SEKISUI

SK300
CHEMISTRY

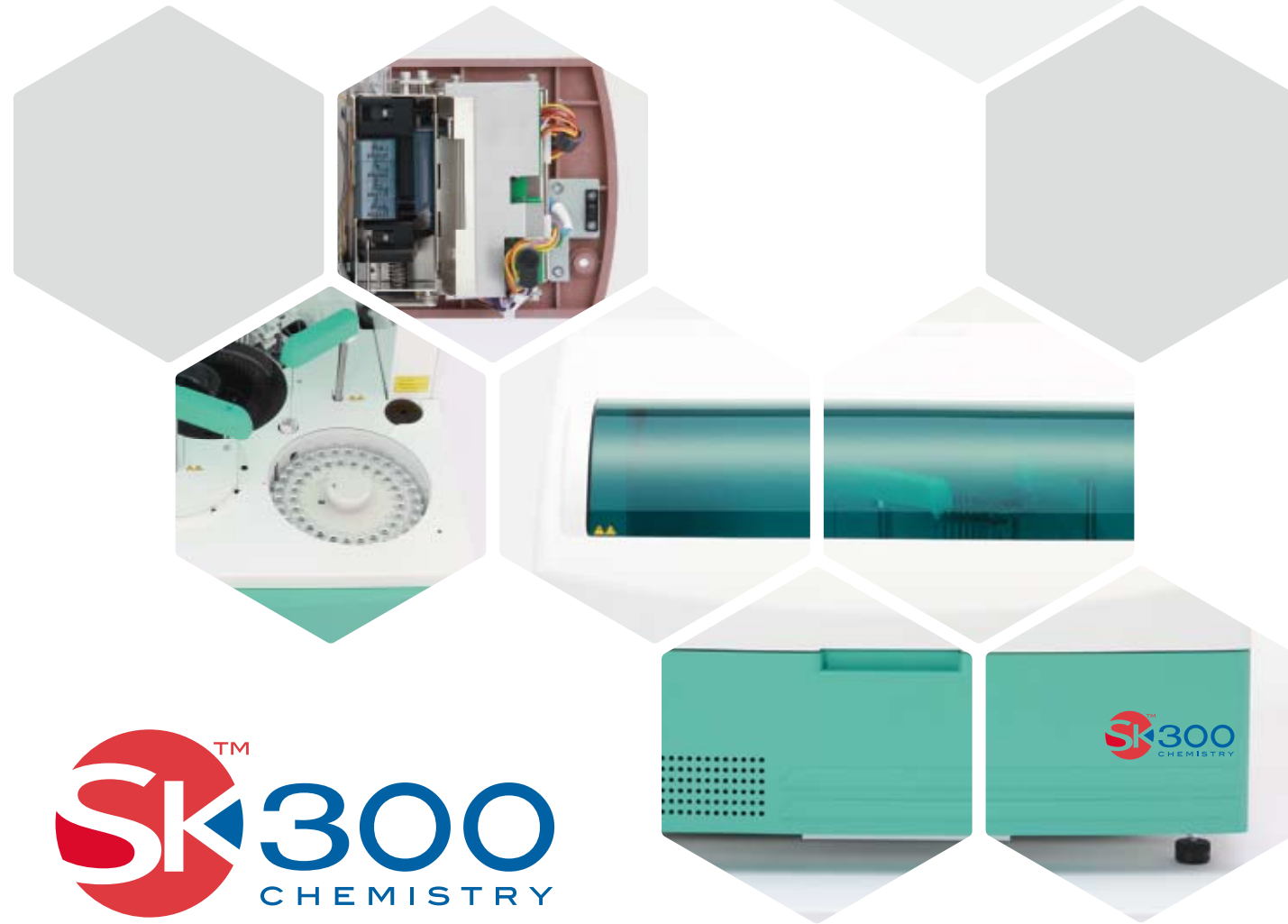**Automated Clinical Analyzer**

SEKISUI MEDICAL CO.,LTD.

