

# GS300Plus Introduction

International Marketing



EXCEED IN QUALITY AND MORE

**Genru**



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# General Features

1

# General Features



## General Features

- ▶ Automatic, benchtop, discrete, random access
- ▶ STAT priority
- ▶ Constant 240 tests/hour, up to 300 T/H
- ▶ Large reagent and sample loading capacity
- ▶ Low reaction volume
- ▶ Auto cuvette wash
- ▶ Open system or closed system on demand
- ▶ LIS connectivity

# General Features



## Consumables

- ▶ Deionized water
- ▶ Wash concentrate
- ▶ Reagent bottle
- ▶ Reusable cuvette
- ▶ Lamp

# Chemistry Family



WP21B/E



WP21A



GS100



GS200



GS300Plus



GS480A

# Advantages and Benefits

2

## Challenge

- Limited capacity to expand test menu
- Increasing test volume
- Limited space and budget



- A faster and powerful analyzer which support more onboard items

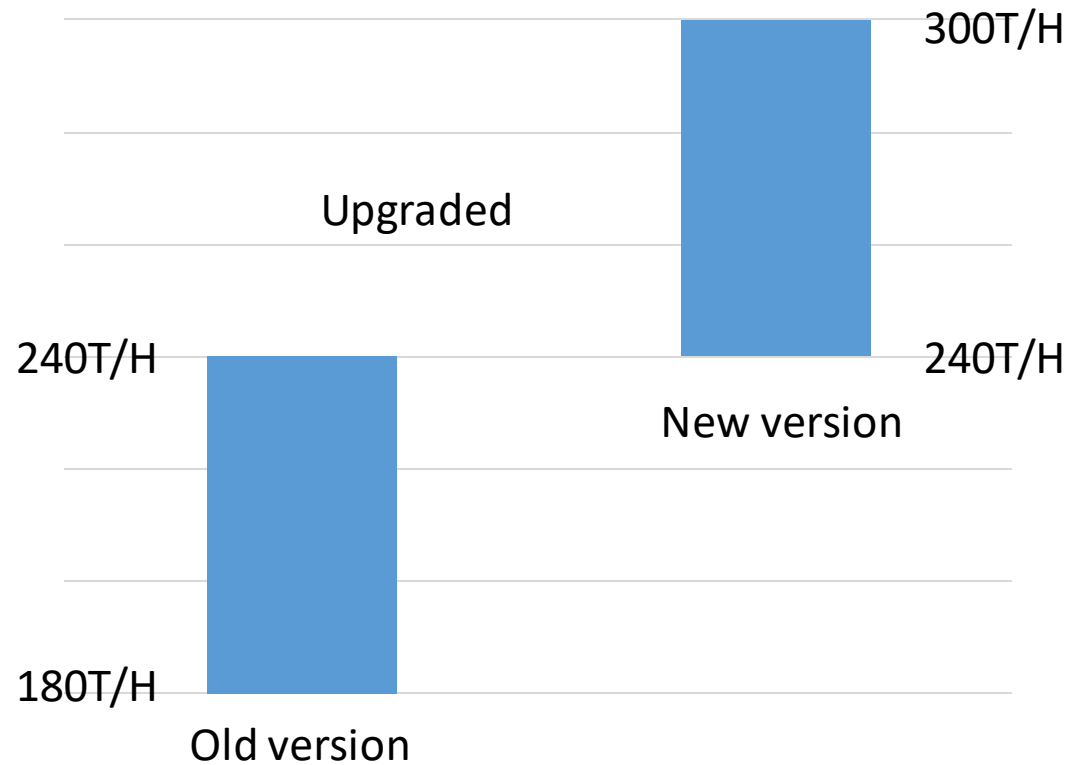




GS300Plus

## Hardware features

- High throughput
- Constant 240 tests per hour, up to 300 tests per hour



# Hardware features

## Large capacity

- Maximum 58 items onboard
- 60 sample positions and 60 reagent positions
- Compatible with primary tube, microcentrifuge tube and sample cup

## Cooling system

- 24-hour nonstop cooling
- Noise-free water-cooling design



# Hardware features

## Reaction disk

- 150ul minimum reaction volume
- 81 semi-permanent plastic cuvettes (nine in one segment)
- Recommend to replace every three months
- Solid heating, free-maintenance



