



MADE IN JAPAN

**BIOLIS Series**

# **BIOLIS30i**

**Automated Clinical Analyzer**

# LABORATORY SOLUTION

## BIOLIS30i

*Improved user-friendly interface and test efficiency*

*The latest model of Biolis series meeting various needs of clinical laboratory tests*





## Compact & Easy Operability & Excellent Function

# BIOLIS30i

### Brand new user interface

- Intuitive screen layout with a sense of unity
- Item parameter in one screen relieving the bother of page feeding

### Upgraded operability

- Various touch panel operation (swipe-to-select / drag & drop ) contributing to better facility of operation
- Enlarged touch buttons for reducing operation errors

### Upgraded throughput

- 270 tests/hour (maximum 450 tests/hour with ISE )

### Hemolysis of whole blood sample for HbA1c

- Automatic process on board contributing to the test efficiency

### Automatic sample clot detection

- Automatic detection & clean-up of sample probe clots (such as fibrin)

### Crash prevention

- Prevent reagent & sample probes from crash during operation for safety

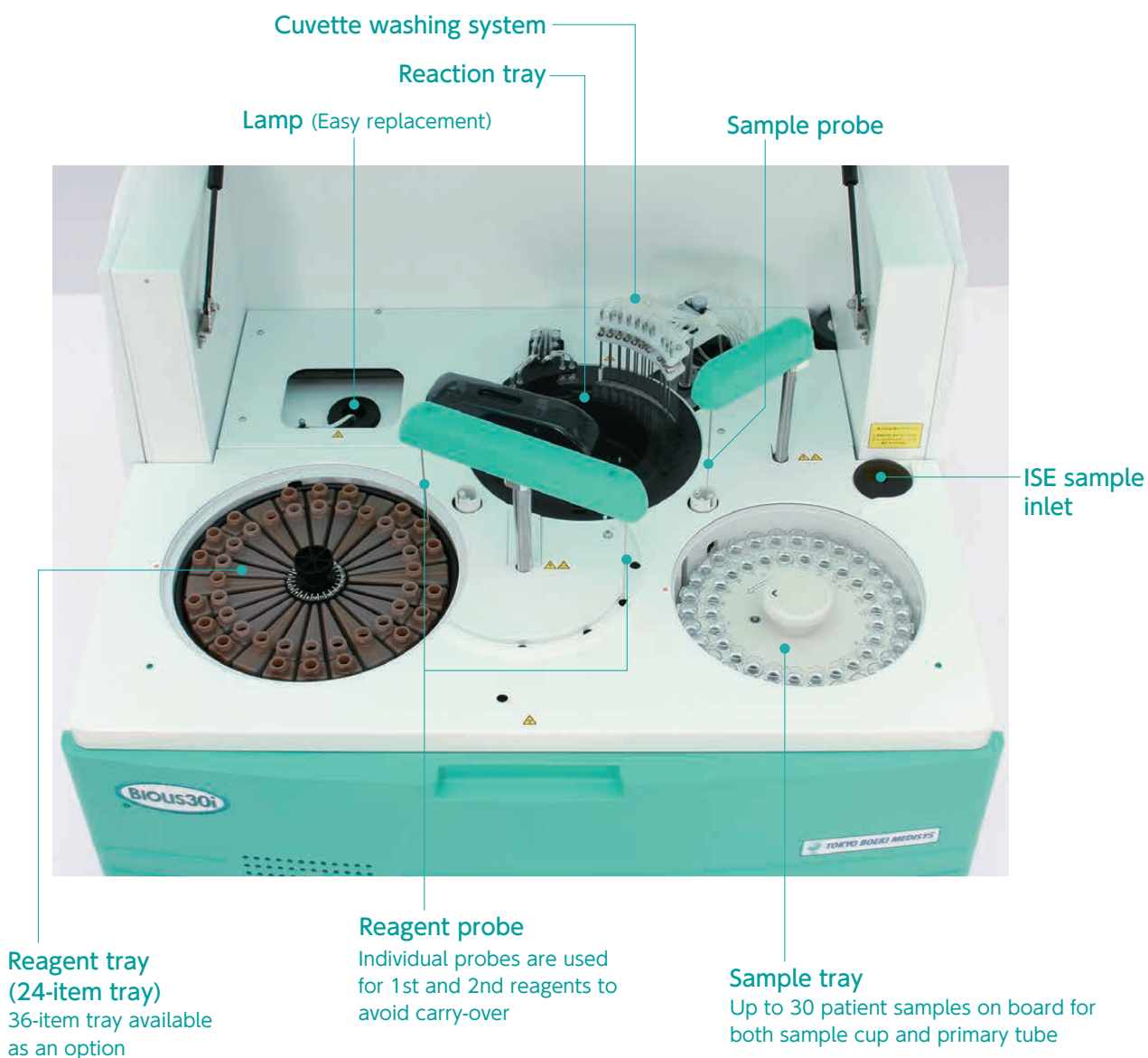
### Automatic startup and shutdown

- Stress-free operation by cutting waiting time

### Ethernet connections

- Ethernet connections between machine and operation PC for higher-speed and more stable communication

