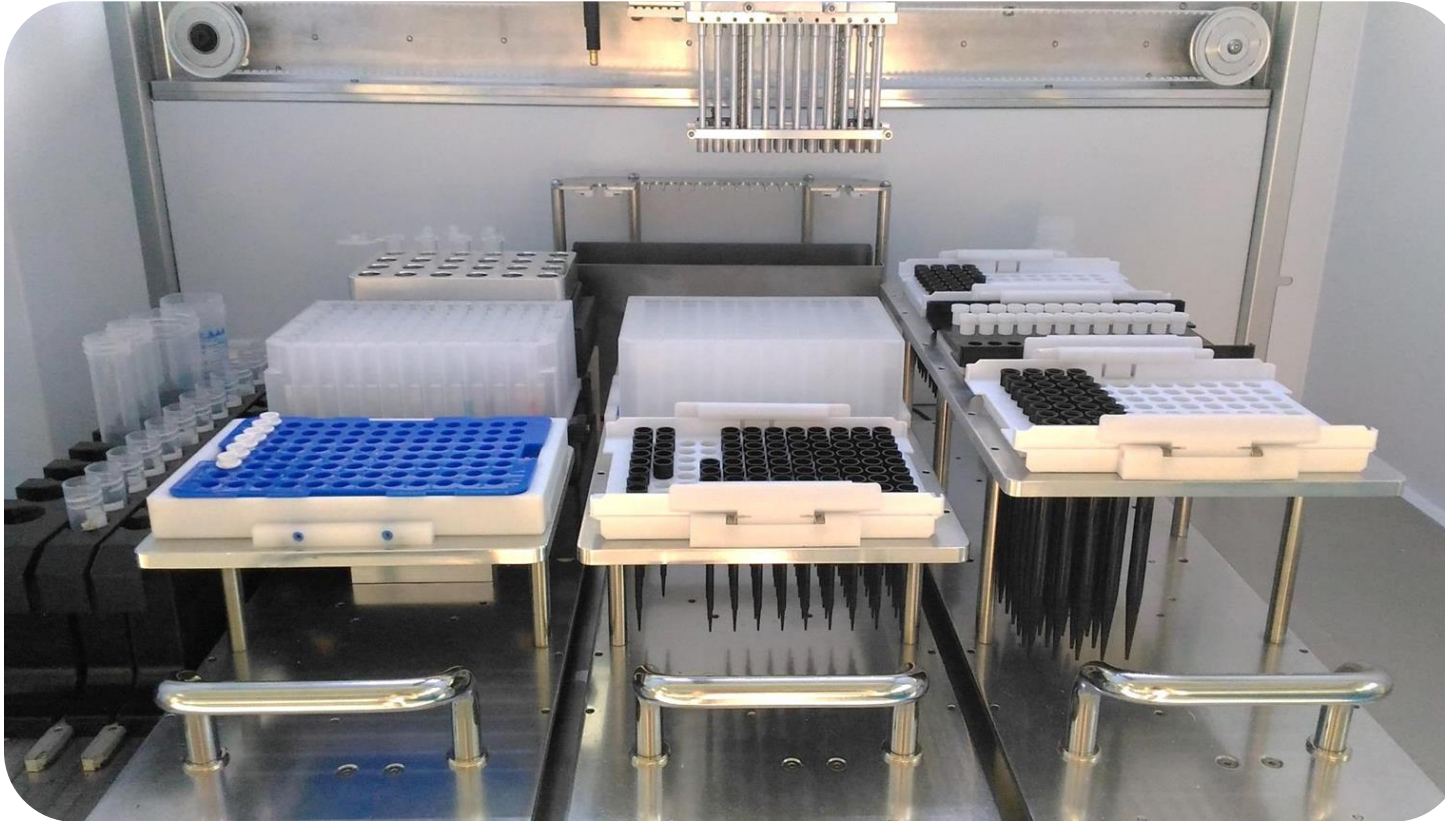
- 1 plate deep well for lysis
- 1 plate deep well for washing
- 'Falcon' tubes
- Conductive tips with filter
- 24 magnetic cover-rod
- Container for waste

Dimensions

- Size: 800 x 752 x 680 mm (WxDxH)
- Weight: 85 kg.

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Layout



Working platform configuration
for DNA extraction and PCR setup,
1 pipette and 1 magnetic head
for 24/48 samples



Touchscreen operation monitor
for start, stop and run operation,
including monitoring of the test progress.

