

# Robustness & Optimisation

BioSystems  
Y15

BioSystems Y15,  
Multiparametric automatic system

Food & Beverage analysis

human - centred biotech





# Technological innovation

## Efficiency in lab automation

BioSystems Y15 is an **open analyser** that easily adapts to any need and, thanks to its **multiple configuration options**, it can work with and monitor different sample types simultaneously.

## Reliable and validated analysis system

BioSystems Y15, in conjunction with the dedicated reagents, is a **fully developed system validated for use in food and beverage industries and laboratories**. It provides rapid and accurate analytical results during the manufacturing process and facilitates quality control.

## Minimum handling

Reagents adapted and dedicated to the analyser, avoiding the manual liquid handling.

## Continuous loading

Samples continuous loading to streamline laboratory tasks.

## Stable onboard temperature

**BioSystems Y15c** is the version equipped with a cooling system, which increases the onboard stability of reagents and ensures a constant temperature during work lists.

## Simple and intuitive interface

A user-friendly software, designed specifically for these kind of analysis. The flexible and simple interface makes the BioSystems Y15 a versatile analyser that can adapt to any need.

# Analytical solutions

Since 2008, we have been providing solutions for food and beverages analysis with the aim of improving their quality and safety. By listening to and understanding the needs of the sector, our team of professionals supports the food industry by developing and validating precise and reliable systems that offer an excellent user experience.

To ensure the best solution, we offer personalized assistance, providing technical and scientific support at every stage of the production process.



Technical & scientific support



Remote assistance



Customized assessment



Minimal manipulation



Fast and convenient



Reagent cost saving

# A compact analytical system with maximum robustness that adapts to your laboratory.

## BioSystems Y15:

Adapted and validated for various types of samples.

## BioSystems Y15 parameters

ORGANIC ACIDS	CODE	HISTAMINE	CODE
D-Lactic Acid	12801	Histamine	12829
L-Lactic Acid	12802	Histamine Spike Solution	12891
L-Malic Acid	12803		
Acetic Acid	12810	GLUTEN	CODE
Acetic Acid (Liquid)	12930	Gluten	31000
Gluconic Acid	12811	Gluten Spike Solution	31002
Tartaric Acid	12808	Gluten Extraction Solution	31003
Pyruvic Acid	12826		
L-Glutamic Acid	12830	NITROGENOUS SUBSTANCES	CODE
Ascorbic Acid	12828	Nitrite	12842
Citric Acid	12825	Primary Amine Nitrogen (PAN)	12807
		Ammonium	12809
		Urea	12879
SUGARS	CODE	OTHER PARAMETERS	CODE
Total Starch	12848	Ethanol	12847
D-Glucose/D-Fructose	12800	Polyphenols (Folin-Ciocalteu)	12815
Sucrose/ D-Glucose/D-Fructose	12819	Glycerol	12812
Maltose/Sucrose/D-Glucose/D-Fructose	12893	D-Sorbitol/Xylitol	12895
Lactose/D-Galactose	12882	Acetaldehyde	12820
IONS	CODE	MULTICALIBRATORS	CODE
Calcium	12824	Multical	12818
Iron	12817	Ions Multical	12814
Copper	12814		
Potassium	12823	PRETREATMENTS	CODE
Phosphate (Phosphorus)	12877	Carrez Reagent	12837
SULFITES	CODE		
Sulfite	12845		

# BioSystems Y15

# Automatic Random Access Analyser

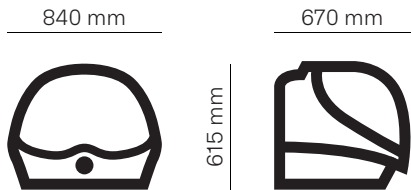
## Highlights

- 150 cycles/hour (75 results/hour).
- Samples continuous loading.
- Dedicated reagents, minimum handling.
- Automatic pre and post dilution.
- User-friendly and adaptable software, direct results.

