

# — BiOLiS 50i — Superior

Automated Clinical Analyzer

# LABORATORY SOLUTION

## **BIOLIS 50i** Superior

*Higher test performance and operability with new functions  
The clinical analyzer in the next stage*





## The best to the requirements for functionality and usability

# BiOLiS 50i Superior

### The highest throughput in BIOLIS series

- 480 tests/hour for photometry. 580 tests/hour with ISE.

### Rapid correspondence by a new function for HbA1c

- Hemolysis of whole blood sample for HbA1c is available automatically.  
※The throughput of HbA1c is different from that of general chemistries.

### Automatic sample clot detection & automatic cleaning

- Clot detector for the sample probe enhances the accuracy of the test results.
- Automatically cleaning the sample probe in instances where clots are detected.
- Sampling ceases automatically in case clots are not removed.

### Accommodate multiple languages

- Multilingual support software provides a user-friendly interface and higher usability.

### User interface

- Easy touch screen operation.
- The interface includes improved and additional functions such as sample status screen, and others.

### Dedicated sample probe for ISE

- The sample probe **directly connected** to ISE transfers the sample to electrodes.

### Common reagent bottles

- R1: 70 ml, R2: 20 ml, two sizes can be used.

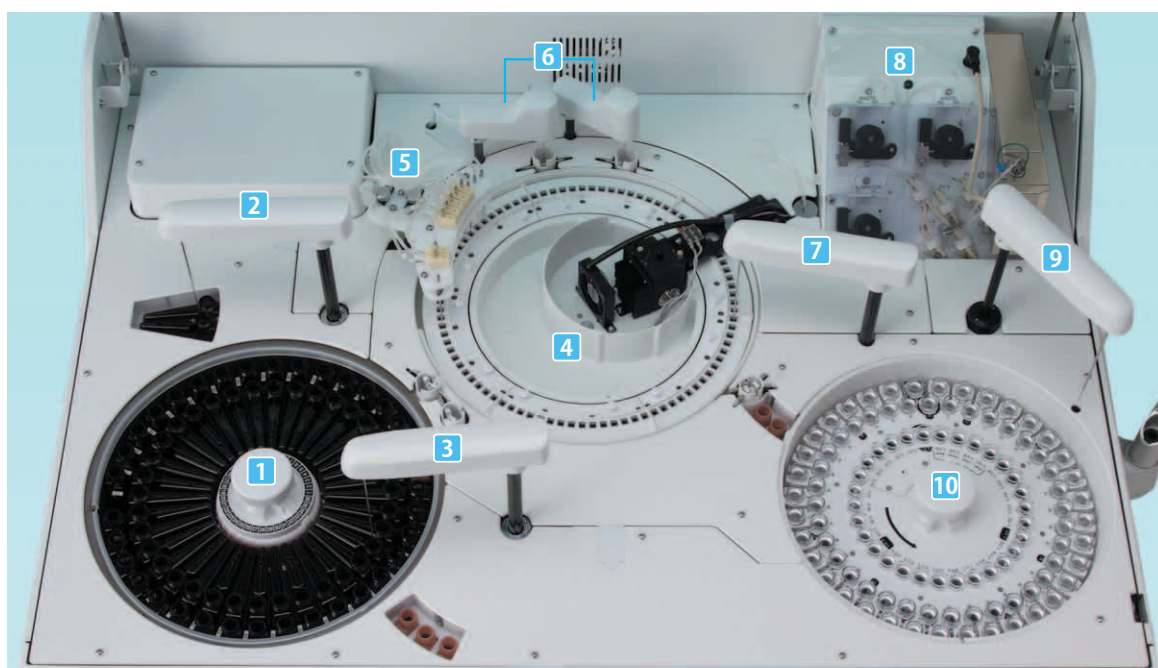
## Accuracy Features

- Sample clot detection
- QC sample cooling
- Carry-over protection program for reaction cuvettes and probes
- Pre-dilution
- Auto-rerun
- Cuvette skip
- Five mixing speeds

## Operation Features

- Sample cups (0.5 ml, 1.5 ml), Primary tubes (2 ml, 5 ml, 7 ml, 10 ml)
- Availability for using multiple bottles of the same item
- Reaction waste stored in a dedicated tank
- Common reagent bottles (R1: 70 ml, R2: 20 ml)
- Hemolysis of whole blood sample for HbA1c
- Sample and reagent barcode readers as standard feature
- Bidirectional communication

