



EUROIMMUN Analyzer I

The new automated ELISA system for microtiter plates



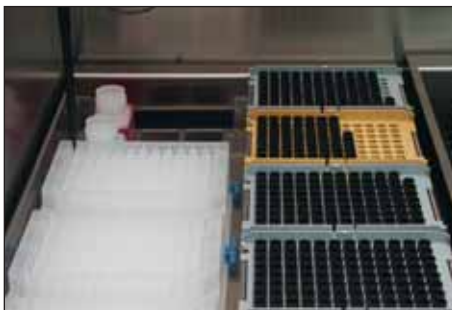
- **Automation of all EUROIMMUN ELISA, including the allergy system Allercoat™ 6**
- **Over 900 validated parameters available (60 autoantibody, 100 infection and 740 allergy parameters)**
- **7 microtiter plates can be loaded at the start**
- **Unusually short loading time**
- **High convenience through use of barcode identification**
- **Reloading function for patient samples, microtiter plates, reagents and disposable tips**
- **“Walk-away function” – fully automated from the start to the end of processing following loading**
- **Own processor, independent of external IT system, guaranteeing against risk of system crashes**
- **Bidirectional online connection to laboratory computer system**



Sample and reagent area

Sample and reagent area

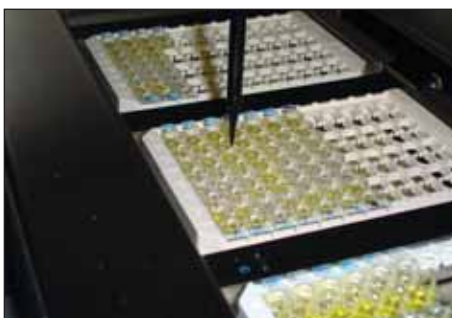
- Individually adjustable setup
- Low dead volume for reagents (200 µl) and samples (50 µl)
- High convenience through barcode identification: automatic scanning when racks are retracted, quality control certificate via 2D handbarcode scanner
- Unusually short loading time
- Continual reloading of patient samples, microtiter plates, reagents and disposable tips
- Parallel processing of many different parameters using up to 54 calibrators and controls



Dilution area

Dilution area

- Space for 3 x 96 dilution tubes (deep well)
- Possibility of 6 sample buffer bottle insertion
- Dilution series and variable dilutions are freely programmable (e.g. for CSF diagnostics)
- Space for 5 tip boxes (tip size: 300 µl and 1100 µl)
- Restocking of tips not necessary due to memory function



Pipetting station

Pipetting and working area

- A single pipetting needle with carbon disposable tips, no risk of carryover
- Exact fill volume recognition (capacitive measurement)
- Multishot (dispenser) function
- Optimal mixing of sample and sample buffer on addition to reaction vessel
- Automatic tip recognition
- Clot detection
- Working area with space for 4 microtiter plates

High safety and reliability

- “Walk-away function”: interference-free process, fully automated from the start to the end of processing following loading
- Automatic message if reagents run out or waste tray is full
- Covering provides protection for personnel and reagents
- National and international conformity (standardization): CE, IVD, FDA und CMD/CAS
- Software works reliably due to own processor: almost no risk of crashing, optimal performance of analyses even if external computer system down occurs



Transport unit

Transport unit

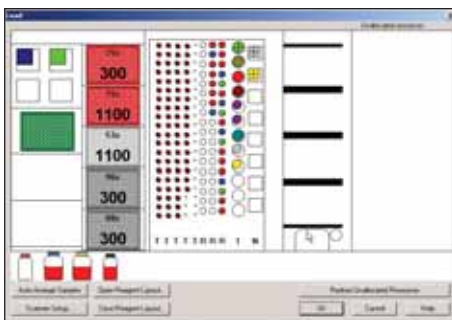
- Interference-free plate transport via carriers and lift
- Pipetting possible during plate transport due to separation of transport and pipetting unit
- Outstanding time management



Incubators

Incubators, photometer and washer

- 4 heatable incubators with shaking option up to 20 Hz
- 4 incubators at room temperature
- Temperature range (20-56 °C)
- Temperature monitoring integrated into software
- High-quality reader with 6 filters (up to 8 filters available)
- Washer well suited for different types of plates
- Allercoat™ 6: no risk of allergen ring displacement due to special allergy mode



