

# Robustness & Optimization

BioSystems

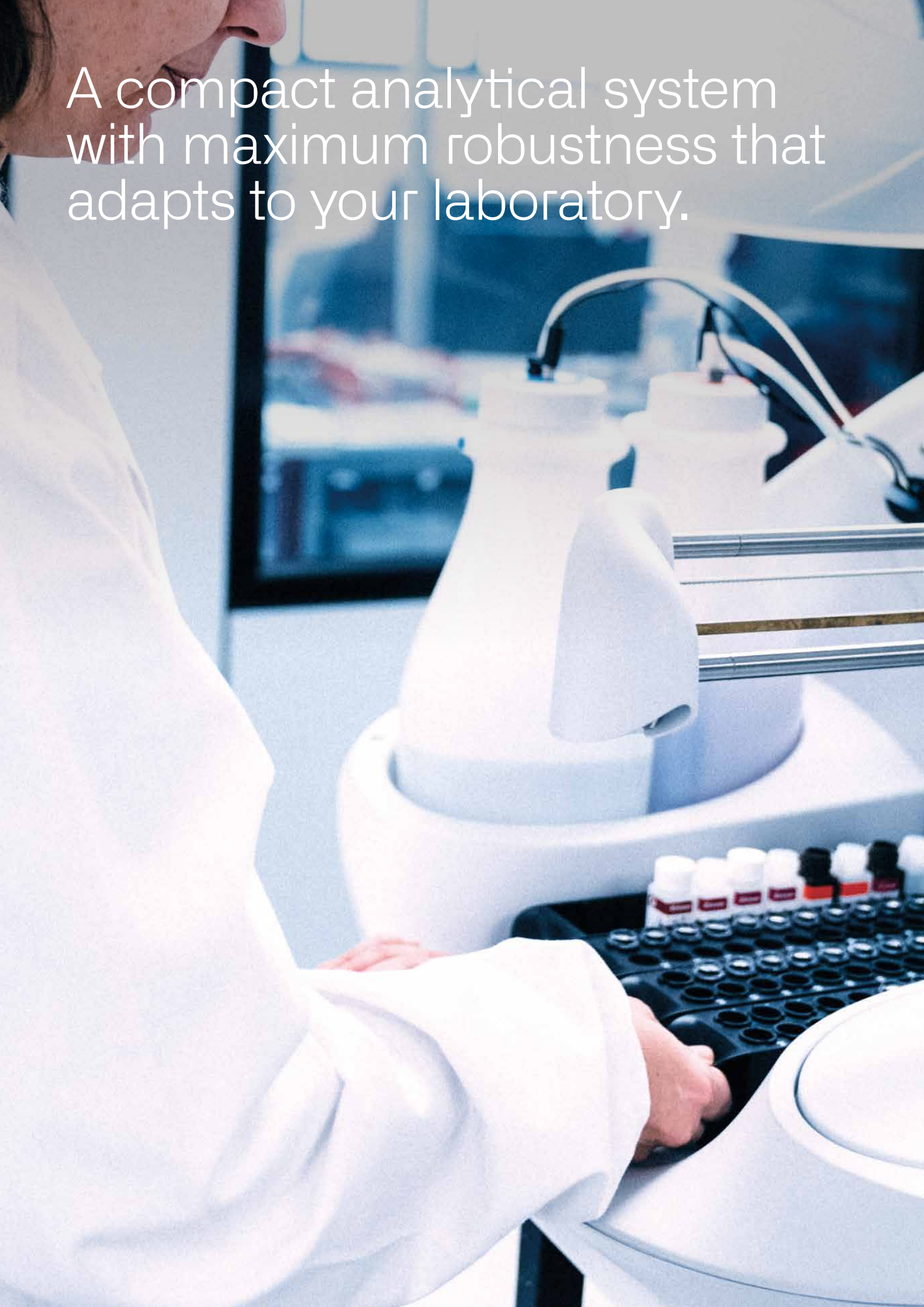
Y15 multiparametric analyser

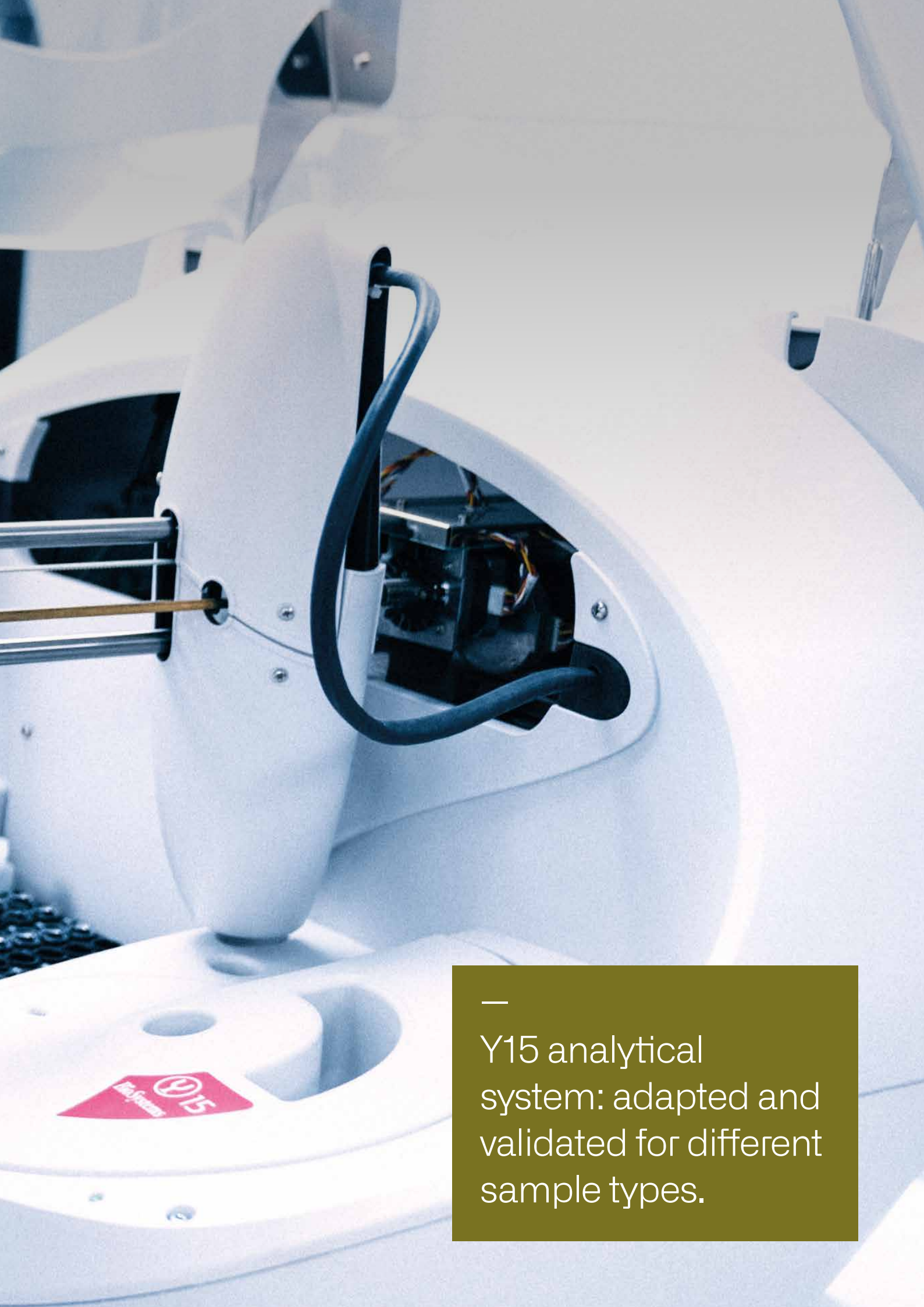
Food & Beverage analysis

human - centred biotech



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





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Y15 analytical  
system: adapted and  
validated for different  
sample types.

# Technological innovation



## Efficiency in lab automation

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

Y15, in conjunction with the BioSystems line of reagents, is a **fully developed system validated for use in oenological laboratories**. It provides rapid and accurate analytical results during the wine making process and facilitates quality control of finished products.