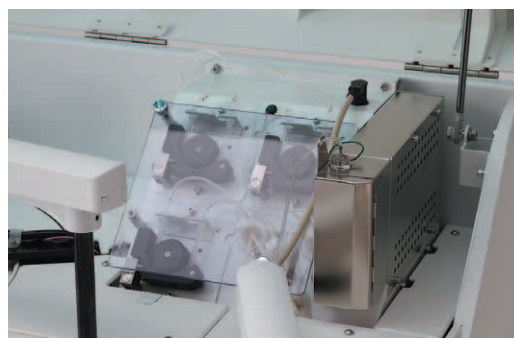
## Main Unit Arrangement



<b>1 Reagent tray</b>	R1: 36, R2: 35 position. Cooling temperature: 8-12°C	<b>6 Mixing unit</b>	Five mixing speeds
<b>2 R1 probe</b>	140-200 µl (in 0.5 µl steps) dispensing	<b>7 Sample probe</b>	2-20 µl (in 0.1 µl steps) dispensing
<b>3 R2 probe</b>	20-160 µl (in 0.5 µl steps) dispensing	<b>8 ISE module</b>	Na, K, Cl measurement
<b>4 Reaction tray</b>	90 semi-disposable cuvettes. Cuvette skip function is available.	<b>9 ISE probe</b>	Dedicated sample probe for ISE
<b>5 Cuvette washing station</b>	Cuvette washing with alkaline and acid washing solutions and heated water.	<b>10 Sample tray</b>	72 samples on board. QC sample cooling: 18-20°C

## ISE module

- Direct method
- Dedicated sample probe for ISE
- Na, K, Cl in serum, plasma and urine can be measured
- Sample volume: 100 µl
- Electrodes can be commonly used in BIOLIS series



## Specifications

Analysis	System	Discrete single line random access multi-test analysis
	Number of test items on board	36 + 3 items (ISE)
	Throughput	480 tests/hour, 580 tests/hour with ISE *160 tests/hour for HbA1c only (with hemolysis)
	Analysis methods	End point assay, Rate assay, ISE
	Calibration curve	8 kinds (Linear, Spline, etc)
Sample	Contents of test	Serum, Plasma, Urine, Dialysis, CSF (ISE not available for CSF)
	Sample container	Sample cups (0.5 ml, 1.5 ml), Primary tubes (2ml, 5 ml, 7 ml, 10 ml)
	Number of samples on board	72 patient samples and standard samples, 30 positions for QC and/or STAT samples
	Sample dispensing volume	2- 20 µl (in 0.1 µl steps)
	Dilution ratio	6-100 times
	STAT	Available during measurement
	Cooling temperature	18-20°C (QC samples only)
	Sample barcode reader	Available
Reagent	Number of bottles on board	R1: 36 positions, R2: 35 positions
	Bottle size	R1: 70 ml, R2: 20 ml
	Reagent dispensing volume	20-200 µl (in 0.5 µl steps)
	Cooling temperature	8-12°C
	Reagent residual volume	Level sensing or count down calculation
	Reagent barcode reader	Available
Reaction	Cuvette material	Plastics (Semi-disposable)
	Number of cuvettes	90
	Cuvette washing	Auto washing with heated water and 2 kinds of washing solutions
	Washing solution	Alkaline and acid washing solutions
	Cuvette skip function	Available
	Reaction time	3.4 min. after sample dispensing + 5 min. after R2 dispensing
	Reaction volume	140- 300 µl
	Reaction temperature	37°C ± 0.3°C
	Photometric assay method	Grating method
	Optical measurements	12 fixed wavelengths (340, 380, 405, 450, 505, 546, 570, 600, 660, 700, 750, 800 nm)
	Optical source	Tungsten halogen lamp
	Optical range	OD 0- 2.5
	Mixing	By stirrers
Mixing speed	5 speed levels available	
Interface	Operation	Personal computer (Touch screen)
	OS	Windows 7
	Output	RS232C serial cable, LAN (TCP/IP)
	Reaction curve monitor	Optical absorbance graphic display
	Quality control	Realtime QC, Within a day, Day-to-day variation
	Test results storage	100,000 tests
	Printer	Internal printer (option), External printer (option)

\*The specifications are subject to change without notice.

