

HumaFIA

Semi-automated immunoassay system

- > On-the-spot results in lab quality with immunofluorescence technology
- > Cardiac, inflammatory, thyroid, and other parameters in just a few minutes
- > Compact and portable for clinics, laboratories, or emergency departments
- > Highest sensitivity comparable to central lab chemiluminescence tests



Human

Diagnostics Worldwide

Key Diagnostics On-Site

No time loss, immediate patient care

Why is the demand for acute point-of-care parameters rising?

An aging population and unhealthy lifestyles lead to increased demand for cardiovascular markers, chronic disease management, and inflammation monitoring.

Every minute counts when it comes to acute parameters to avoid long-term damage and save lives. The solution lies in easy-to-use devices that deliver results within minutes, eliminating laboratory submissions, saving time, and enabling immediate treatment options.

On-the-spot results in lab quality

HumaFIA's on-the-spot testing ensures high sensitivity through innovative immunofluorescence technology, comparable to laboratory methods like chemiluminescence. It doesn't require laboratory infrastructure, is compact, and delivers quick results.

Laboratories and diagnostic centers

Extended diagnostic capabilities: With single sealed, pre-calibrated tests, laboratories can offer a broad range of on-site diagnostics.

Reduced turnaround times: Benefits for patients and doctors alike.

General practitioners and specialists

Immediate decisions: Enables rapid, diagnosis-based decisions for targeted patient care.

Crucial for remote areas: No waiting for sent samples; bring the lab to the patient.

Increased patient trust: Quick and reliable on-site diagnosis reduce follow-up appointments.

Hospital wards, particularly in diabetology or pediatrics

Reduced diagnosis and treatment times: Critical in pediatrics departments

Cost savings: Minimizes the need for expensive lab tests and referrals.

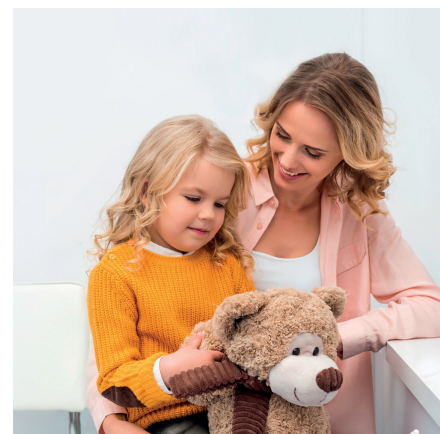
Versatile use: The same device platform can be used in different departments to optimize patient care.

Emergency medicine and rescue services

Quick test results: Available directly on-site.

Fast decision-making: Important for first aid and transportation.

Mobility and flexibility: Compact, portable systems for easy use during operations.



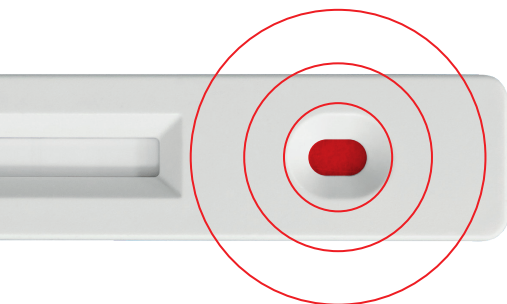
Troponin I, PCT, Thyroids and More

Key diagnostics directly from whole blood

Proven strip technology: cost-efficient and tailored to your needs

- Ready-to-use test cassettes for single-sample testing – pay only for what you need
- Barcode on test cassettes includes all test information, preventing duplicate readings
- Test cassettes can be stored at room temperature with no cooling required
- Availability of control materials for each parameter to ensure result reliability

Comprehensive testing options with quantitative results you can rely on



● Thyroid Hormones	● Cardiac	● Inflammation	● Rheumatoid arthritis	● Others	● Diabetes
TSH	Troponin I	NT-proBNP	D-Dimer		
T3	CRP	PCT	IL-6		
T4	RF	Anti-CCP	ASO		
fT3	Ferritin	Vitamin D	Vitamin B12		
fT4	HbA1c				

Diagnose thyroid disorders, heart attack and cardiac insufficiency in just 15 minutes.

