We make fish analysis easy

BioSystems
Y15

BioSystems Y15, multiparametric analyser

Food & Beverage analysis

human - centred biotech

Analytical solutions

The analysis of fresh and processed fish is made easier with our reagents and automatic analyser BioSystems Y15. Together with you, we guarantee quality and safety for your product.

Technical & scientific support

Remote assistance

Customized assessment

Minimal manipulation

Fast and convenient

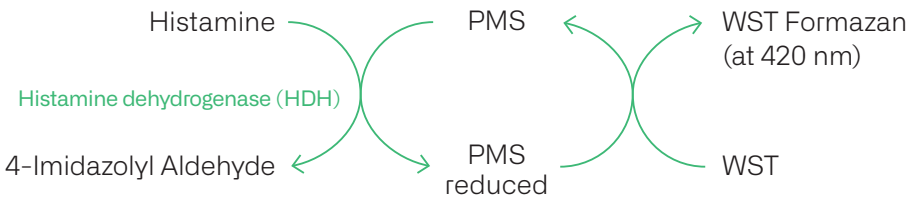
Reagent cost saving

BioSystems Y15 parameters

Reagent	Code
Histamine	12829
Histamine Spike Solution	12891
Sulfite	12845
Phosphate	12877
Ascorbic Acid	12828

Histamine | Ref. 12829

The reagent specifically detects the presence of histamine in fish and fishery products with high sensitivity (**histamine dehydrogenase** method). The analysis consists of a simple validated extraction and a rapid reaction with minimal reagent use. The system includes calibrators and is more economical and easier to use than expensive methodologies, such as immunoassay or HPLC.



PERFORMANCE TESTED AOAC RESEARCH INSTITUTE LICENSE NUMBER 072001

Histamine kit for automated procedure, certified as AOAC Performance Tested MethodSM #072001.

Inmunoassays for alergens are available

Sulphites | Ref. 12845

The reagent for sulfite assay in crustaceans allows highly sensitive analysis of this substance and avoids interference by using the **pararosaniline** method.

The analysis consists of a simple validated extraction in crustaceans and a rapid reaction with minimal reagent use. The kit includes the extraction buffer and calibrator, making it very easy to use compared with other methodologies, and shows excellent correlation with the official method (Monier-Williams).

Principle of spectrophotometric method:

$$SO_2 + PR + I \xrightarrow{pH = 0,9\ F} [PR\text{-}F\text{-}SO_2] + [PR\text{-}F\text{-}I]$$

$$SO_2 + PR + I \xrightarrow[+Oxidant\ -\ SO^2]{pH = 0,9\ F} [PR\text{-}F\text{-}I]$$

Phosphate | Ref. 12877

Phosphates are used as preservatives in many foods and in fish they serve mainly to maintain its organoleptic characteristics.

The inorganic **phosphate** present in the previously calcinated sample reacts with **molybdate** in an acid medium to form a complex which is quantified **spectrophotometrically.**

Principle of spectrophotometric method:

Phosphomolybdate | UV

Ascorbic Acid | Ref. 12828

Ascorbic acid is an organic acid that occurs naturally in various plant foods and is used as an **antioxidant** in many foods. In fish, it helps to maintain its properties.

In our method, the ascorbic acid present in the sample is reduced through the two reactions described.

$$\text{Ascorbic Acid} + X_{red} + \text{MTT} \xrightarrow{PMS} \text{Dehydroascorbic Acid} + X_{ax} + \text{MTT-formazán}$$

$$\text{Ascorbic Acid} + \tfrac{1}{2}\ O_2 \xrightarrow{AO} \text{Dehydroascorbic Acid}$$

BioSystems Y15

Automatic Random Access Analyser

Highlights

150 cycles/hour (75 results/hour).

Samples continuous loading.

Dedicated reagents, minimum handling.

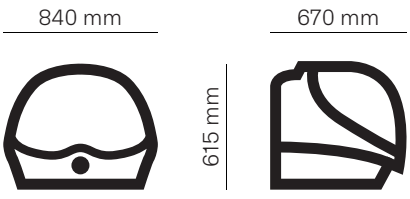
Automatic pre and post dilution.

User-friendly and adaptable software, direct results.

Item	Quantiy	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	Capacitative
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)
Lightpath	6 mm
Wavelengths	340 - 405 - 420 - 520 - 560 - 600 - 620 - 635 - 670 nm (1 additional filter can be added by user)
Wavelenght 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 IntelCore 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


HISTAMINE
AOAC
BioSystems

99674
BioS/10-24

BioSystems S.A.
Costa Brava 30, 08030 Barcelona (Spain)
t. +34 933 110 000
www.biosystems.global
foodbeverage@biosystems.global