## Test Items List

Clinical Chemistry	LD(LDH)	AST(GOT)	ALT(GPT)	ALP	γ-GTP	CK(CPK)	LAP
	ChE	AMY	P-AMY	BUN	CRE	UA	T-CHO
	TG	HDL-C	LDL-C	TP	ALB	Ca	IP
	Mg	Fe	UIBC	D-BIL	T-BIL	GLU	NEFA
	PL	ALD	SIA	TBA	GA	CK-MB	
	Apo A-I	Apo A-II	Apo B	Apo CII	Apo CIII	Apo E	
	Lp(a)	Fer	µTP	NAG	µALB	HbA1c	HBAO
Immunoassay	CRP	RF	ASO	TPLA	RPR	β2-m	Tf
	C3	C4	Ig-G	Ig-A	Ig-M	Ig-E	
TDM	BRP	CBZ	CSA	DIG	DIGT	HAL	PB
	PHT	THEO	VPA				
Coagulation	ATIII	APL	PLG	PC	FDP	D dimer	
ISE	Na	K	Cl				

# User Interface

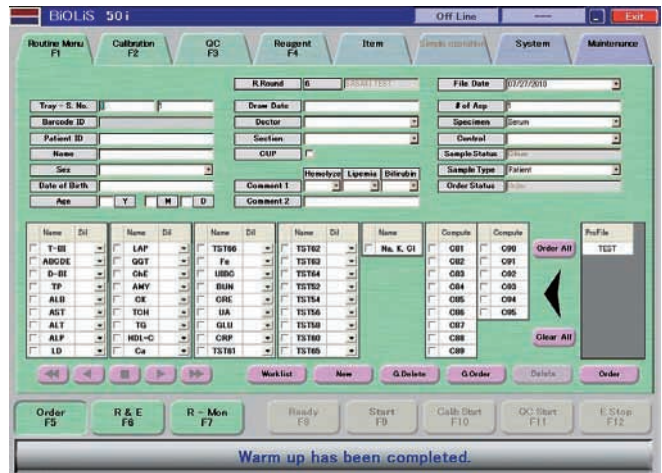
## Simple Operation

Direct access to each function by clicking tabs and buttons shown on the main screen

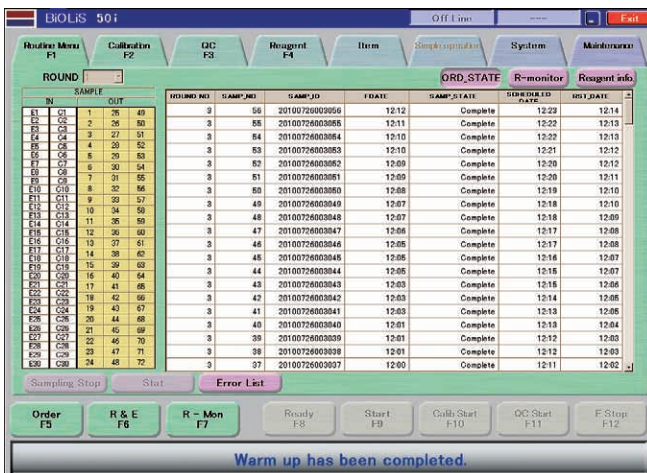
## New feature for time management

The list of time records for orders or test results is displayed in "Sample Status Screen"