## Main unit arrangement

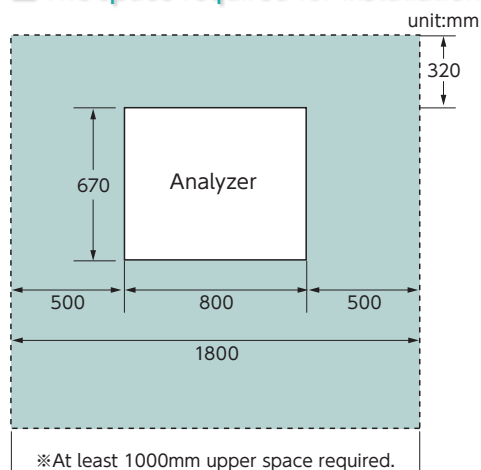


## Installation

### Conditions

Item	Description
Dimensions and Weight	Analyzer W800×D670×H555(mm) Approx. 95Kg
Power supply	AC 100/115/220/230V, 50/60Hz Voltage fluctuation less than 10%
Power consumption	600VA
Grounding	Earth resistance of ground terminal should be less than 100Ω
Ambient temperature	15~30℃
Humidity	45~85% (No condensation)
Water consumption	Max 3.8 l / hour
Waste liquid	Separate drainage (low and high density waste)

### The space required for installation



## Specifications

Analysis	System	Discrete single line random access multi-test analysis
	Number of test items on board	36+3 (ISE) or 24+3(ISE)
	Throughput	270 tests/hour, 450 tests/hour including ISE, 90tests/hour for HbA1c only
	Analysis method	End point, Rate, ISE
	Calibration curve	8 kinds (linear , spline, etc)
Sample	Sample kind	Serum, Plasma, Blood cell, Urine, Dialysis, CSF (ISE not available for CSF and Blood cell)
	Sample container	Sample cups , primary tube (5, 7, 10ml)
	Number of samples on board	Software tray (30 positions for patient sample, and 45 positions for standard and blank sample)
	Sample tray mode (software tray)	Selectable modes for patient sample, calibration and QC
	Sample dispensing volume	2.0 ~ 25.0 $\mu$ l(0.1 $\mu$ l step)
	Dilution ratio	0.5 ~ 100 times
	STAT	available during measurement (step between samples by priority)
Reagent	Reagent tray	36 items or 24 items (removable)
	Number of bottles on board	72 (36 items) or 48 (24 items)
	Bottle size	36 items : 13, 25, 40 ml 24 items : 20, 40, 60 ml
	Reagent dispensing volume	R1 : 140 ~ 300 $\mu$ l(1 $\mu$ l step), R2 : 20 ~ 260 $\mu$ l(1 $\mu$ l step)
	Reagent storage	24 hours cooling
	Reagent volume check	Level sensing or count down
Reaction	Cuvette material	Plastics (semi-disposable)
	Reaction volume	140 $\mu$ l ~ 400 $\mu$ l
	Reaction time	approx 10 min. (1st reaction 5 min., 2nd reaction 5 min.)
	Reaction temperature	37 $\pm$ 0.1 $^{\circ}$ C
	Optical measurements	Fixed 13 wavelengths (340 ~ 800nm)
	Optical source	Tungsten halogen lamp
	Optical range	OD 0 ~ 2.5
	Cuvette washing	Auto washing with heated water and 2 kinds of washing solutions
	Reaction waste collection	Reaction waste stored in a dedicated tank
Pure water consumption	Maximum 3.8 $\ell$ /hour	
Interface	Operation	Personal computer
	OS	Windows 10
	Reaction monitor	Optical absorbance graphic display
	Quality control	Current, Daily and Cumulative QC. Westgard algorithms
	Output	Ethernet connection
Option	ISE module	
	Sample barcode reader, Reagent barcode reader	

※Specifications are subject to change without notice.

