



INSTRUMENTS & DIAGNOSTICS

BPC BIOSED designs, develops, manufactures and markets all automated analyzers included in this catalog. After years working in the wine sector with national and international OEM dealers, we decided to directly distribute our products and be a solid point of reference in the wine field. Our analysers have all the requirements requested by the wine industry. **PRECISION - RELIABILITY - THROUGHPUT - COMPETITIVE PRICE**, are the qualities of our instruments which together with an extreme versatility and a complete line of reagents make our Company the best response to an increasingly demanding and constantly evolving market.

ACCURACY AND SIMPLICITY FOR THE WINE INDUSTRY





D-GLUCOSE / D-FRUCTOSE

Wine, Food and Beverage

Enzymatic Method for determination of Glucose and Fructose

NOTES - The test performed establishes exactly the right time for harvest, in addition lets you know the alcohol content achieved. Excellent also for the other phases of the winemaking and analysis of sweet products excluding the determination of R3 you only get the Glucose result and vice versa!

KEY NOTES: HIGH STABILITY, READY TO USE , HIGH LINEARITY(0-300g/L)
DETECTABILITY FROM 0,01g/L TO 300g/L IN AUTOMATION

PACKAGE: R1 1x40 ml R2 1x10 ml R3 1x10 ml Std 3x5 ml 3-30-150 g/L

SACCHAROSE

Wine, Food and Beverage

Enzymatic Method for determination of Saccharose

NOTES - Wine may contain glucose and fructose (reducing sugars natural constituents of grapes) and sucrose (non-reducing sugar added on purpose to increase the alcohol content.

KEY NOTES: HIGH STABILITY, READY TO USE , INVERTASE IN ROUTINE OF 10' - ANALYTIC RESULTS ONLY IN 10 MINUTES!

PACKAGE: R1 1x40 ml R2 1x10 ml R3 1x10 ml Invertase Std 1x5 ml 3 g/L

D-GLUCONIC ACID

Wine, Food and Beverage

Enzymatic Method for determination of Gluconic Acid

NOTES - D-Gluconic Acid through NADPH, generates a measurable reaction by spectrophotometry. This test reveals the level of deterioration or health status of sample.

KEY NOTES: HIGH STABILITY, READY TO USE AS TRIAGENT AVAILABLE BPC CONTROL

PACKAGE: R1: 1x50 ml R2: 1x1 ml R3: 1x1 ml

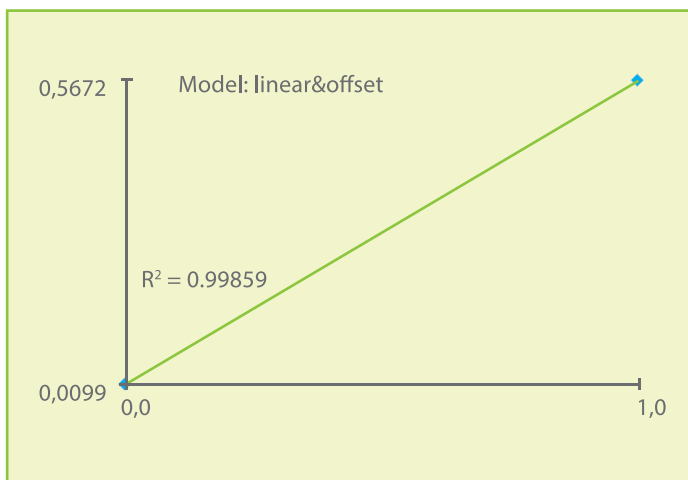
ACETIC ACID

Wine, Food and Beverage

Enzymatic Method for determination of Acetic Acid - LIQUID STABLE

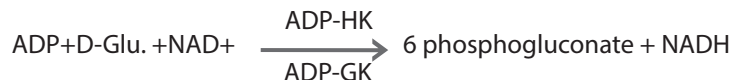
NOTES - Acetic acid is an organic chemical compound, better known to give the vinegar, with its characteristic sour taste and its pungent odor. Formed during malolactic fermentation is due to the degradation of citric acid by lactic acid bacteria. The abnormally high values of volatile acidity are due, however, to the intervention of the anaerobic lactic acid bacteria, when they decompose the residual sugars, tartaric acid or glycerol. The acid bacteria aerobic also form acetic acid, but by ethanol oxidation.