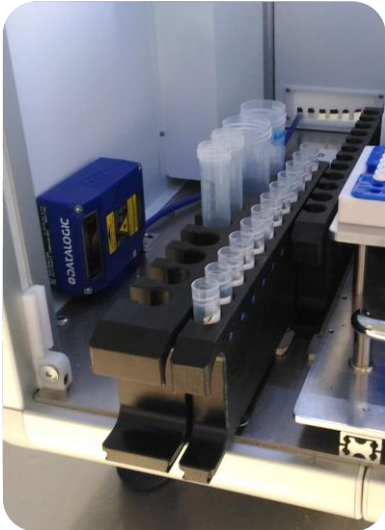
- Editor for protocols easy to use
- Library of predefined protocols
- User friendly interface

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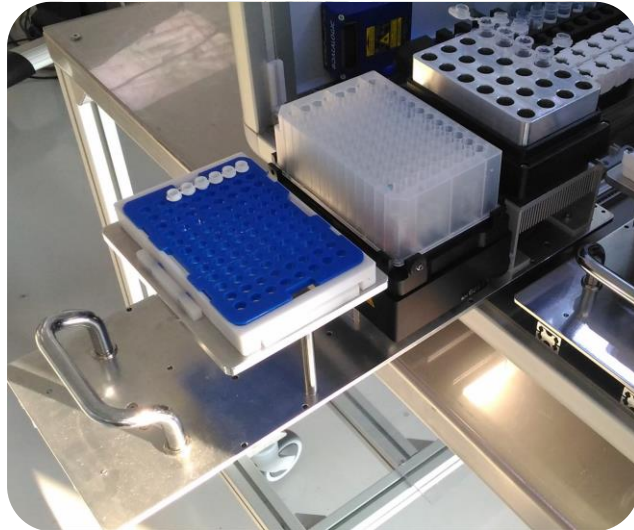
Interior



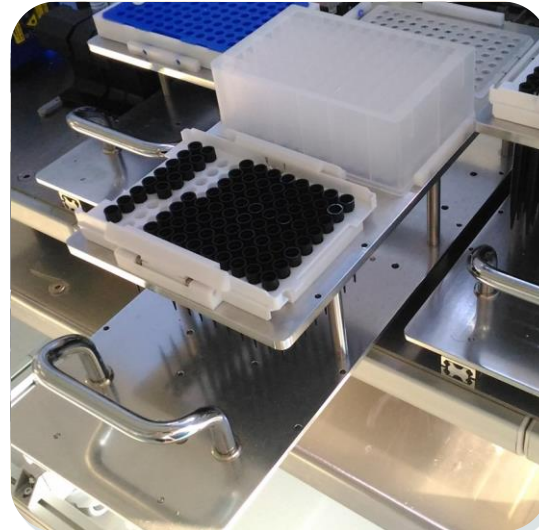
VDVFLI2



Ready to use reagents and up to 24/48 samples charging, integrated barcode reading for sample traceability



Removable rack with temperature controlled zone for dedicated reagents (heating and cooling unit), thermoshaker (for sample lysis and elution) and PCR setup customizable plate



Removable rack with washing step plates



Removable rack with different sized tips and 'sheats' for the magnetic head

MOLgen Menu



**Molecular diagnostic panels and reagent kits for nucleic acid extraction
and RT-PCR of infectious diseases and genomics**

Universal Extraction

Human Immunodeficiency Virus (HIV)

Hepatitis A, B, C, D, G

Tuberculosis

ToRCH Infections

Tick-borne Infections

Gastrointestinal Infections

Human Papilloma Viruses (HPV)

Sexually Transmitted Infections (STI)

Multiplex Detection of STI

Herpes Viruses

Vaginal Biocenosis and Microflora

Candidiasis

Genetics (for SNP Detection)

The Diagnostic kits of **MOLgen** series were developed for detection of infectious and genetics diseases by real time PCR.

The proprietary development allows us to turn round the procedure of real time PCR analysis from a complicated process, requiring extensive specialized knowledge and practical experience, into a standardized, simple and readily reproducible procedure.

We provide convenient solutions in reagent configuration such as lyophilized, ready-to-use mixtures with a long shelf-life and the possibility to ship the kits at room temperature.

All kits can be used basically with all current real time PCR detection systems. The majority of MOLgen line kits are CE marked.

MOLgen kits offer:

- Simple approach to Molecular diagnostics including sample preparation, RT-PCR amplification and evaluation of results
- Simple nucleic acids extraction using magnetic particles
- Lyophilized ready-to-use Master Mix for detection of DNA/RNA in real time PCR
- One cycler protocol for the detection of a wide range of pathogens
- Internal Control for reliability and control of extraction and amplification included in each reaction
- Storage of all components at the same temperature (2-8)°C for up to 12 months; no freezing required
- Shipment of kits at 25 C° up to 10 days

