BioSystems

Y200/Y400, multiparameter analysis systems for oenology



Improved performance and analytical accuracy

Food & Beverage analysis

human - centred biotech

BioSystems Y200 & Y400: Designed for wineries and laboratories seeking productivity, accuracy and speed in every analysis.





- **Repeatable and reproducible results.** Precision tips and pumps, specialised stirrers and LED optics to ensure consistent results, with automatic pre- and post-dilution.

- **Continuous loading for a smoother workflow.** Add samples whilst the analyser is running, thanks to the Y400's segmented sample rotor.

- **Reagents that remain stable during analysis.** The cooled rotor maintains the dedicated reagents at a controlled temperature to preserve their stability during use.

- **Efficient management of consumables and waste.** The use of consumables is reduced thanks to the automatic washing station. Furthermore, the dual circuit separates high- and low-concentration waste.

Analyser Overview

Highlights

- Validated multiparameter systems, with a maximum throughput of 200 (on the Y200) and 400 (on the Y400) results per hour.
- LED optical technology and dynamic baseline.
- Continuous loading of samples and reagents.
- Automatic pre- and post-dilutions.
- Washing station with continuous monitoring of cuvette condition.

Dimensions



Product configuration

	QUANTITY	CODE
BioSystems Y200	1 unit	83020
BioSystems Y400	1 unit	83040
Extra sample segments (Y400) + paediatric adaptors	3 units	AC17457
Reaction rotors	10 units	AC11485
Wheeled table (Y200) + computer support	1 unit	AC17346
Wheeled table (Y200)	1 unit	AC17345
Concentrated washing solution	500 mL	AC16434
Acid washing solution (WS1)	4 x 20 mL	AC17201
Alkaline washing solution (WS2)	4 x 15 mL	AC17205
Alkaline concentrated washing solution (WS3)	2 x 60 mL	AC17800
Sample wells (pediatric cups)	1000 units	AC10770
Reagent bottles 60 mL + caps	10 units	AC16362
Reagent bottles 20 mL + caps	10 units	AC16363
Ambar reagent bottles 60 mL + caps	10 units	AC16364
Ambar reagent bottles 20 mL + caps	10 units	AC16365
Open adapter	90 units	AC16360
Closed adapter	45 units	AC16361
Sample tube adapter	45 units	AC17268

Intended use:

Advanced analytical systems designed to determine multiple analytes in oenological samples and derivatives. These systems optimise performance and workflow in laboratories and wineries.

Technical Specifications

PERFORMANCE

Analysis speed	200 cycles per hour (Y200) 400 cycles per hour (Y400)

OPTICAL SYSTEM

Light source	LED
Wavelengths	340, 405, 420, 430, 505, 520, 560, 600, 620, 635 and 750 nm
Optical path length	6 mm
Maximum absorbance	3,5 Abs
Internal resolution	< 0,0001 A
Accuracy of measurements (340 nm, 405 nm and 505 nm)	CV <1% at 0,1 A CV <0,1% at 2 A

SAMPLE AND REAGENT MANAGEMENT

Sample types	Wine and wine products, cider and other fermented products
Pipetting volume – Sample	From 2 µL to 40 µL
Sample rotor capacity	Up to 85 flexible positions (Y200) Up to 125 flexible positions (Y400)
Barcode reader	Yes
Sample well	13.5 mm in diameter
Dispensing pump	Low-maintenance ceramic piston
Pipetting resolution	0.1 µL
Ratio de predilución	De 1:2 a 1:40
Dispensing tip	Stainless steel
Tip wash	Inside and outside
Blockage detector	Sí
Volume of reagent bottles	20 mL, 60 mL
Reagent rotor capacity	85 (Y200) 88 (Y400)
Pipetting volume – Reagent 1	90 µL at 300 µL (Y200) 120 uL at 450 uL (Y400)
Pipetting volume – Reagent 2	10 µL at 100 µL (Y200) 10 uL at 300 uL (Y400)
Cooled reagents	Yes
Temperature range of refrigerator	From 6 to 11 °C (measured at 21 °C)

REACTION ROTOR

Number of wells	120
Reaction volume range	From 180 µL to 440 µL (Y200) From 180 uL to 600 uL (Y400)
Well material	UV methacrylate (PMMA)
Type of incubation	5 min. (fixed)
Temperature	37,0 °C ± 0,2 °C
Temperature accuracy	± 0,2 °C
Number of mixers	1 (Y200) 2 (Y400)
Cuvette washing system	7 tips: 2 for washing, 3 for rinsing and 2 for drying



LABORATORY INFORMATION MANAGEMENT SYSTEM (LIMS)

LIMS connectivity	HL7 and ASTM protocols

FLUIDIC SYSTEM

Water inlet	External tank or mains water supply
Water type	Purified type II
Water consumption	<9 L/h (Y200) <14 L/h (Y400)
Bottle of high concentration waste	3 L (Y200) 5 L (Y400)
Bottle of washing solution	3 L (Y200) 5 L (Y400)

ELECTRICAL AND ENVIRONMENTAL REQUIREMENTS

Main voltage	115 to 230 V
Main frequency	50 or 60 Hz
Electric power	500 VA max.
Room temperature	From 10 to 35 °C
Relative humidity	<85% without condensation
Altitude	<2500 m

MINIMUM COMPUTER REQUIREMENTS

Operating system	Windows® 10/11 (x64)
CPU	Equivalent to Intel Core i3 (8th gen) @3.10 GHz or higher
RAM	8 GB
Hard disk	40 GB or higher
Minimum monitor resolution	1024 x 768
Connector of serial channel	USB

Available Parameters

Organic acids

Acetic Acid 21810/23810
Acetic Acid (liquid) 21930/23930
Ascorbic Acid 12828
Citric Acid 12825
D-Gluconic Acid/Gluconolactone 21811
D-Lactic Acid 12801
L-Lactic Acid 21802
L-Malic Acid 21803/23803
Sorbic Acid 12880
Tartaric Acid 12808

Sugars

D-Glucose/D-Fructose 21800/23800
D-Glucose/D-Fructose/Sucrose 12819

Nitrogenous substances and sulphites

Ammonia 21809
Primary Amine Nitrogen (PAN) 21807
Free Sulphite 21813
Total Sulphite 21806

Ions

Calcium 21824
Copper 12814
Iron 12817
Potassium 21823

Other parameters

Acetaldehyde 12820
Total Acidity 21846
Anthocyanins 12831
Catechins 12834
CO_2 12832
Colour 21816
Glycerol 12812
Gluten 31000
Total Polyphenol Index (TPI)
pH (3.0-4.4) 12876
Polyphenols 12815
Polymeric Pigments 21851
Tannins (precipitable) 12850
Tannins (predictive) 12815+12831+12834+21816

↗ Enzymatic and chromogenic methods with standards included.

Reference material

Red wine control 12822
White wine control 12821
High D-Glucose/D-Fructose Control 18069
Free & Total Sulfite Control (2 Levels) 12817

Ions Multical 12841
Ions Multireference 12935
Multical 12818
Multireference 12933
Sugar Multireference 12934

We offer comprehensive analytical solutions —analyser, software, reagents, and reference materials— specifically designed to simplify the work of wineries and winemaking labs.



BioS/11-26 99918

Do you want to know more about BioSystems Y200/400? Scan the code.

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