Type	Features
Solid heating	<ol style="list-style-type: none"><li>1. Quick</li><li>2. Stable</li><li>3. Minimized maintenance</li></ol>
Air bath	<ol style="list-style-type: none"><li>1. Quick</li><li>2. Unstable</li><li>3. Minimized maintenance</li></ol>
Water bath ( Oil bath)	<ol style="list-style-type: none"><li>1. Slow</li><li>2. Equable heating</li><li>3. Routine maintenance</li></ol>

# Hardware features

## Probe

- Highly polished design avoid hanging liquid
- Ceramic syringe ensure high precision and free maintenance
- Liquid level detection and tracking
- Collision protection

## Precision

- Sample volume: 2-60ul, 0.1ul increment
- Reagent Volume: 20-450ul, 1ul increment



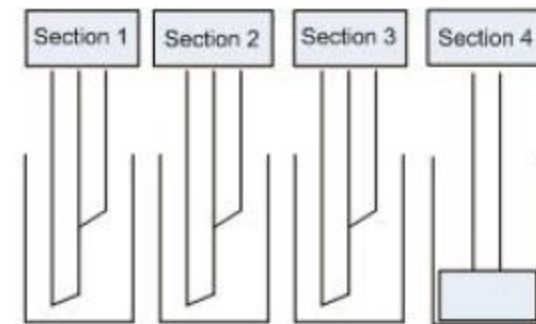
# Hardware features

## 4-step wash station

- Wash solution and warm water
- Real-time dirty cuvettes detection
- High washing efficiency ensures low carry-over

## 4-step auto washing

- 1 step: wash concentrate
- 2&3 steps: warmed water
- 4 step: wipe and dry



# Hardware features

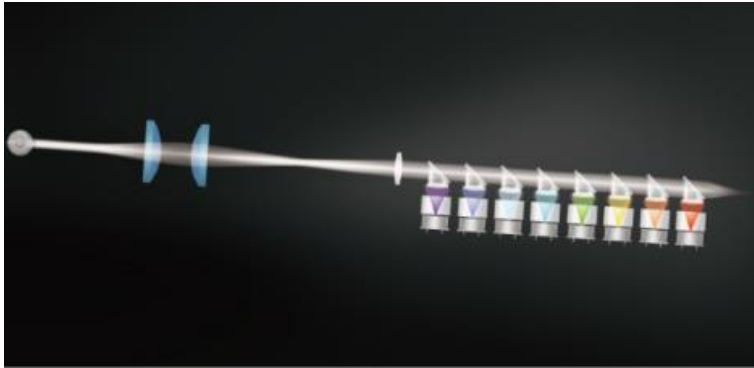
## Carry-over testing

NO.	A	B	C	D	E
1	53211.96	48048.12	50142.85	48330.15	43559.12
2	52926.54	48818.7	49621.2	48100.86	44095.1
3	52216.95	50465.24	47905.93	47180.26	44584.03
4	56	63.91	46.08	50.2	58.2
5	49.17	41.45	42.98	38.35	42.09
6	47.65	40.45	40.23	81.34	35.81
Carry-over	0.0032%	0.0090%	0.0022%	0.0120%	0.0086%
Requirement	0.5%	0.5%	0.5%	0.5%	0.5%
Conclusion	PASS	PASS	PASS	PASS	PASS

# Hardware features

## Focal point optical system

- Completely sealed system avoid environment interference
- 8 wavelengths: 340nm, 405nm, 450nm, 510nm, 546nm, 578nm, 630nm, 670nm
- Simultaneous dual-wavelength measurement
- Auto-gain adjustment





## Hardware features

### Optical system

	Performance	Requirement
Stray light	4.0A	> 2.3A
Abs linear range	0-4.0A	Max Abs $\geq 2.0A$ ( $\pm 5\%$ )
Abs repeatability	CV < 0.5%	CV < 1.5%
Abs stability	$\Delta \leq 0.01$	$\Delta \leq 0.01$

The higher the stray light, the more sensitive for low concentration sample.

\*According to YY/T 0654-2017

# Hardware features

Reliable Performance

Sample: Randox QC  
N= 20

	TBIL	TP	UREA	ALT	CREA	ALB	GGT
Mean	0.94	1.69	0.09	1.31	2.67	0.25	0.95
SD	25.21	139.13	5.39	33.4	119.95	36.89	39.8
CV	3.73%	1.21%	1.72%	3.93%	2.22%	0.68%	2.39%



Clinic Data

# Hardware features

Reliable Performance

Sample: from Xili Hospital  
N= 20

Group A

NO.	TP	UA	ALB	AST	ALT	GGT	UREA
Mean	56.56	194.5355	36.545	17.87	25	40.65	3.1175
SD	1.59	4.64	0.37	0.66	0.86	0.75	0.06
CV	2.80%	2.39%	1.01%	3.71%	3.43%	1.83%	2.06%