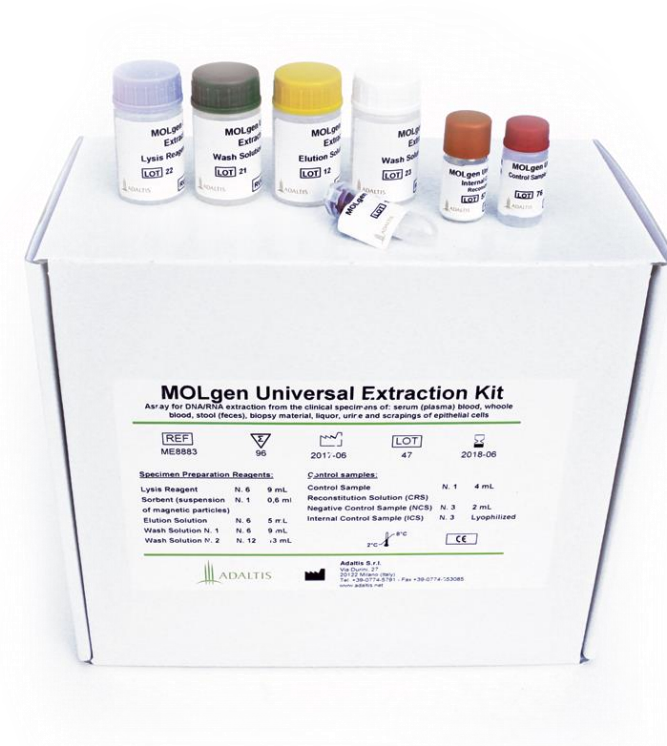
Different formats for different cyclers

STR format

The Master Mix is lyophilized in strips of 8× 0.2ml tubes. Just extract the nucleic acids (NA) and pipette into the tubes. This format is recommended for block cyclers e.g. Bio-Rad CFX and iQ PCR cycler.

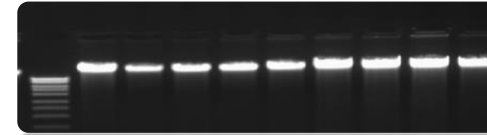
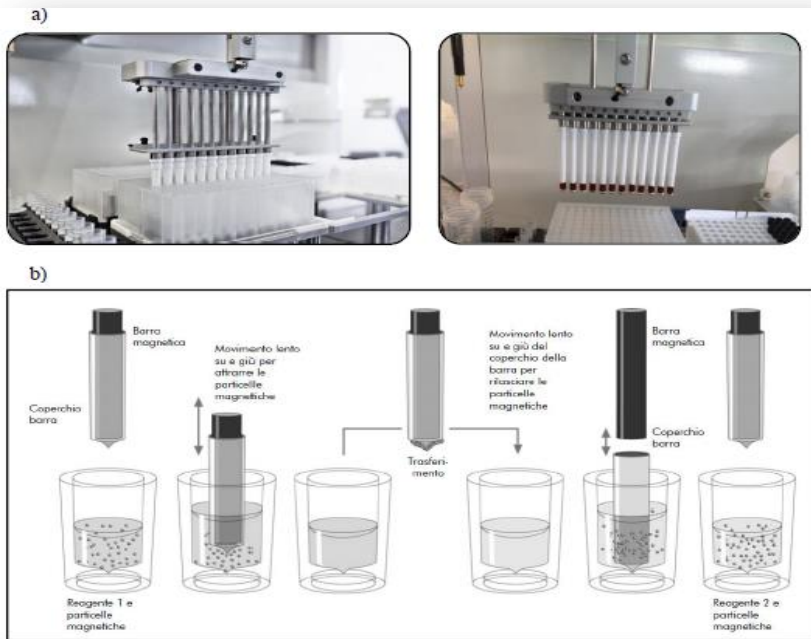
UNI format

One tube – one reaction (50µl). The lyophilized Master Mix is filled in clear 0.2 ml single PCR tubes. This format can be used in nearly every PCR cycler.



Results

High yield, purity and integrity of the nucleic acid extract



Starting Matrix	Yield Average ($\mu\text{gDNA/sample}$)	Purity Average (OD 260/280 nm)
Blood/Saliva (200 μl)	$\sim 7 \mu\text{g}$	1.9
Liver (15mg)	$\sim 60 \mu\text{g}$	1.9
Lung (15mg)	$\sim 60 \mu\text{g}$	1.9
Brain (15mg)	$\sim 70 \mu\text{g}$	1.9
Kidney (15mg)	$\sim 40 \mu\text{g}$	1.9
FFPE Brain (3 sect. da $5 \mu\text{m}$)	$\sim 1 \mu\text{g}$	1.9



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Fully automated Medical and Biotech Devices

You can find additional information at:
<http://www.adaltis.net/products/ivd-instruments/>

Adaltis is dedicated to customer satisfaction and will do the utmost to respond quickly to your needs.

We look forward to an exciting and jointly profitable future with partners like you.

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