

EVOLIS™ *Twin Plus* System

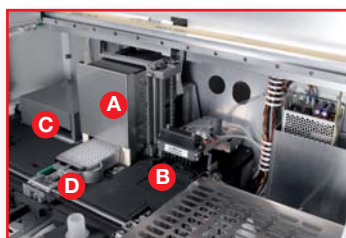
Advanced Serology Automation





EVOLIS™ *Twin Plus* System

Compact design with an integrated PC and touchscreen



- A Incubators**
(2x) 37° C or 40° C incubators with shaking
(3x) room temperature incubators
- B Wash station**
8-channel double probe arm for independent aspiration and dispense cycles
- C Absorbance reader**
End point and kinetics, single or dual wavelength, up to 8 different filters
- D Microplate transport system**
Transport module moves microplates between workstations as programmed



Microplate pipette station
Holds one microplate containing individual or multiple assays on each plate



Pipette arm
Performs plate dilutions and distributes primary samples and reagents
Level sensing for primary samples and reagents
Clot and insufficient volume detection using a triple technology (capacitance/air pressure/colorimetry)



Sample queue and reagent loading deck
On-board capacity for 144 primary tubes plus reagents
Each rack holds 16 primary samples
Accepts a wide range of primary tube sizes



Wash buffer reagent tray
Capacity for two wash bottles and one rinse bottle



Pipette tip station
Disposable tips eliminate carryover contamination
Tips in 300- μ l or 1,100- μ l volumes
Holds three 96-tip racks



Pre-dilution/archiving station
Space for 192 pre-dilution or archiving samples on microplates

Fully automated process

- Primary sample-in to result-out
- Highest level of safety with the triple sample pipetting monitoring system – capacitance, air pressure & colorimetry.
- Automatic inventory of all resources needed



Completely open system

- Easy programming of any EIA-based assay
- Direct use of kit bottles, from Bio-Rad and other suppliers
- Wide diversity of sample tubes accepted, on-board capacity for 144 sample tubes



Metrology Tools

The **incubator verification tool**, the **plate transport module check**, the **performance evaluation kit** and the **reader verification plate tool** ensure conformity to original manufacturer conditions and specifications, guarantee reliable operation and meet the highest accreditation requirements.



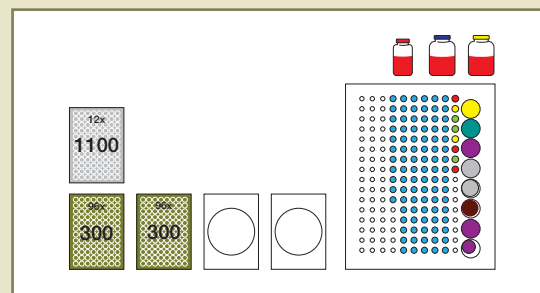
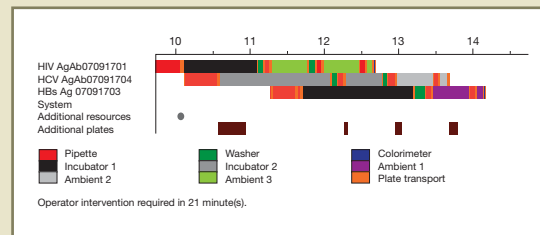
Designed for flexibility

- Scheduling of up to 3 full plates
- Continuous loading of reagents, samples and microplates, with positive identification
- Large choice of formats for sample pre-dilution: in-tip dilution in tubes, using standard or deepwell plates
- Serum archive management, including aliquoting, sample data management, and freezer inventory (with Archiving Management Software)



Advanced software

- Real-time monitoring of all events
- Bidirectional interfacing and multi EVOLIS Twin Plus configuration
- Bio-Rad reagent labels include the expiration date and batch number: automatic verification of reagent batch compatibility and expiration dates
- **Optimize** worklist scheduling function to reduce overall processing time



EVOLIS™ Twin Plus System

Sample Processing

Primary sample capacity	144
Dilution capacity (via tubes/plate)	72/192
Container (diameter & height)	10-16 mm/50-100 mm
Sample dilution	up to 1/10,000*

Reagent Processing

Calibrators & controls capacity	16
Reagents capacity	16
Reagents containers	Bio-Rad reagent bottles
Reagents identification	internal BCR
Lot & expiration management	yes

Disposable Tips

Carbon tips	300-1,100 µl
Volume (useable)	10-1,000 µl
Liquid level & clot detection	capacitive + air pressure
On-board capacity (walk-away)	288 tips (3 x 96)