Compact & Easy Operability & Excellent Function

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)
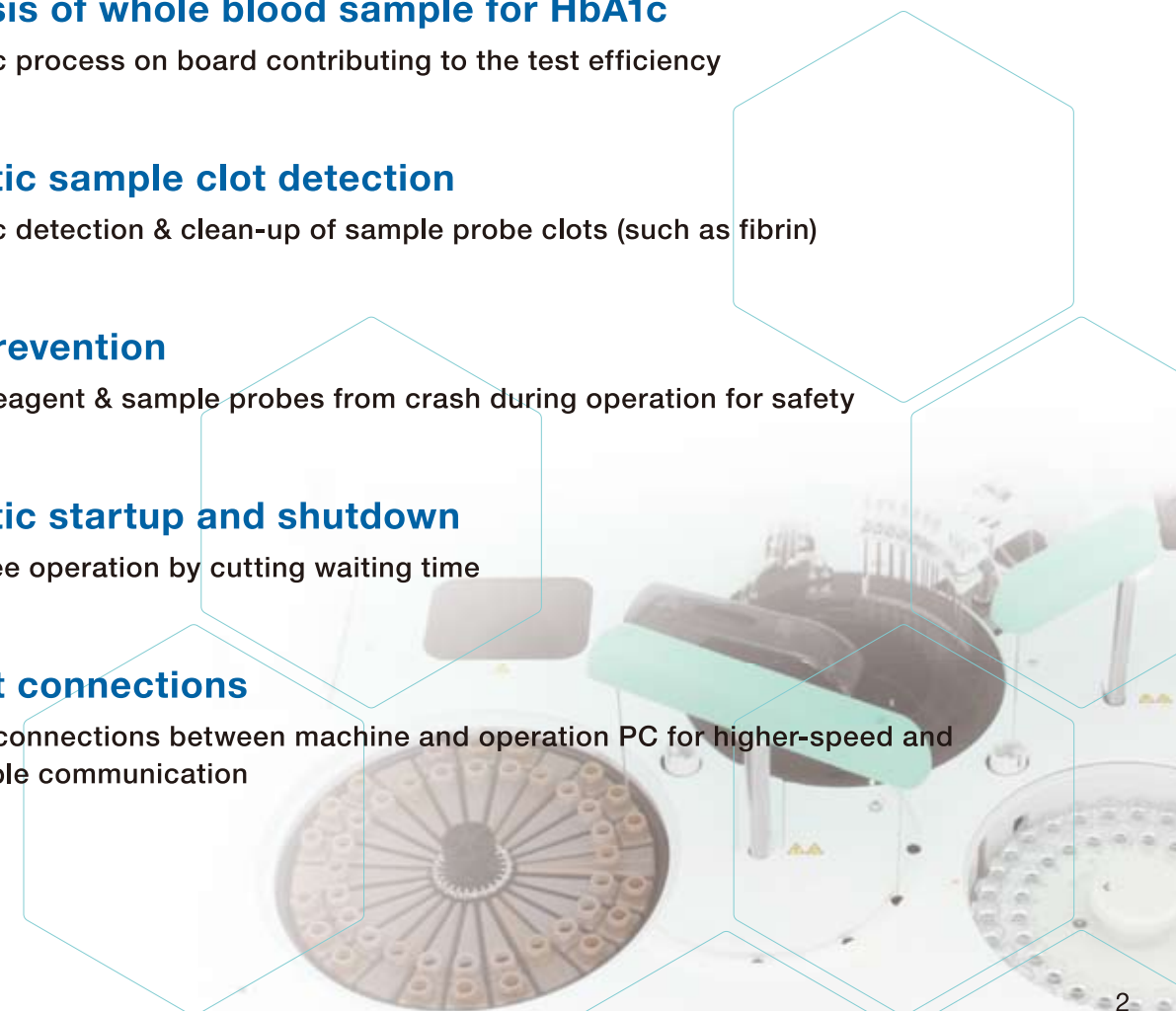
Crash prevention