Software

Software

- Standard Windows 2000 software: familiar user interface
- IVD conform password access in different user levels
- Automatic error detection and correction
- Intuitive working possible
- Open system
- All relevant statistical functions included

EUROIMMUN Service

- Programming and setup of automated system by qualified personnel
- Competent introduction to system with user training and comprehensive literature service
- Specialist advice and customer service onsite or via EUROIMMUN service number +49 451 5855 555
- Reliable and fast delivery of disposable materials
- Ordering of prefitted allergy plates by fax or internet (via EUROAllergy software)
- Connection to in-house computer system via communication protocol ASTM
- Maintenance contract with EUROIMMUN if desired



EUROIMMUN Analyzer I specifications

System

Number of plates	up to 7 plates
Number of samples	a max. of 100 patient samples (depending on rack config.)
Size of sample tubes	external diameter 13-16 mm internal diameter 10.5-15 mm height 30-100 mm
Number of reagents	26 (depending on rack config.)
Number of contr./calibr.	54 (depending on rack config.)
Dilution range	1) 3 x 96-well Greiner dilution racks, 2 ml tubes 2) 3 x 96-well 2 ml Nunc plates
Loading	continuous loading of microplates, patient tubes, reagents and disposable tips
Number of tips	up to 5 tip racks
Volume of tips	300 µl and 1100 µl
Features	memory function for use of disposable tips

Photometer

Spectral range	400-700 nm
Dynamic range	0.100 to 3.000 OD (measurement range)
Accuracy	OD +/-0.005 or 2.5 %
Linearity	OD 0-2.000 or +/-1 %
Detection	photodiode
Reading time	< 15 s per microplate
Reading modes	optical density (OD)
Filter wavelengths	405 nm, 450 nm, 492 nm, 570 nm, 620 nm, 690 nm (plus two freely selectable wavelengths)

Pipetting unit

Pipettor	liquid pipettor for disposable tips
Liquid level detection	capacitive
Min./max. volume	5-300 µl (300 µl tip) 301-1000 µl (1100 µl tip)
Precision	CV < 5 % at 50 µl CV < 2.5 % at 100 µl
Features	tip detection, mixing, multi-dispensing

Barcodes

Samples/reagents/quality control certificates	Identification and allocation with barcodes (optional), automatic scanning when racks are retracted, quality control certificate via 2D handbarcode scanner
Barcode types	all usual barcode types e.g. EAN (8- or 13-digit), Code 128/EAN 128 etc.

Incubation

Capacity	4 heatable incubators with shaking option up to 20 Hz, 4 incubators at room temperature
Temperature range	20-56 °C
Accuracy	+/-2 °C
Uniformity	+/-1.5 °C
Features	temperature control

Washer

Capacity	up to 3 different wash buffers
Wash head	wash comb (1 x 8)
Dispensing volume	200-2500 µl/well
Precision	+/- 5 % CV at 300 µl
Residual volume	< 2.5 µl in round-bottom wells < 4.0 µl in flat-bottom wells
Fluid level alarms	in case of low wash buffer level or full waste canister
Features	setting of residence times, rinsing time, bottom wash mode, allergy mode and overflow mode, different pump speeds

Online connection

Interface	ASTM interface
ASCII import	worklists and sample IDs
Export options	ASCII export/report

Assay options

Time management	time scheduling for up to 7 microtiter plates; night-run program for fully automated processing of 7 microplates
Assays per microplate	up to 12 assays per microtiter plate (strip tests, break-off microplate wells)
Qualitative results	user-definable result classes
Quantitative results	linear and quadratic regression, sigma regression etc.
QA analysis	mean value, SD, CV, standard error and Levey Jennings (graphic evaluation method in quality assessment according to Westgard rules)

Other

Operating system	Windows 2000
Languages	German, English
Width x depth x height (incl. table and PC)	210 cm x 100 cm x 183 cm
Weight incl. table	approx. 250 kg