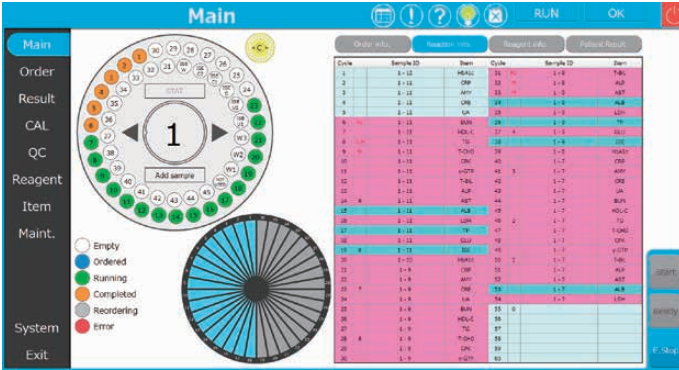
## Test Items List

Clinical chemistry	LD(LDH)	AST(GOT)	ALT(GPT)	ALP	$\gamma$ -GTP	CK(CPK)	CK-MB
	ChE	AMY	P-AMY	LAP	CRE	UA	BUN
	Cys-C	TG	T-CHO	HDL-C	LDL-C	TP	ALB
	IP	Mg	Ca	Fe	UIBC	Zn	Cu
	GLU	HbA1c	1,5-AG	GA	$\mu$ TP	$\mu$ ALB	IRI
	L-FABP	T-BIL	D-BIL	TTT	ZTT	NH3	*NEFA
	*PL	*SIA	*Fer	*Li			
	Coagulation	*AT $\text{III}$	*FDP	*D-dimer			
	Immuno-assay	CRP *IgE	RF MMP-3	TPAb	RPR	*IgG	*IgA
TDM	VCM CBZ	ABK DIG	TPM HAL	MTX PB	EVER PHT	TACR THEO	BRP VPA
ISE	Na	K	Cl				

\* Above includes test items under verification.

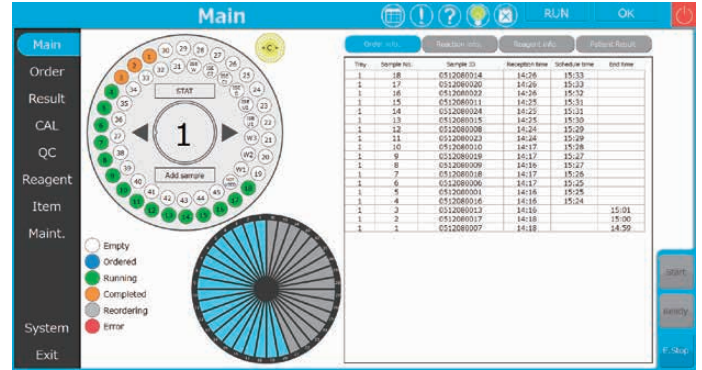
# User Interface

## Run monitor screen



Monitor measurement info by cycles

## Journal screen



View sample ordered time and result out-put time

## Order screen



Easy to select test items by swiping the touch screen

## QC graph screen



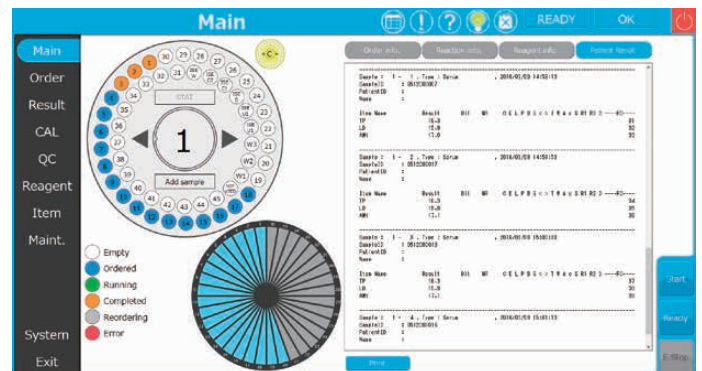
Current, daily, and cumulative QC

## Auto startup & shutdown screen



Auto maintenance available before shutdown

## Result screen



Show current day test results (Separate printer needed for output)

## Air pressure mixing system

Our original system for mixing the sample and reagent using air pressure alone.

**Reaction cuvette**

- Specially developed to utilize air pressure mixing system
- The material is water repellent plastic (Semi-disposable)

**Advantages of Air Pressure Mixing**

- No carry-over because a stirrer is not used
- No water consumption for stirrer washing
- No dilution of the reaction solution by washing water from the stirrer

## HbA1c sample preparation and measurement

**Centrifuged sample**

Aspirating the red blood cell.

**Cuvette1**

Dispensing the red blood cell into the hemolyzing reagent and mixing them.

**Cuvette2**

Hemoglobin (Hb) is measured by R1. A1c is measured by R2. In the case of Enzymatic method

HbA1c(%) is calculated from hemoglobin and A1c results.

## ISE module (OPTION)

**Side view**

ISE is Direct Method

- Throughput is 450 tests/hour including ISE
- ISE module is equipped with Biolis 30i
- Easy to replace electrodes

**Consumables for ISE module**

- Calibrators
- Cleaning solution
- Electrode (Na, K, Cl, Ref)



**TOKYO BOEKI MEDISYS INC.**

**International Marketing Division**

28F KYOBASHI EDOGRAND, 2-2-1 Kyobashi, Chuo-ku, Tokyo, 104-0031 Japan  
Tel: +81-3-6841-8703 Fax: +81-3-6841-8704

**Headquarters & R&D Center**

1-14-21, Higashitoyoda, Hino, Tokyo, 191-0052 Japan  
Tel: +81-42-587-7777 Fax: +81-42-587-7781  
URL <http://www.tb-medisys.co.jp/english/>



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