Item	Quantity	Code
BioSystems Y15 analyser	-	83106
BioSystems Y15C analyser	-	83106C
Reaction rotor	10 units	AC11485
Concentrated Washing Solution	500 mL	BO13416
Concentrated System Liquid	1000 mL	12889
Sample wells (pediatric cups)	1000 units	AC10770
Reagent bottles 50 mL + caps	10 units	BO11493
Reagent bottles 20 mL + caps	10 units	BO11494
Amber reagent bottles 50 mL + caps	10 units	BO13442
Halogen lamp Y15 6V/10W	1 unit	LA10429U

**Intended use:** automated analyser for the measurement of different kind of food and beverage samples. For professional use in analytical laboratories only.

## Dimensions



# Technical Specifications

## THROUGHPUTS

Speed	150 cycles/hour
Mean throughput	75 results/hour

## SAMPLE HANDLING

Positions for racks (reagents or samples)	4 or 2 in Y15c
Rack samples capacity	24 sample positions/rack
Max. capacity of samples	72 or 48 in Y15c
Barcode reader	External
Size of primary tubes	Ø 13 mm or 15 mm (max. height 100 mm)
Sample well diameter	13 mm
Sample types	Agri-food and beverage samples
Dispensing pump	Ceramic pump of high durability
Dispensing tip	Stainless steel 110 mm
Level detection	Capacitive
Sample pipetting volume	From 2 µL to 80 µL
Pipetting resolution	0.1 µL
Predilution ratio	From 1:2 to 1:40
Tip wash	Inside and outside

## REAGENTS HANDLING

Volume of reagent bottles	20 mL, 50 mL
Reagents rack capacity	10 bottles of 20 or 50 mL
Cooled reagent	Yes, in Y15c. 20 reagents max.
Temperature range of cooler	10 °C below room temperature (at 25 °C)
Reagent volume	R1 volume, 10 µL to 600 µL R2 volume, 10 µL to 200 µL
Dispensing mode	Ceramic pump without maintenance
Pipetting resolution	1 µL
Tip wash	Inside and outside

## REACTION ROTOR

Reaction volume range	From 180 µL to 800 µL
Number of wells	120
Well material	UV methacrylate
Type of incubation	Dry without maintenance
Temperature	37.0 °C
Temperature accuracy	±0.2 °C

## OPTICAL SYSTEM

Light Source	Halogen lamp (6V, 10W)
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Lightpath	6 mm
Wavelengths	340 - 405 - 420 - 520 - 560 - 600 - 620 - 635 - 670 nm (1 additional filter can be added by user)
Wavelength accuracy	±2 nm
Spectral range	340 - 900 nm
Photometric range	-0.05 to 3.6 A
Photometric detection system	Silicon photodiode
Internal resolution	<0.0001 A
Baseline stability	0.004 A max., 30 minutes at 505 nm

## SIZE AND WEIGHT

Size (w., d., h.)	840 x 670 x 615 mm
Weight	45 Kg
Packaging	120x80x94 cm; 116 Kg

## ELECTRICAL AND ENVIRONMENTAL REQUIREMENTS

Mains voltage	115 to 230 V
Mains frequency	50 or 60 Hz
Electric power	150 A (200 A in Y15c)
Ambient temperature	From 10 to 35 °C
Relative humidity	<75%
Altitude	<2500 m

## FLUID REQUIREMENTS

System liquid solution bottle	3 L
Washing solution bottle	3 L
Waste solution bottle	3 L

## MINIMUM COMPUTER REQUIREMENTS

Operative system	Windows® 10 (x64) or Windows® 11 (x64)
CPU	Equivalent to Intel Core i3 (8th generation) @ 3.10 GHz or over
RAM	8 GB
Hard Disk	40 GB or over
DVD Lector	Yes
Monitor minimum resolution	1280x800
Connector of serial channel	USB

## LABORATORY INFORM ON SYSTEMS (LIS)

Connectivity to LIS	Yes
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BioSystems

SUCROSE /  
D-GLUC / D-FRUC

REF 12819 40 mL

A1

20°C

LOT 039XA

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