Power supply

Universal AC input	wide range AC 50/60 Hz, ~100-230 V +/-10 %
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EUROIMMUN ELISA: Test systems optimized for fully-automated processing

Easy handling

- Individual break-off wells each labeled with antigen abbreviations
- Ready-to-use reagents (no mixing or diluting necessary)
- Colour coded reagents, largely exchangeable between different lots as well as between different parameters
- Uniform incubation periods (75 min in total) at room temperature
- RF absorbent is included in the sample buffer (IgM tests) – no extra costs
- Incubation protocols of all tests have been integrated into the EUROIMMUN Analyzer I – no additional programming necessary

Comprehensive test system validation for the EUROIMMUN Analyzer I

- All parameters validated in accordance with 98/79/EG guidelines and based on EN ISO 13485:2003
- Detailed validation protocols available on request

Over 900 parameters – all required test systems from one manufacturer

- 60 autoantibody parameters
- 100 infection parameters
- 740 allergy parameters

All test systems are manufactured according to the European Quality Standards (IVD).





Test systems validated for the EUROIMMUN Analyzer I

Microplate ELISA for the detection of autoantibodies against:

Rheumatic diseases

Cell nuclei (ANA)
ANA screen
ANA VarioProfile
ENA
ENA ProfilePlus 1/2/3
ENA SLE Profile 1/2
ENA PoolPlus
Double-stranded DNA (dsDNA)
Single-stranded DNA (ssDNA)
Nucleosomes
Histones
Ribosomal P-proteins
Sm
nRNP/Sm
SS-A (Ro)
SS-B (La)
Cyclic citrullinated peptide (CCP)
Rheumatoid factors
Centromeres
Scl-70
PM-Scl
Jo-1
Cardiolipin (AMA-M1)
β2-Glycoprotein 1
Phosphatidylserin
Circulating immune complexes (CIC)
C1q

Vasculitides

Proteinase 3 (PR3; cANCA)
Myeloperoxidase (MPO; pANCA)
Lactoferrin
Elastase

Gastro-intestinal diseases

Transglutaminase (Endomysium)
Gliadin
Parietal cells (PCA)
Intrinsic factor
Saccharomyces cerevisiae

Thyroid diseases

Thyroid peroxidase (TPO)
Thyroglobulin (TG)
TSH receptor

Diabetes

Glutamic acid decarboxylase (GAD)
Tyrosine phosphatase (IA2)
GAD/IA2 Pool

Liver diseases

Soluble liver antigen/liver pancreas antigen (SLA/LP)
Liver cytosolic antigen type 1 (LC-1)
Liver-kidney microsomes (LKM-1)
Mitochondria (AMA-M2)

Other

Glomerular basement membrane (GBM)
Total IgE

Microplate ELISA in infectious serology for the detection of antibodies against:

Adenovirus
Borrelia (CSF test also available)
Brucella
Chlamydia pneumoniae
Chlamydia trachomatis
Cytomegalovirus (CMV) (avidity and CSF test also available)
Diphtheria toxoid
Dengue virus
Echinococcus granulosus
Epstein-Barr virus (EBV-CA, EBNA-1, EBV-EA) (avidity and CSF test also available)
Helicobacter pylori
HSV-1 (CSF test also available)
HSV-2 (CSF test also available)
HSV Pool (CSF test also available)
Influenza A
Influenza B

Influenza A/B Pool
Legionella pneumophila
Measles virus (CSF test also available)
Mumps virus (CSF test also available)
Mycoplasma pneumoniae
Parainfluenza type 1-4
Respiratory syncytial virus (RSV)
Rubella virus (avidity and CSF test also available)
SARS coronavirus
TBE virus (CSF test also available)
Tetanus toxoid
Toxoplasma gondii (avidity and CSF test also available)
Treponema pallidum (CSF test also available)
Varizella Zoster virus (VZV) (avidity and CSF test also available)
West Nile virus (WNV) (avidity test also available)
Yersinia enterocolitica

Allercoat™ 6 system for the detection of class IgE antibodies against:

Pharmaceutical drugs
Mites
Animal allergens
Food
Grasses
House dust
Insects

Moulds
Parasites
Trees
Environmental allergens
Herbal and flower pollens
Further allergens