FIRST POINT		SECOND POINT	
Filter 1	Filter 2	Filter 1	Filter 2
STD 46 0,1564		0,1662	
STD 41 0,1586		0,7257	



ACETIC ACID g/L					
GLOBAL				OFFICIAL METHOD ACETIC ACID	
TEST 1	TEST 2	TEST 3	AVERAGE	OIV-MA-AS313-02 R2009	AV
0,18	0,19	0,18	0,183	0,22	0,04
0,22	0,24	0,21	0,223	0,26	0,04
0,19	0,19	0,17	0,183	0,21	0,03
0,20	0,21	0,22	0,210	0,25	0,04
0,14	0,15	0,14	0,143	0,17	0,03
0,13	0,10	0,11	0,113	0,13	0,02
0,17	0,20	0,18	0,183	0,20	0,02

PRINCIPLE:



The increase in NADH concentration is measured at 340 nm and is the basis for calculation of acetic acid concentration in the sample.

KEY NOTES:

LINEARITY UP TO 1 g/L

NO DECOLOURIZATION REQUIRED

MEASURING RANGE FROM DETECTION LIMIT
0,07 g/L TO LINEARITY LIMIT

NEW PACKAGING BIREAGENT:

R1: 1x40 R2: 1x10

Standard 1x5 ml value 1g/L



L- MALIC ACID

Wine, food and beverage

Enzymatic Method for determination of L-Malic Acid - Liquid stable

NOTES - The test of Malic acid is necessary for the evaluation of the malolactic fermentation!

KEY NOTES: DETECTABILITY 0,002 g/L

PACKAGE: R1 1x30 ml R2 1x10 ml R3 1x10 ml
Standard included

L- LACTIC ACID

Wine, food and beverage

Enzymatic Method for determination of L-Lactic Acid - Liquid stable

NOTES - The follow up of malolactic.

KEY NOTES: STABLE IN TIME

NEW PACKAGING: R1: 1x40 ml R2: 1x10 ml
Std included

D- LACTIC ACID

Wine, Food and Beverage

Enzymatic Method for determination of D-Lactic Acid - Liquid stable

NOTES - The test of D-lactic acid for the determination of bacterial flora able to stop the fermentation and convert sugars in D-Lactic. Values up 0.3 g/L indicate problems...

KEY NOTES: HIGH STABILITY, HIGH NUMBER OF TESTS, READY TO USE

PACKAGE: R1 1x40 ml R2 1x10 ml Std Included

Malic - Acid g/l

Global					Official Method	OIV Method Std deviation
test 1	test 2	test 3	Average	Std Deviation	OIV-MA-AS313-11	
0,72	0,70	0,69	0,703	0,015	0,76	0,06
0,66	0,65	0,68	0,663	0,015	0,61	0,05
0,19	0,17	0,18	0,180	0,010	0,23	0,05
0,54	0,56	0,57	0,557	0,015	0,52	0,04
1,10	1,06	1,08	1,080	0,020	1,15	0,07
0,54	0,52	0,53	0,530	0,010	0,50	0,03
0,34	0,30	0,31	0,317	0,021	0,27	0,05

Lactic - Acid g/l

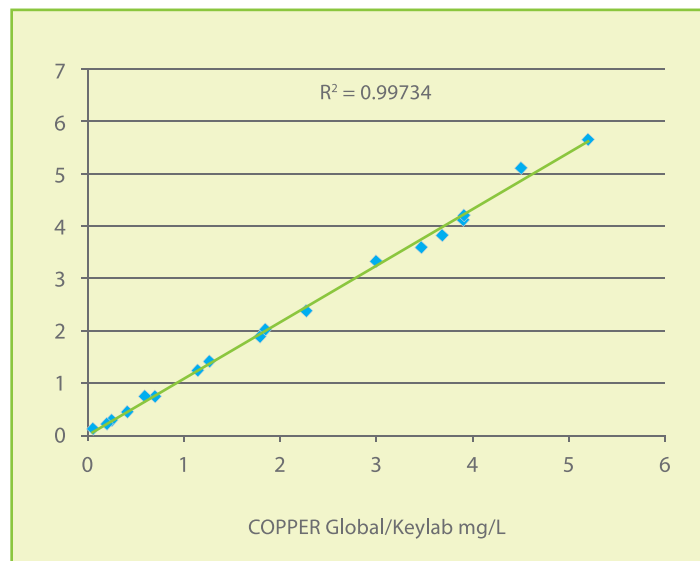
Global					Official Method	OIV Method Std deviation
test 1	test 2	test 3	Average	Std Deviation	OIV-MA-AS313-11	
0,22	0,22	0,21	0,217	0,006	0,26	0,04
0,20	0,22	0,19	0,203	0,015	0,25	0,05
0,66	0,68	0,69	0,677	0,015	0,72	0,04
0,11	0,09	0,09	0,097	0,012	0,13	0,03
0,08	0,09	0,11	0,093	0,015	0,14	0,05
0,18	0,16	0,15	0,163	0,015	0,14	0,02
0,42	0,44	0,40	0,420	0,020	0,37	0,05