Group B

NO.	TP	UA	ALB	AST	ALT	GGT	UREA
Mean	93.2	394.021	44.51	43.725	93.2	50.5	6.3605
SD	1.105013	5.156204	0.491935	0.8626	1.105013	0.82717	0.109807
CV	1.19%	1.31%	1.11%	1.97%	1.19%	1.64%	1.73%



Clinic Data

# Software features

## GS Workstation

The image displays the GS Autochemistry System software interface. On the left is a login screen with the following fields and buttons:

- Username:** A text input field containing "admin".
- Password:** A text input field with a lock icon on the left.
- Buttons:** "Startup Procedure" and "Backup/Restore".

The main workstation view on the right features a circular carousel of reaction dishes. A legend in the center of the carousel identifies the status of each dish:

- Normal:** Represented by a white circle.
- Unavailable:** Represented by a yellow circle.
- Depleted:** Represented by a red circle.
- Expired:** Represented by a purple circle.

The workstation interface includes a top menu bar with icons for Sample Dish, Reagent Dish, Reaction Dish, and Test List. A central panel shows a "Chemistry List" with a table of data:

Chemistry	Exp. Type	Pos	Tests Left
AST	62	1-2	100

Below the table is a "Reagent" information panel for "AST\_61":

- Name:** AST\_61
- Specification:** 30
- Exp. Date:** 11/9/2017
- Lot No.:** 20001204
- Uncap Time:** Day
- Volume Limit:** 30.00
- Remaining:** 304
- Day:** Day

The interface also includes a right-hand sidebar with various control icons and a bottom status bar with buttons like "Release Status", "Emergency", "Reset", "Release Position", "Release All", and "Reagent Status".

# Software features

## Basic:

- One press to finish all parameter setting
- One press to export the reaction information to excel
- Real-time monitoring reaction time
- Real-time display the reaction curve



# Software features

## Reagent management

- Statistic the remain volume and expired information
- One item with multi-position
- Avoid replace reagent frequently

The screenshot shows the Genru software interface with the 'Reagent Status' window open. The window title is 'Reagent Status' and it has a close button (X). Below the title bar, there are filter conditions: 'Chemistry', 'Tests Left (s)', 'Days left (s)', and 'Residue Volume (s)'. The main area contains a table with the following columns: Chemistry, Cal Status, Calibration Date, Reagent Name, Rgt Type, Position, Tests Left, Residue volume (ml), Days left, Specification, Exp Date, and Lot No. The table lists various reagents such as ALB, ALP, ALT, AMY, AST, CK, CK-MB, and CREA, along with their calibration dates, reagent names, positions, and remaining tests and volume. At the bottom of the window, there are buttons for 'Inventory', 'Reset', and 'Close'. On the left side of the window, there is a circular diagram representing a reagent disk with numbered positions (1-36) and a legend for 'Empty', 'Diluent', 'R1', 'R2', 'Shared', 'Unrelated', and 'Detergent'. The top of the interface shows the Genru logo and several icons for navigation and settings. The top right corner displays the date and time: '2018/01/10 Wednesday 16:55:08'.

Chemistry	Cal Status	Calibration Date	Reagent Name	Rgt Type	Position	Tests Left	Residue volume (ml)	Days left	Specification	Exp Date	Lot No.
			Diluent		45		30.00	141	30	2018/06/01	
ALB	Calibrated	2017/08/08	ALB_R1	R1	51	96	38.43	426	60	2019/03/13	
ALP	Calibrated	2017/08/08	ALP_R1	R1	48	195	62.57	706	60	2019/12/18	
ALP	Calibrated	2017/08/08	ALP_R2	R2	3	457	36.58	649	30	2019/10/22	
ALT	Calibrated	2016/12/14	ALT_R2	R2	1	377	30.20	936	30	2020/08/04	
ALT	Calibrated	2016/12/14	ALT_R1	R1	46	92	29.70	706	60	2019/12/18	
AMY	Calibrated	2016/12/14	AMY_R1	R1	81	187	60.00	245	60	2018/09/13	
AMY	Calibrated	2016/12/14	AMY_R2	R2	36	375	30.00	301	30	2018/11/08	
AST	Calibrated	2016/12/14	AST_R1	R1	47	99	31.74	761	60	2020/02/11	
AST	Calibrated	2016/12/14	AST_R2	R2	2	381	30.56	677	30	2019/11/19	
CK	Calibrated	2016/12/14	CK_R1	R1	79	187	60.00	362	60	2019/01/08	
CK	Calibrated	2016/12/14	CK_R2	R2	34	375	30.00	700	30	2019/12/12	
CK-MB			CK-MB_R1	R1	82	187	60.00	294	60	2018/11/01	
CK-MB			CK-MB_R2	R2	37	375	30.00	118	30	2018/05/09	
CREA	Calibrated	2017/08/11	CREA_R1	R1	65	205	65.82	448	60	2019/04/04	
CREA	Calibrated	2017/08/11	CREA_R2	R2	20	460	36.84	370	30	2019/01/16	