Processing Features

Patient samples (100 µl/well)	~ 16 min/full plate
Reagent (100 µl/well)	~ 4 min/full plate
Dilution (1:10)	~ 23 min/full plate
Precision (at 20 µl)	< 6% CV
Accuracy (at 20 µl)	< 10%
Precision (at 100 µl)	< 3% CV
Accuracy (at 100 µl)	< 5%

Incubation Specifications

Number of incubators	3 x ambient T 2 x from ambient T +5°C, up to 50°C
Temperature Precision	1.4°C
Temperature Accuracy	± 1.0°C

Washer Specifications

Manifold	8 channels
Plate type (bottom shape)	flat, U- & V-shaped
Wash buffers and rinse	2 x 2 l, 1 x 1 l

Reader Specifications

Reading head	8 channels
Reading range	0-3.5 OD
Filter wheel	8 (equipped with 450, 492, 620)
Linearity (0-2.0 OD)	1%
Precision (0-2.0 OD)	2.5%

Communication

Communication Port	RS-232 Serial, USB 2.0, RJ-45
On-line (bi-directional)	ASTM or ASCII format

Infectious Disease Assays

AIDS Line

HIV Ag-Ab, 4th Generation Assay
HIV 1/2 Ab
HIV 1 Ag

Hepatitis Line

HCV Ag-Ab, The First 4 th Generation Assay: infection detection up to one month earlier than HCV Ab assays
HCV Ab
HBs Ag, 4 th Generation Assay: ultra-sensitive and mutant detection
HBs Ag Confirmation
HBs Ab
HBc Total Ab
HBc IgM
HAV Total Ab
HAV IgM
HBe Ag/HBe Ab*
HDV Ag, HDV IgM, HDV Total

Prenatal & Congenital Diseases

Toxoplasmosis IgM
Toxoplasmosis IgG
Toxoplasmosis IgG Avidity
Toxoplasmosis IgA
Rubella IgM
Rubella IgG
CMV IgM
CMV IgG
CMV IgG Avidity
HSV 1/2 IgM
HSV 1/2 IgG
HSV 1 IgG
HSV 2 IgG

Pediatric/Vaccination Immunity

Measles IgM
Measles IgG
Mumps IgM
Mumps IgG
VZV IgM
VZV IgG

Respiratory

<i>Mycoplasma pneumoniae</i> IgM*
<i>Mycoplasma pneumoniae</i> IgG*

Gastro-Intestinal

Helicobacter pylori IgG

Sexually Transmitted Diseases

Chlamydia IgG
Syphilis Total Ab

Infectious Mononucleosis/EBV

EBV EA IgG*
EBV VCA IgM*
EBV VCA IgG*
EBV EBNA IgG*

Invasive Mycosis/Oportunistics Diseases

<i>Aspergillus</i> Ag*

Tick Borne Diseases

Lyme IgM
Lyme IgG

Emerging/Tropical Diseases

Dengue (NS1) Ag
Malaria Total Ab
SARS Total Ab
Rabies Total Ab

Autoimmune Assays

Systemic

<i>Anti-dsDNA</i> *
<i>ENA Plus Screen</i> *
<i>Anti-SS-A</i> *
<i>Anti-SS-B</i> *
<i>Anti-Sm</i> *
<i>Anti-SmRNP</i> *
<i>Anti-Scl-70</i> *
<i>Anti-Jo-1</i> *
<i>ANA Screen</i> *
<i>Anti-Centromere</i> *

Thyroid

<i>Anti-TPO</i> *
<i>Anti-TG</i> *

Vasculitis

<i>Anti-MPO</i> *
<i>Anti-PR3</i> *
<i>Anti-GBM</i> *

Anti-Phospholipid Syndrome

<i>Anti-Cardiolipin IgG</i> *
<i>Anti-Cardiolipin IgM</i> *
<i>Anti-Cardiolipin IgA</i> *
<i>Anti-β2 Glycoprotein I IgG</i> *
<i>Anti-β2 Glycoprotein I IgM</i> *
<i>Anti-β2 Glycoprotein I IgA</i> *
<i>Anti-Phosphatidylserine IgG</i> *
<i>Anti-Phosphatidylserine IgM</i> *
<i>Anti-Phosphatidylserine IgA</i> *

Autoimmune Hepatitis

<i>Anti-Mitochondrial</i> *

* Protocols for these assays will be available soon



Bio-Rad
Laboratories

For further information, please contact the Bio-Rad office nearest you or visit our website at www.bio-rad.com/diagnostics

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