COPPER

Wine, Food and Beverage

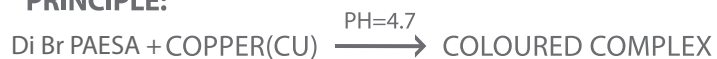
Colorimetric Method for determination of COPPER - Liquid stable

NOTES - The control of copper is crucial to control the amount present in the wine after treatments against downy mildew or added to eliminate odors caused by mold. During fermentation can also find values of 6 mg/L, these values are set to fall in the pre-bottling up to 0,2 mg/L in whites wine and 0,4 mg/L in reds wine. Legal limit 1mg/L.



COPPER AGAINST ATOMIC ABSORPTION

PRINCIPLE:



KEY NOTES:

DETECTABILITY 0,10 mg/L

READY TO USE

HIGH STABILITY UP TO EXPIRATION DATE

PACKAGE:

R1: 2x50 ml R2: 1x10 ml Standard 1x 5 ml 1,6 mg/L



COLOR KIT

Wine, Food and Beverage

Colorimetric Method for determination of Intensity and color point - Liquid stable

NOTES - The absorbance at 420, 520 and 620 nm allows the determination of color intensity easily and at low cost, with automatic process at pH controlled.

KEY NOTES: HIGH SPEED RESPONSE (120"), READY TO USE, END POINT AND CALIBRATION AGAINST FACTOR

PACKAGE: R1: 3X50 ml

ANTOCYANS

Wine, Food and Beverage

Colorimetric Method for determination of Antocyanins - Liquid stable

NOTES - In countries with hundreds of grape varieties, for the winemaker is essential to know and appreciate the specific characteristics of the raw material. Normally, the test of total anthocyanin in grapes, progresses towards maturity. However, there are cases where it is even more important to the 'timely analysis (48 hours) where you have to stop the accumulation and even collapse of the concentrations in the final stage of maturation (especially in hot climates) ...

KEY NOTES: READY TO USE, HIGH NUMBER OF TESTS! LOWER COST OF ANALYSIS

PACKAGE: R1: 5x40 ml

CATECHINS

Wine, Food and Beverage

Colorimetric Method for determination of Catechins - Liquid stable

NOTES - The catechins are colorless compounds that oxidize easily and give rise to the browning of the wine, characteristic very important for the quality of product.

KEY NOTES: HIGH STABILITY, HIGH NUMBER OF TESTS, READY TO USE

PACKAGE: R1: 2X45 ml R2: 2X15 ml R3: BLANK NOT USED STANDARD INCLUDED

PH

Wine, Food and Beverage

Colorimetric Method for determination of PH

NOTES - The PH value of wine is related to the nature and degree of dissociation of the acids present and their combinations with the basics. Is an index of actual acidity, unlike the total acidity, which represents treatable acidity. It's a parameter which undergoes changes during the different stages of vinification and conservation. *The pH of the musts varies from 2.8 to 3.6.*

KNOWLEDGE OF PH IN THE WINE:

INFLUENCE COLOR AND SHADES OF COLOR, ESPECIALLY RED WINES.

INFLUENCE TASTE.

INFLUENCE PROTEIN CLARIFICATIONS.