# Software features

## Add tests

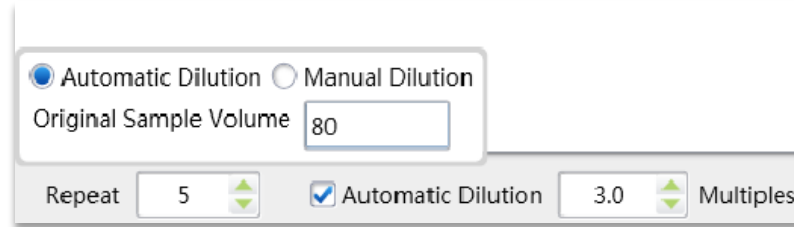
The screenshot displays the Genru software interface. On the left, a circular sample disk layout is shown with 100 numbered positions. A legend indicates the status of each position: Idle (white), To be tested (blue), In Progress (pink), Finished (green), Incomplete (orange), and Insufficient (red). The 'To be tested' status is highlighted for position 4. On the right, the 'Sample Information' section shows fields for Sample position (4), Sample ID (4), Patient Name, Test Type (Sample), and Type (Serum). Below this is a table of test results:

Chem	Result	Unit	Resp	Cuv No.	Rerun	Sample Blank	Dilution Ratio	Finish Time	Commen
TP		g/L		1			1		Invalid
TP	0	g/L	8.21	1			1	06/26/2018 17:28:03 PM	Finish
TP	0	g/L	8.04	58			1	06/26/2018 17:36:45 PM	Finish

At the bottom of the interface, there are several buttons: Barcode Scan, Delete, Release, Release Part, Release All, Add (highlighted with a red box), Reaction Curve, and Rerun. The date and time are shown as 06/30/2018 Saturday 13:10:04.

- Add new tests to online sample
- Avoid your waiting time

## Auto rerun function



The screenshot shows a software interface with the following settings:

- Automatic Dilution  Manual Dilution
- Original Sample Volume: 80
- Repeat: 5
- Automatic Dilution
- 3.0 Multiples

- Post-diluent and pre-diluent
- Auto-diluted and rerun, diluted ratio is 1:200



# Software features

## Powerful statistics

The screenshot displays the Genru software interface for 'Charge Statistics'. The top navigation bar includes icons for Test Statistics, Workload Statistics, and Charge Statistics. The main content area shows a table with columns for Request Date, Name, Sample ID, Chemistry number, Completion, Total Cost, Total Charge, and Total Profit. The 'Total' row at the bottom of the table is highlighted with a red box, showing the following values:

Request Date	Name	Sample ID	Chemistry number	Completion	Total Cost	Total Charge	Total Profit
12/31/2017		12	3	3	6	10	4
12/31/2017		13	3	3	6	10	4
12/31/2017		14	3	3	6	10	4
12/31/2017		15	3	3	6	10	4
12/31/2017		16	3	3	6	10	4
12/31/2017		17	3	3	6	10	4
12/31/2017		18	3	3	6	10	4
12/31/2017		19	3	3	6	10	4
12/31/2017		20	3	3	6	10	4
12/31/2017		21	3	3	6	10	4
12/31/2017		22	3	3	6	10	4
12/31/2017		23	3	3	6	10	4
12/31/2017		24	3	3	6	10	4
12/31/2017		25	3	3	6	10	4
12/31/2017		26	3	3	6	10	4
12/31/2017		27	3	3	6	10	4
12/31/2017		28	3	3	6	10	4
12/31/2017		29	3	3	6	10	4
12/31/2017		30	3	3	6	10	4
12/31/2017		31	3	3	6	10	4
Total			79290	79194	148568	252848	104280