- Prevent reagent & sample probes from crash during operation for safety
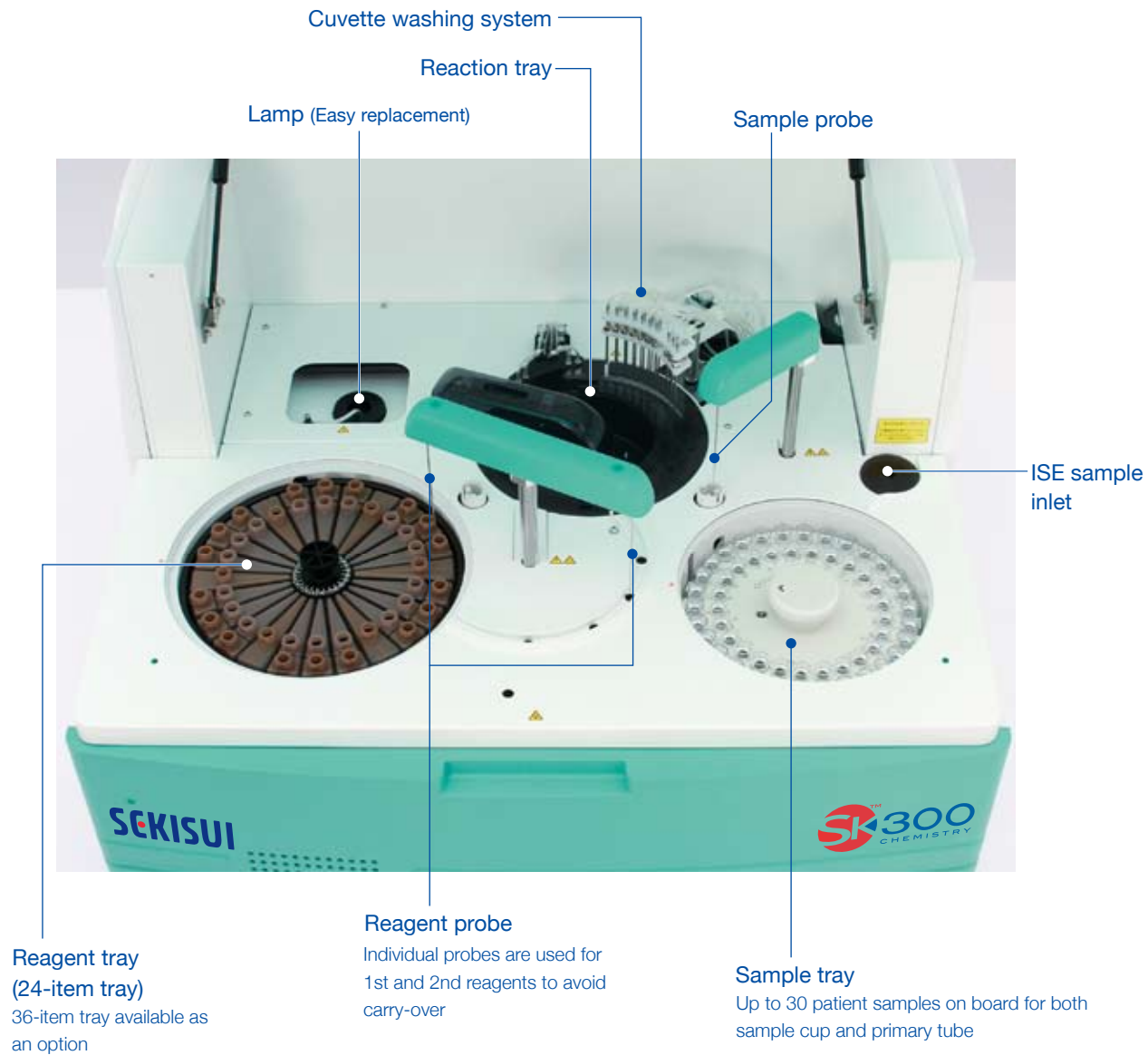
Automatic startup and shutdown
- Stress-free operation by cutting waiting time