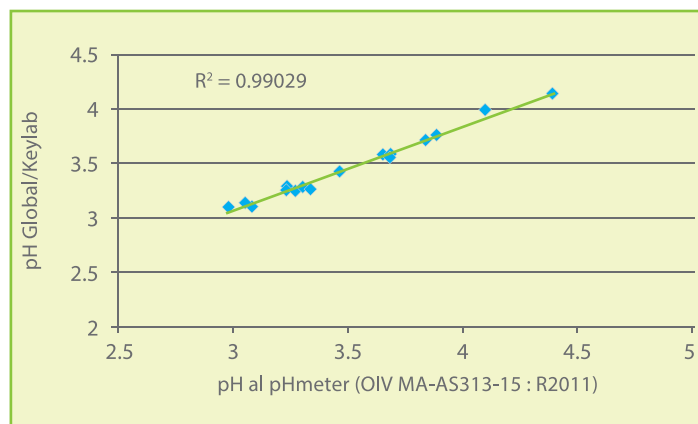
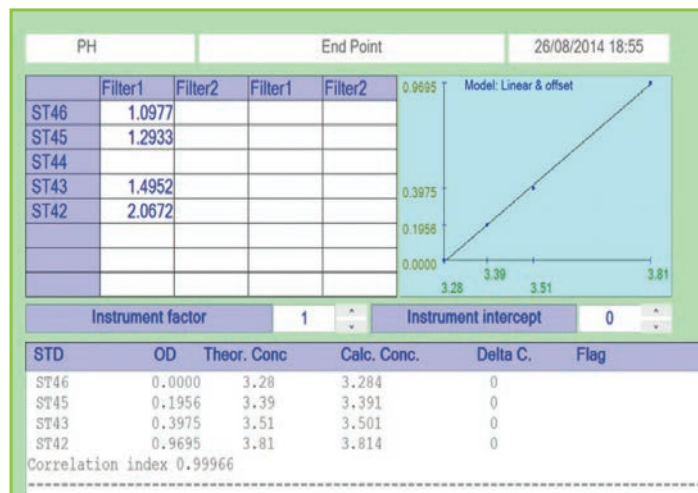
INFLUENCE THE ANTISEPTIC ACTIVITY OF SO₂.

INFLUENCE BACTERIAL RESISTANCE.

PRINCIPLE:

The color of Bromophenol Blue changes from yellow to blue between pH 3.0 and pH 5.0.

This property is used to determine the pH of wines by measuring the intensity of the blue color at 570/580 nm of a mixture of wine and Bromophenol Blue.



ANALYSIS EXECUTED THROUGH PH METHOD HAVE BEEN COMPARED AND CORRELATED WITH THE VALUES DETERMINED BY GLOBAL 240 AND KEYLAB ANALYZERS.

PACKAGE:

R1: 1x100 ml R2: 1x3 ml Standard 1x5 ml 1,0 g/L



CALCIUM

Wine, Food and Beverage

Colorimetric Method for determination of CALCIUM

NOTES - The calcium content in wine is limited, depending on the pH and the alcoholic strength of the indissolubility of calcium tartrate. White wines contain from 80 to 140 mg/L of calcium. Their higher content in acid dissolves the calcium in most of the red wines. Calcium has an important function in the wines, ensures the precipitation of colloids, particularly ferric phosphate and the colloid formed by the action of tannin on wine jellies.

KEY NOTES: HIGH SPEED RESPONSE (120"), MONO LIQUID REAGENT, HIGH NUMBER OF TEST EXECUTABLE IN AUTOMATION, LOWER COST OF ANALYSIS.

PACKAGE: R1: 4x50 ml Standard included

IRON

Wine, Food and Beverage

Colorimetric Method for determination of IRON - Liquid stable

NOTES - The value of iron present in wine can be given from the soil absorbed by the itself plant or by dirty machinery/containers used for the production phase. Control of this metal becomes fundamental to prevent turbidity (ferric class) in the finished product and do not exceed the legal limits of 10 mg/L.

KEY NOTES: HIGH SPEED RESPONSE (120"), MONO LIQUID REAGENT, HIGH NUMBER OF TEST EXECUTABLE IN AUTOMATION,

PACKAGE: R1: 4x50 ml Standard included

ZINC

Wine, Food and Beverage

Colorimetric Method for determination of ZINC - Liquid stable

NOTES - Zinc is an oligomer important for the metabolism of the plant. Naturally present in grapes for root absorption, the average content in wine varies from 0,2 to 3.0 mg/L. The further increase could result from pesticide treatments based on dithiocarbamates or by contact with the metal alloy of equipment..