## Carryover setting

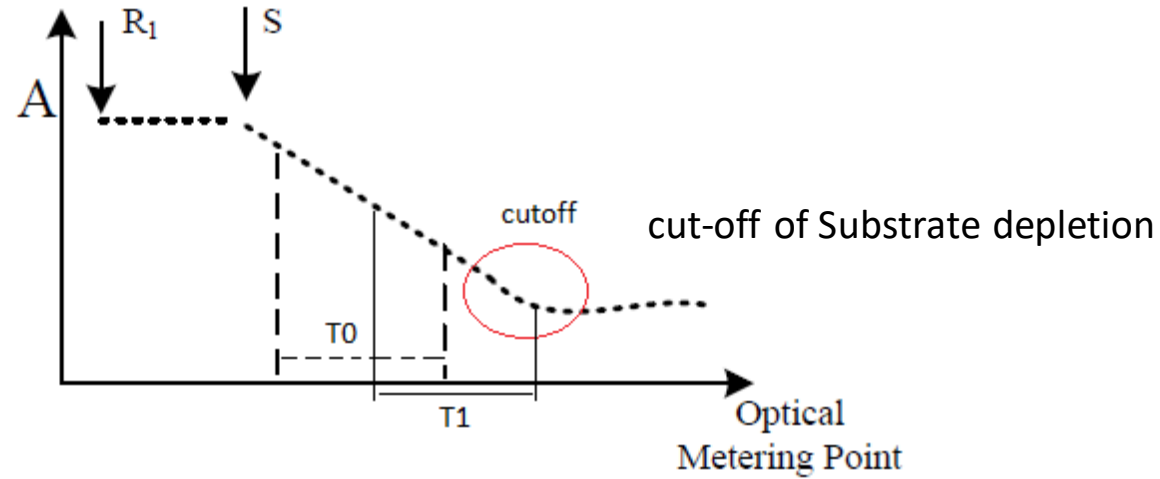
Contaminator			Contaminated		
AST			LDH		
Chemistry	Rgt Type	Pollution Chemistries	Chemistry	Rgt Type	Contaminated Cuvette
ALT	R1		ALB	<input type="checkbox"/> R1	<input type="checkbox"/>
ALT	R2		ALP	<input type="checkbox"/> R1 <input type="checkbox"/> R2	<input type="checkbox"/>
TP	R1		LDH	<input checked="" type="checkbox"/> R1 <input checked="" type="checkbox"/> R2	<input type="checkbox"/>
TP	R2		CK-MB	<input type="checkbox"/> R1 <input type="checkbox"/> R2	<input type="checkbox"/>
DBIL	R1		APOB	<input type="checkbox"/> R1 <input type="checkbox"/> R2	<input type="checkbox"/>
DBIL	R2		AST	<input type="checkbox"/> R1 <input type="checkbox"/> R2	<input type="checkbox"/>
UREA	R1		CK	<input type="checkbox"/> R1 <input type="checkbox"/> R2	<input type="checkbox"/>

➤ Intelligently schedule tests avoid interference between different reagents

e.g.:

1. ALT (IFCC)、AST (IFCC) reagent might affect the LDH testing
2. CK (NAC method) reagent might affect the GLU testing

## Substrate depletion

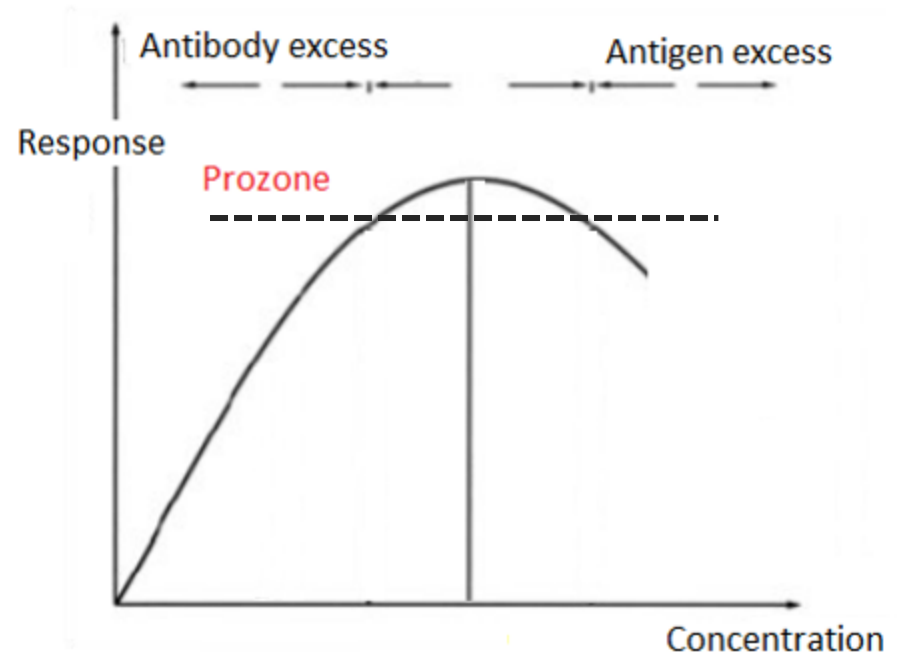


### Advantages

- Support substrate depletion detection and enzyme linear extension
- Auto identify the valid metering points auto recalculate true results
- Expend the linearity, avoid retest and diluent

## Hook reaction

- Prozone check: Reaction velocity ratio
- Avoid false-negative results
- Items including:  
PA , APOA1, APOB, IgA, IgG, IgM, C3, C4, etc.



# Software features

## Easy connection

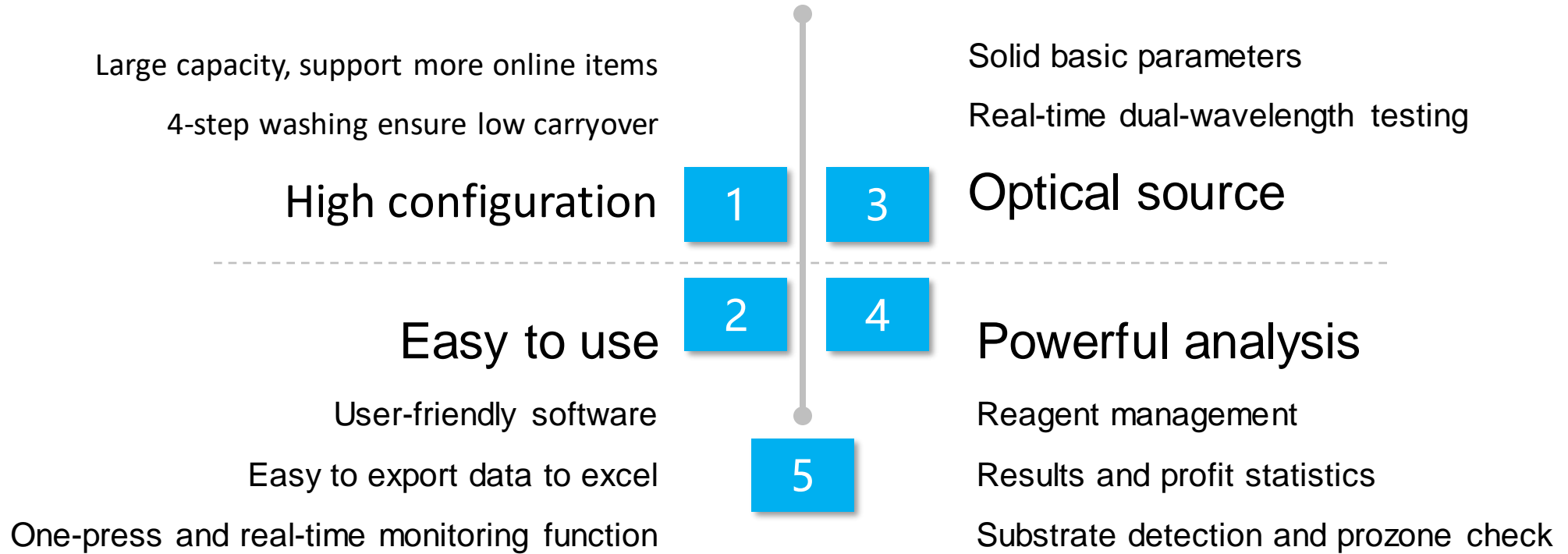


LAN  
Ethernet RJ45



Parameters	Descriptions
Support bilateral LIS	Bidirectional LIS
Water consumption	≤ 8.4L/H
Dimension	880mm × 650mm × 570mm (W × D × H)
Net weight	90kg

# Summary



Reliable Performance

# Market Position

3



## Who will need the GS300Plus ?

### Middle-sized labs

- > Heavy daily work
- > Extended tests
- > Old device with limited efficiency and capacity
- > Tests from 300 to 700

A reliable and robust analyzer to replace

### Middle to large labs

### Small labs

- > Growing sample quantity
- > Semi-auto or low-speed analyzers

An analyzer meets the current and future needs to update

# THANK YOU

**Genrui**

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