## 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

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 analysis types. The flexible and simple interface make the Y15 a versatile analyser that can adapt to any need.





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Take care  
of your wine,  
we take charge  
of its analysis.

# Analytical solutions

Since 2008, we offer solutions for wine analysis in order to improve the quality and safety of the wine.

From discussions with industry and understanding sector needs, our professional team and technical colleagues help the experts of the wine industry. We develop and validate analytical systems that are accurate and reliable to offer you an excellent user experience.

Finding the best solution at the same time we continuously improve together. Thus, we offer a personal assistance, giving you technical and scientific support in any moment.

At BioSystems, our main aim is to help our users and customers in their daily job monitoring wine processes to make the right decisions during the winemaking.



Technical &  
scientific support



Remote  
assistance



Customized  
assessment



# Y15

## parameters

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### Organic acids

Acetic Acid  
Ascorbic Acid  
Citric Acid  
D-Gluconic Acid  
L-Lactic Acid  
L-Malic Acid  
Sorbic Acid  
Tartaric Acid

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### Sugars

D-Glucose/D-Fructose/Sucrose  
D-Glucose/D-Fructose

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### Ions

Calcium  
Copper  
Iron  
Potassium

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### Calibration and control materials

High Glucose/Fructose Control  
Ions Multical  
Multical  
Sulfite Control  
Red/White wine control

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### Other parameters

Acetaldehyde  
Anthocyanins  
Catechins  
Colour  
Glycerol  
PTI (Total Polyphenols Index)  
pH  
Polyphenols  
Total Acidity

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### Nitrogenous substances and sulfites

Ammonia  
PAN  
Free Sulfite  
Total Sulfite

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# Technical specifications

### Highlights

- Speed of 150 cycles/h.
- Mean throughput of 60 results/h.
- Samples continuous loading.
- Pre and post dilution automatic.
- Dedicated reagents and bottles for the analyser.
- Low water consumption (0.5-1 L/h).

### Ordering information

| Description                        | Code     | Format     |
|------------------------------------|----------|------------|
| Y15 analyser                       | 83106    | -          |
| Y15C analyser                      | 83106C   | -          |
| Reaction rotor                     | AC11485  | 10 units   |
| Concentrated Washing Solution      | AC16434  | 500 mL     |
| Sample wells (pediatric cups)      | AC10770  | 1000 units |
| Reagent bottles 50 mL + caps       | BO11493  | 10 units   |
| Reagent bottles 20 mL + caps       | BO11494  | 10 units   |
| Amber reagent bottles 50 mL + caps | BO13442  | 10 units   |
| Halogen lamp Y15 6V/10W            | LA10429U | 1 unit     |



| Throughputs                               |                                                                                                                |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Speed                                     | 150 cycles/hour                                                                                                |
| Mean throughput                           | 60 results/hour*                                                                                               |
| Sample handling                           |                                                                                                                |
| Positions for racks (reagents or samples) | 4 or 2 in Y15c                                                                                                 |
| Rack samples capacity                     | 24 samples position/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                              | Grape-juice, sulfited grape-juice, white wine, rosé wine, red wine, beer, cider, and other alcoholic beverages |
| 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 botellas de 20 o 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 550 µL<br>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)                                                                            |
| 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 3.0 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                                                                                             |
| Electrical and environmental requirements |                                                                                                   |
| Mains voltage                             | 115 to 230 V                                                                                      |
| Mains frequency                           | 50 or 60 Hz                                                                                       |
| Electric power                            | 500 VA                                                                                            |
| 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® 7 or Windows® 10 64 bit (x64)                                                            |
| CPU                                       | Intel Core i3 @3.10 GHz or over                                                                   |
| RAM                                       | 512 MB                                                                                            |
| Hard Disk                                 | 20 GB or over                                                                                     |
| Monitor minimum resolution                | 800x600                                                                                           |
| Connector of serial channel               | USB                                                                                               |
| Laboratory Inform on Systems (LIS)        |                                                                                                   |
| Connectivity to LIS                       | Yes                                                                                               |

\*Average value, final throughput will depend on the configuration of the worklist and the analyte



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