KEY NOTES: STABLE UNTIL EXPIRATION DATE, LOWER COST OF TEST, TESTED AGAINST ATOMIC ABSORPTION (AA)

PACKAGE: R1: 2x16 ml R2: 1x8 ml Standard included

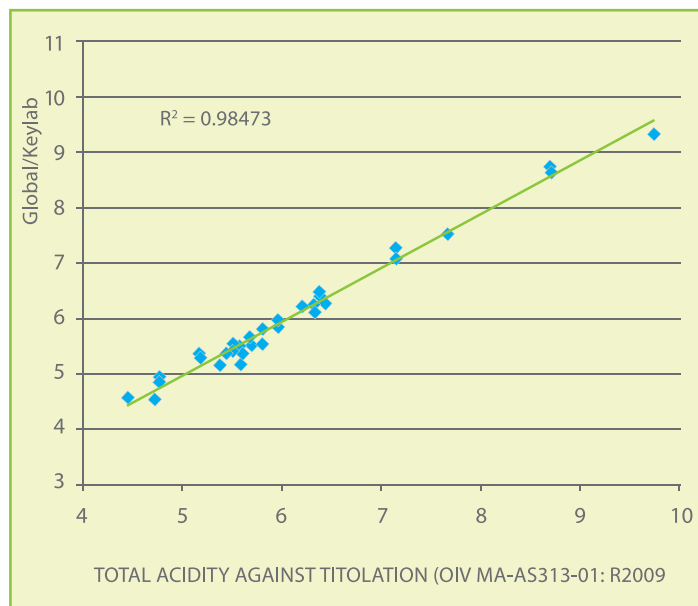
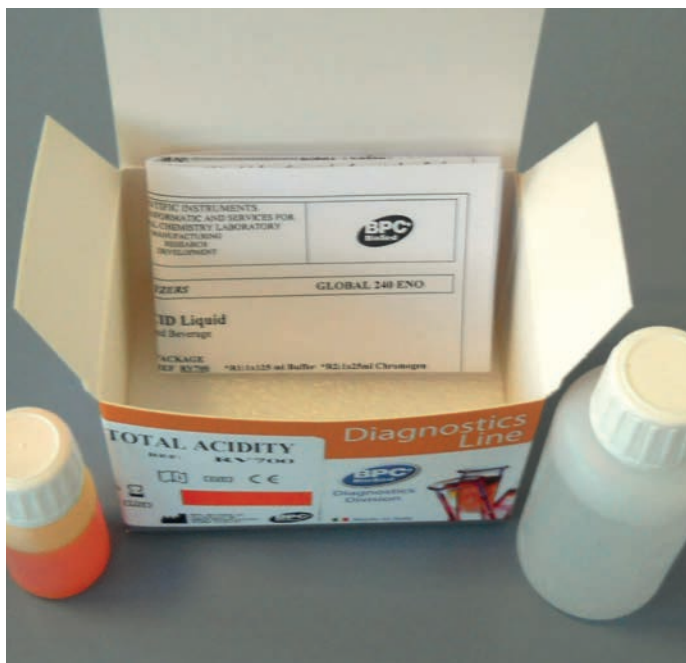


TOTAL ACIDITY

Wine, Food and Beverage

Colorimetric Method for determination of TOTAL ACIDITY - Liquid stable

NOTES - The 'Total Acidity' of wine is the sum of its titratable acidities when you bring the pH to 7 by the addition of a standard alkaline solution. In fact the wine contains fixed acids (tartaric, malic, succinic, lactic, citric acid) and volatile acids (which can be removed by boiling, such as acetic acid): the total acidity takes account of both types, and does not include the acid derived from CO₂ and SO₂. The acidity of the wine is linked to its alcohol content and the amount of sugar present in it.



KNOWLEDGE OF TOTAL ACIDITY IN THE WINE:
TO PREVENT DISEASES FROM BACTERIA
AND GIVE BODY TO THE WINE.

PRINCIPLE:

By mixing sample with a buffer pH 8 at the H⁺ concentration grow and the chromogen, Bromocresol purple, change its color. The color changes in an exponential way the H⁺ concentration.

PACKAGE:

R1: 1x125 ml R2: 1x25 ml



GLYCEROL

Wine, Food and Beverage

Colorimetric Method for determination of GLYCEROL - Liquid stable

NOTES - Quality index of the final product, as it makes the wine tasting tasty and agreeable.

KEY NOTES: ACCURATE RESULTS IN SHORT TIME, MONO LIQUID REAGENT, HIGH NUMBER OF TEST EXECUTABLE IN AUTOMATION.