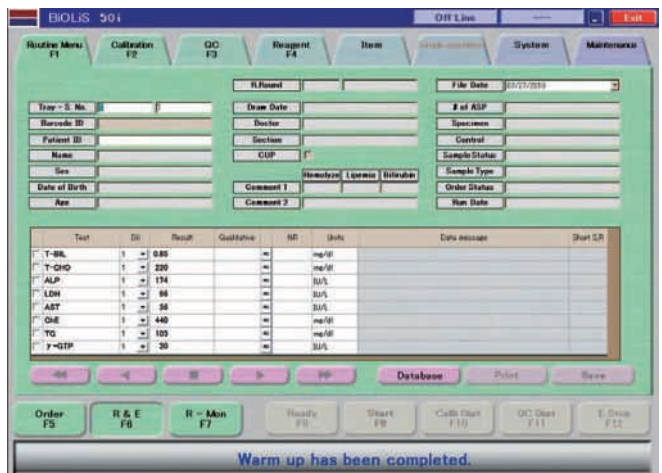
## Order Entry Screen



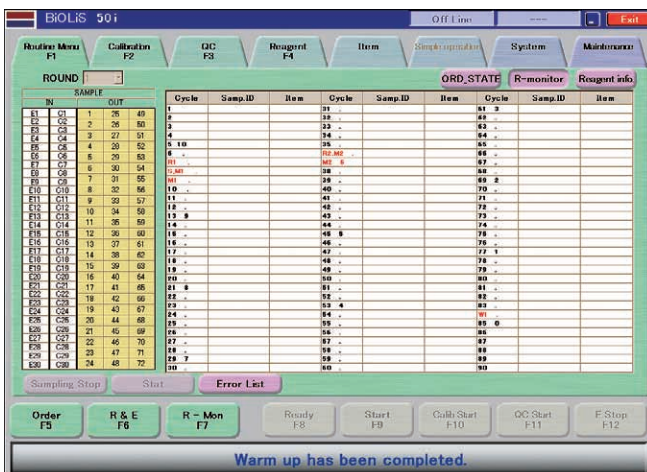
## Sample Status Screen



## Test Result Screen



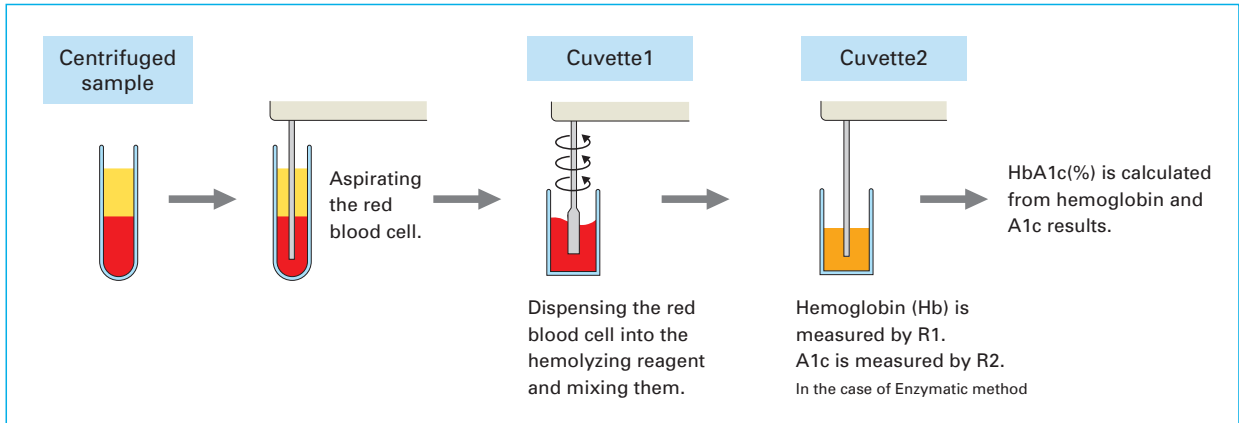
## Run Monitor Screen



## QC Graph Screen



## HbA1c sample preparation and measurement

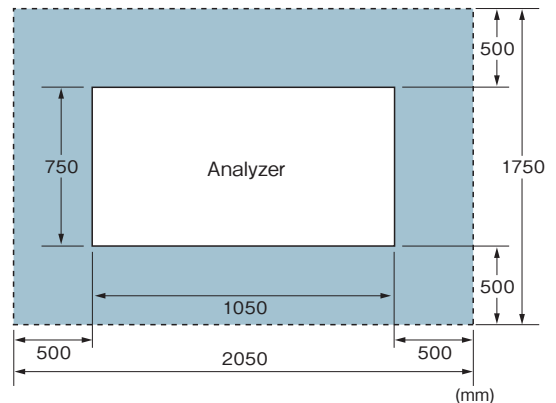


## Installation

### Conditions

Item	Description
Dimensions and weight	Analyzer W1050 x D750 x H1145 (mm) Approx. 300kg
Power supply	AC100/115/230V±10%, 50/60Hz Voltage fluctuation: Less than 10%
Power consumption	1.2kVA
Grounding	Earth resistance of ground terminal should be less than 10Ω.
Ambient temperature	15-30°C ±2°C/hour during measurement
Humidity	45-85% (No condensation)
Water consumption	Max. 15 ℓ/hour
Waste liquids	Separate drainage (low and high density waste)

### The space required for installation



※At least 500 mm space required for safety and maintenance.

## Option

### Water purification system

- Water purification system built into the analyzer
- Reverse osmosis membrane, Ion-exchange treatment, and UV disinfection
- 15 ℓ/hour of highly purified water
- Simple maintenance design  
(Easy exchange of accessories such as filter, RO module, cartridge, and UV lamp.)





GLOBAL PARTNER FOR LABORATORY SOLUTION



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