Acute myocardial infarction (heart attack)

- The highest risk of mortality occurs in the first few hours after symptoms start
- Rapid quantitative diagnosis and treatment are essential

HumaFIA Troponin I supports early diagnosis with an extended measurement range and low detection limit (LOD = 0.02 ng/ml)

Cardiac insufficiency

- Accurate diagnostics and continuous monitoring are essential for acute and chronic conditions
- NT-proBNP values below 300 pg/mL virtually rule out heart failure, further examinations are often not necessary

HumaFIA NT-proBNP is a diagnostic and prognostic marker with an extended linearity range of up to 40,000 pg/ml

Thyroid disorders

- The thyroid gland plays a key role in regulating metabolism, energy production, and overall body function.
 - Early detection through diagnostic tests can help identify thyroid disorders before they cause serious complications.
- Hypo/Hyperthyroidism

HumaFIA TSH, T3, fT3, T4 and fT4 tests provide the full panel to assess thyroid function, activity, autoimmune and general health conditions.

HumaFIA

On-the-spot results in lab quality



Video

Portable: Diagnostics wherever you need it

- > Designed for clinics, laboratories, emergency departments, and on-the-go healthcare professionals
- > Small, compact, can be set up anywhere
- > Convenient use anytime and in any environment with power bank and solar panel

Excellent data management

- > Store and access up to 10,000 results and patient data
- > Integration with hospital management systems
- > Built-in printer and barcode scanner

Fast results with lab-test precision

- > Reliable results in 1.5–15 minutes with the accuracy comparable to central lab chemiluminescence tests
- > Extended measurement ranges track the pathology of at-risk patients more effectively
- > Automatic quality control with incubation real-time monitoring and LOT verification
- > Fully customizable normal value ranges to meet individual needs

Efficiency made easy

- > User-friendly operation via touch display and intuitive workflow navigation
- > Simple process: Apply, incubate, read — done!
- > Fast Sample Mode — supports to run a test every 20 seconds by software management of multiple cartridges. An efficient and cost-effective alternative to multi-channel systems
- > Flexible testing with whole blood, serum or plasma
- > Smart automatic cartridge detection
- > Easy assay calibration with calibration card

HumaCool cartridge incubator, the perfect add-on

- > Dual-purpose, cooling and heating for precise cartridge incubation
- > 6 positions with individually programmable timing for ultimate versatility
- > Accurate temperature control within an ambient range of 4-60°C
- > Stable incubation temperatures, even in extreme environmental conditions
- > Cost-efficient cartridge cooling instead of cooling the entire room



Innovative Immunofluorescence Technology

Fast, precise and reliable

Results with high clinical relevance

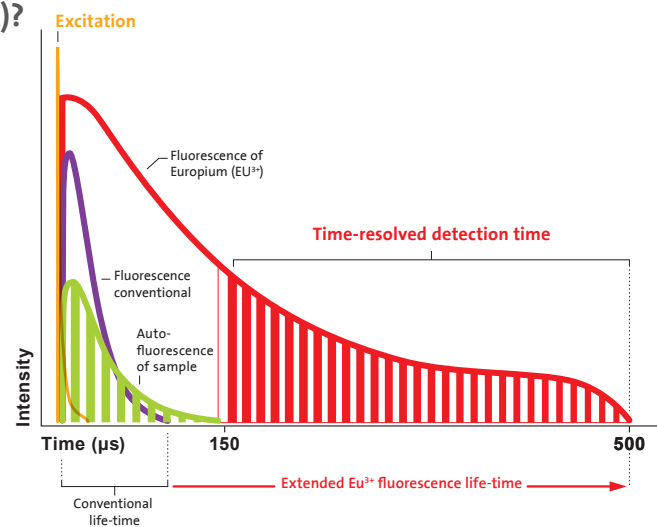
- > High sensitivity: The method is extremely sensitive and can detect very small amounts of the analyte
- > High specificity: The use of specific antibodies and fluorochromes ensures high selectivity for the target analyte
- > Minimized interferences: Temporal separation of the fluorescence signal from the background signal enhances accuracy
- > Excellent stability and strong signals with Europium Eu^{3+}

What is Time-Resolved Fluorescence Technology (TR-FIA)?