PRINCIPLE: Glycerol is phosphorylated by glycerolphosphate dehydrogenase (GPO) and ATP in presence of Glycerol Kinase (GK) producing Glycerol-3-phosphate (G3P) and Adenosin-5-diphosphate (ADP). G3P is then converted in Dihydroxiacetone phosphate (DAP) and Hydrogen Peroxyde (H₂O₂) by GPO. At the end (H₂O₂) reacts with 4-aminophenazone and p-chlorophenol producing a red color whose ABS is proportional to Glycerol concentration in the sample.

PACKAGE: R1: 1x50 ml Standard included

TARTARIC STABILITY

IMPORTANT TO DETERMINE THE TARTARIC STABILITY OF WINES

The **TARTARIC** stabilization of wines is an issue which all the wineries must deal because it plays an important role in the wine consumption. In fact if both **POTASSIUM** and Tartaric acid are present in grapes separately, and does not give rise to precipitation phenomena, from the time of crushing grapes they are present together in the same solution, giving rise to conditions of supersaturation in the wort. Their concentration is not substantially modified by the activity of yeasts and then during the fermentation and storage, give rise to obvious phenomena of precipitation of potassium bitartrate.

POTASSIUM

Wine, food and beverage

Enzymatic Method for determination of POTASSIUM

KEY NOTES: ENZYMATIC TEST AND NOTURBIDIMETRIC, MUCH MORE PRECISE AND STABLE

PACKAGE: R1: 4x20 ml R2: 4X20 ml PK Powder
R3: 2X8,5 ml LDH Standard included

TARTARIC ACID

Wine, food and beverage

Colorimetric Method for determination of TARTARIC ACID

PRINCIPLE: Tartaric Acid may be determined in acid environment. In the presence of vanadic acid, this optimized method gives a chromogenic complex, proportional to the concentration of Tartaric acid in the sample, at this wavelength

PACKAGE: R1: 2x40 ml R1: 2x40 ml R1: 2x80 ml
Standard included



TOTAL POLYPHENOLS

Wine, Food and Beverage

Colorimetric Method for determination of POLYPHENOLS - Liquid stable

NOTES - The polyphenolic compounds are responsible for important sensory characteristics of the wine, such as color, astringency and bitterness. They are extracted from different parts of the grape during the wine-making and that the distribution of these compounds between skins and seeds can help the winemaker to set optimally red winemaking.



Analysis executed through infrared method have been compared and correlated with the values determined by Global 240 and Keylab analyzers.

POLYPHENOLS			
Wine (rep 5 times)	External Lab Results with OIV Method	Results with Global240 Against Factor	Standard Deviation
1	2,27	2,28	0,01
1	2,27	2,30	0,03
1	2,27	2,29	0,02
1	2,27	2,27	0
1	2,27	2,31	0,04

KEY NOTES:

HIGH NUMBER OF TESTS OBTAINED

HIGH STABILITY ON BOARD, SO AS TO WORK AGAINST FACTOR

STABLE AND READY TO USE

PRINCIPLE:

Polyphenols react in basic environment with Folin Reagent optimized and modified. The chromogenic complex is proportional to the concentration of Polyphenols in the sample, at this wavelength.

PACKAGE:

R1: 2x80 ml R2: 1x80 ml R3: Washing Solution
Standard included



CITRIC ACID

Wine, Food and Beverage

Colorimetric Method for determination of CITRIC ACID

NOTES - The CITRIC ACID is used to prevent oxidation of the ferric casse and make the taste of the product fresher and more agreeable.

KEY NOTES: SPECIFIC TEST, INTERFERENCES ARE NOT KNOWN.

PRINCIPLE: The Citric acid is changed in oxaloacetate and acetate by CL (citrate lyase). This reaction is helped by a secondary one, who transforms the oxaloacetate originated before (and its decarboxylase product, pyruvate) in the presence of LDH (lactate dehydrogenase), MDH (malate dehydrogenase) and NADH. The intensity of the UV- colour at this wavelength is proportional to the concentration of Citric acid in the tested sample.

PACKAGE: R1: 2x100 ml R2: 5x20 LYO ml R3: 5x0,5 LYO ml

APA (PAN+AMMONIA)

THE INSTRUMENT THROUGH A CALCULATED METHOD WILL PROVIDE AUTOMATICALLY RESULTS OF APA AS WELL AS PAN AND AMMONIA SEPARATELY

Readily assimilable, nitrogen (APA) is a fundamental parameter for the proper conduct of the alcoholic fermentation. It consists of two contributions: the inorganic nitrogen present in the must as ammonium ion (NH_4^+) and organic nitrogen constituted by nitrogen at-amine of the amino acids. (PAN+AMMONIA).