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

Main unit arrangement

- Cuvette washing system
- Reaction tray
- Lamp (Easy replacement)
- Sample probe
- ISE sample inlet

Reagent tray (24-item tray)
36-item tray available as an option

Reagent probe
Individual probes are used for 1st and 2nd reagents to avoid carry-over

Sample tray
Up to 30 patient samples on board for both sample cup and primary tube

Installation

Conditions

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

The space required for installation

unit:mm

670 · Analyzer · 500 · 800 · 500 · 1800 · 320

※ At least 1000 mm upper space required.

Specifications

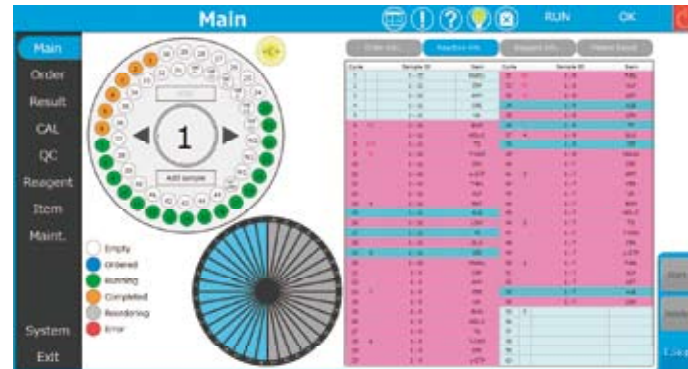|		
Analysis	System	Discrete single line random access multi-test analysis
	Number of test items on board	36＋3 (ISE) or 24＋3 (ISE)
	Throughput	270 tests/hour, 450 tests/hour including ISE, 90 tests/hour for HbA1c only
	Analysis method	End point, Rate, ISE
	Calibration curve	8 kinds (linear , spline, etc)
Sample	Sample kind	Serum, Plasma, Blood cell, Urine, Dialisys, CSF (ISE not available for CSF and Blood cell)
	Sample container	Sample cups , primary tube (5, 7, 10 ml)
	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 μl (0.1 μl 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 μl (1μl step), R2 : 20～260 μl (1μl step)
	Reagent storage	24 hours cooling
	Reagent volume check	Level sensing or count down
Reaction	Cuvette material	Plastics (semi-disposable)
	Reaction volume	140 μl～400 μl
	Reaction time	approx 10 min. (1st reaction 5 min., 2nd reaction 5 min.)
	Reaction temperature	37±0.1℃
	Optical measurements	Fixed 13 wavelengths (340～800 nm)
	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 3.8L/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	

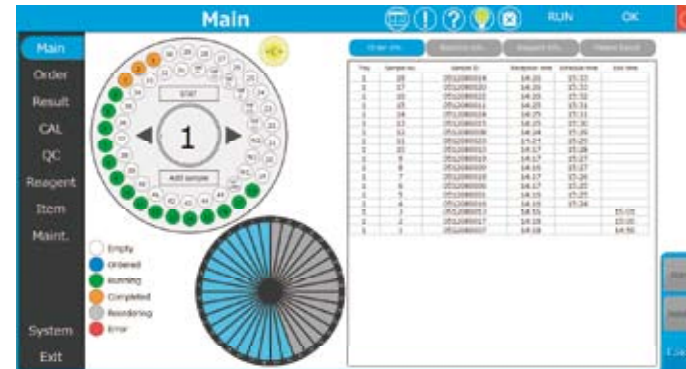※ Specifications are subject to change without notice.

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
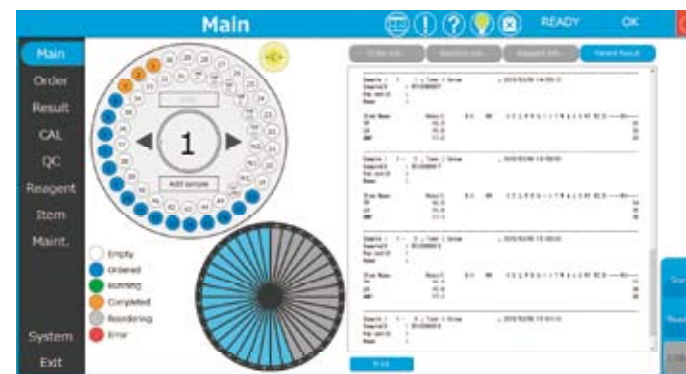
QC graph screen

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)

SAMPLE
REAGENT
DOWN   PRESSURE   SUCTION   UP
AIR
REPEAT

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)