This technology uses fluorescence signals to determine the presence and quantity of an analyte in a sample. Unlike conventional methods, time-resolved fluorescence (TR) measures the signal with a delay.

This temporal separation reduces background noise and nonspecific fluorescence signals, as background fluorescence is much shorter-lived than the innovative Europium fluorescence, which is linked to the analyte.

By time resolution, the shorter-lived background fluorescence is excluded, allowing only the longer-lasting signal of Europium fluorescence to be measured.



Fluorescence immunoassay principle

1. Fluorescence labeling

A specific antibody is conjugated with a fluorochrome, which emits light upon suitable excitation for analyte detection.

2. Binding to the analyte

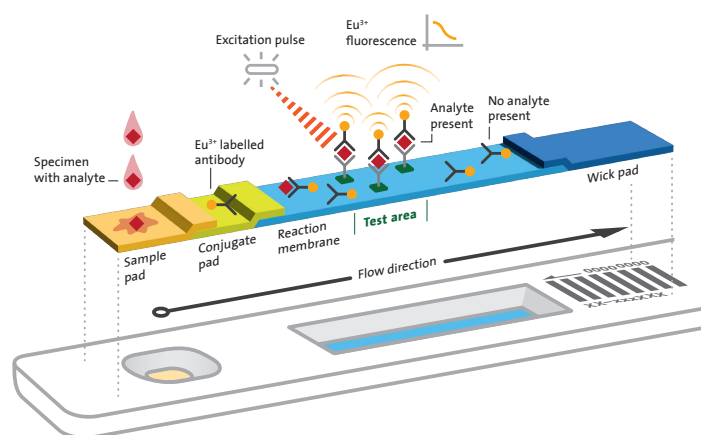
The labeled antibody binds specifically to the analyte in the sample.

3. Excitation and emission

The sample is exposed to light of a specific wavelength, causing the fluorochrome to emit light at a different wavelength.

4. Time-resolved measurement

Background fluorescence and nonspecific signals are minimized, resulting in an increased sensitivity and accuracy.



HumaFIA

Technical specifications at a glance

System overview

HumaFIA System	REF 16090
Analyzer type	Benchtop
System description	Random-access immunoassay system
Result reporting	Quantitative
Throughput	Up to 180 tests per hour (Fast-mode)
Assay technology	Time-Resolved Fluorescence (TR-FIA)
Dimensions (WxDxH)	45 × 38 × 22 cm

Reagent management

Parameters	Troponin I, NT-proBNP, D-Dimer, CRP, PCT, IL-6, Ferritin, Anti-CCP, RF, ASO, TSH, fT3, T3, fT4, T4, HbA1c, Vitamin-D, Vitamin-B12
Assay kit size	25 single cartridges
Controls	2-level controls, lyophilized

Consumable management

Standard cartridge	5-level system control
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System operation

Display	7-inch color touchscreen
Languages	English, French, Spanish, German
Testing Modes	Standard, Fast, STAT
Printer	Integrated
Connectivity	LIS/ASTMH, RS-232 with PC-connect, 4 x USB

Sample management

Sample types	Whole blood, serum, plasma
Sample positions	Multi-cartridge management with 1 test slot
Fast sample mode	Supports to run a test every 20 sec.
Barcode Reader	Integrated for assay verification, optional for patient data

Accessory

HumaCool incubator	REF 15020
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Your local distribution partner

More information

For more information about the HumaFIA and its assay portfolio, visit www.human.de/products/fia or scan the following QR code:



HUMAN has exclusive distribution rights with Beijing HumaDX Tech Co., Ltd. to provide HumaFIA worldwide.



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