PAN

Wine, food and beverage

Enzymatic Method for determination of PRIMARY AMINO NITROGEN

PACKAGE: R1: 12x5 Tablets R2: 1X1,3 ml
Standard included

AMMONIA

Wine, food and beverage

Enzymatic Method for determination of AMMONIUM

PACKAGE: R1: 12x5 Tablets R2: 1x6,5 ml
Standard included

KEY NOTES: VERY GOOD DETECTABILITY UP TO 1MG/L, STABLE, STANDARD INCLUDED

SULFITES

TOTAL SULFITES

Wine, Food and Beverage

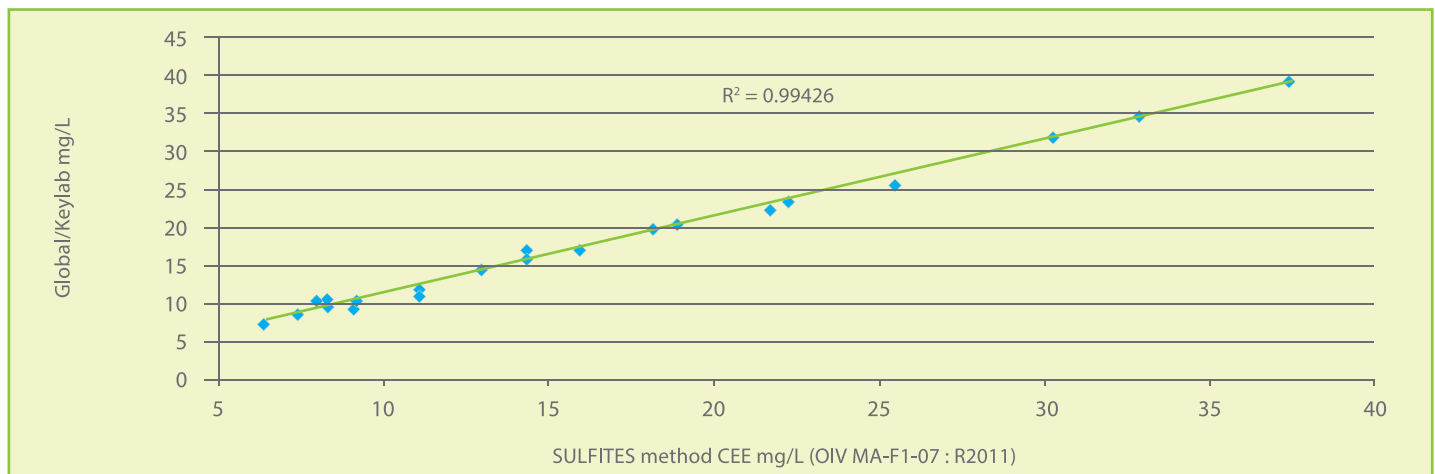
Colorimetric Method for determination of TOTAL SULFITES - Liquid stable

FREE SULFITES

Wine, Food and Beverage

Colorimetric Method for determination of FREE SULFITES

NOTES - Although this is an additive with strong antiseptic qualities, is still the preservative of wine per excellence of yeast and bacteria and is also an antioxidant. L'anhydrite sulfur in wine is present in free and total form!



KEY NOTES:

HIGH STABILITY ON BOARD
PRECISE AND STABLE
HIGH LINEARITY ≥ 250 mg/L
BI REAGENT READY TO USE

PACKAGE: R1:1x50 ml R2:1x50 ml Standard included

KEY NOTES:

HIGH LINEARITY ≥ 150 mg/L

PACKAGE:

R1: 4x20 ml R2: 4x20 PK Powder
R3: 2x8,5 ml LDH Standard included



KEYLAB AUTOMATIC ANALYZER

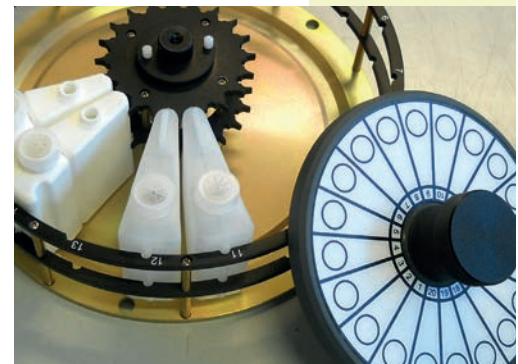
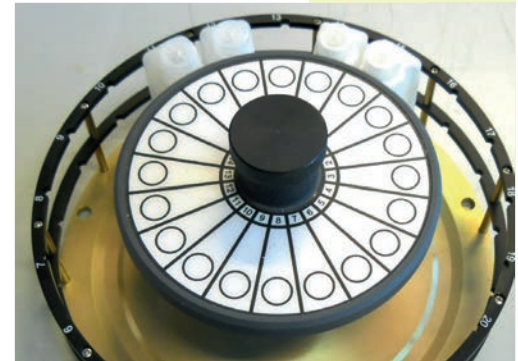
BASIC FEATURES

- Bench top analyzer
- Operation Mode: Random Access, STAT priority, Walk Away analyzer
- Open system with up to 40 programmable methods, either chemistry tests that immuno turbidimetric tests
- Calculation type: End Point - Kinetic - Initial Rate - Bichromatic - Differential - Serum Blank
- 216 Reaction Wells
- Printout: Sample Report, Sorted by Sample, Sorted by Test
- Samples Tray: 70 sample positions
- Automatic dilution: out of range samples can be diluted and repeated
- Reagents Tray: up to 20 reagents on line refrigerated
- Multipoint Calibration (2 to 6 calibrators)
- Up to 3 reagents for single test
- Carry Over: 1% (With 500 µl Reaction Volume)
- Built In Thermal Printer



TECHNICAL SPECIFICATIONS

- Flow cell 50 µl with stainless steel body (optical phase 1 cm)
- Flow cell temperature: 37°C ± 0.1° c by Peltier
- Pre Aligned Halogen Lamp
- Photometer: 6 Interference Filters: 340-405-420-520-546-570-620 nm + 1 free position
- Resolution: 0,0001 Abs
- Accuracy: Better than 1%
- Serial Port RS232C
- USB Port for archive of patients and methods
- Dimensions: 58 (W) x 60 (D) x 73 (H) cm
- Weight: 38 Kg



GLOBAL 240 AUTOMATIC ANALYZER



BASIC FEATURES

SAMPLES

- 40 sample positions for cups and primary tubes
- Sampling probe equipped with level sensor detector
- Automatic identification via barcode

REAGENTS

- Up to 60 reagents refrigerated by Peltier
- Packs of reagents with barcode
- Pre-heating of refrigerated reagents

REACTION SYSTEM

- 50 long lasting cuvettes washable and reusable
- Temperature of cuvettes electronically controlled and stabilized at $37^{\circ}\text{C} \pm 0.1^{\circ}\text{C}$
- Zero setting of each cuvette before use
- Automatic washing station with low consumption of water and washing solution

PHOTOMETER

- Halogen lamp 6V/20W, lifespan 2000 hours
- 9 interference filters: 340-405-420-450-505-520-546-570-620 nm
- Multi-readings at different wavelength every 40 ms
- Transmission of light through optical fiber

SOFTWARE

- Control software running under any Windows OS
- Display of calibration curve in real-time
- Graphical User Interface optimized for touch screen application

SPECIFICATIONS

- Data transmission: via Serial port RS232C (USB port on request)
- Line voltage: 115/230 vac $\pm 6\%$ - Frequency 50/60hz -
- Dimensions: 79 (W) x 58 (D) x 54 (H) cm
- Weight: 58 Kg



BPC BioSed Srl was founded in 1986 as a company of import & distribution of analytic products for laboratory of Clinical Chemistry. The immediate success into market penetration due to the quality of proposed products and the professionalism of operators pushed the Company to produce directly products for sale. Electa, the first system born from this experience, obtained immediately a great success worldwide, thanks to its technical solutions and its operative throughput. Year by year BPC developed its technology focused on the production of reliable automatic analyzers, with high added value, sold worldwide through local distributors. The Instrument Division, flanked by the Diagnostic Division, supported by skilled specialists, allow us to offer an analytic system extremely valid and continuously evolving. In a framework of continuous research and business diversification, after a pluriannual experience as OEM manufacturer of Enological systems, by attending among others to international specific events, today we are a market reality and a reference for the wine industry operators. Our target is to offer, through a continuous R&D, equipment more reliable and efficient, designed to simplify and speed up the work in the laboratory.



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