CDROxiTester

Analysis system for olive oil quality control

CDR OxiTester system

CDR OxiTester consists of a thermostatically controlled analyser with photometric technology using LED emitters and kits of reagents that are pre-filled into vials and ready to use.

1

Take the sample
to be analysed using the pipettes supplied with the system.

2

Place the sample
in the test tube containing the pre-filled reagent.

3

Insert the test tube
into the reading cell to obtain the analysis result.

Reduced analysis times

With CDR OxiTester you are finally free to carry out the analyses independently, in your own oil mill , quickly and easily, without having to rely on an external laboratory. In fact, it is possible to analyse **16 samples simultaneously** and constantly monitor the production process, obtaining specific and precise answers in a few minutes.

Easy to use

The system has been designed so that it can be used not only in the laboratory, but also on the production line for real-time results, by personnel without specific technical training.
The analysis methods, shown on the display, are simpler than traditional methods and can be performed in just a few steps.
If required, the HELP function will guide the operator step by step through the procedure. The result is automatically calculated, displayed and printed out.

Reliable

CDR OxiTester guarantees high sensitivity, a wide measuring range and excellent repeatability of the results thanks to the innovative photometric technology using LED light sources and fixed wavelengths ranging from the ultraviolet to the visible spectrum (with a range of 0 to 6 optical density). **The analysis results are correlated with those of the reference methods.**

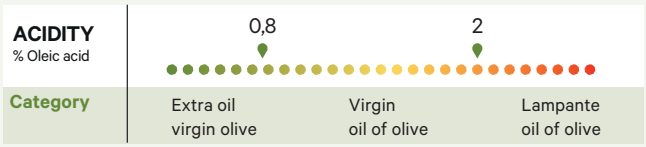
Pre-filled and disposable reagents are packaged in bags of 10 tests, developed and produced by the CDR research laboratories.

CDROxiTester

TEST	Measuring range	Resolution	Repeatability	Test time
Acidity (FFA)	0.03-1.10 % oleic acid	0.01 % oleic acid	0.02 % oleic acid	1 min
	1.0 – 3.5 % oleic acid	0.1 % oleic acid	0.1 % oleic acid	1 min
	1.0 – 13.0 % oleic acid	0.1 % oleic acid	0.2 % oleic acid	1 min
Peroxide	0.30 – 25.00 meqO_2/Kg	0.01 meqO_2/Kg	0.23 meqO_2/Kg	3 mins
	1.0 – 50.0 meqO_2/Kg	0.1 meqO_2/Kg	0.5 meqO_2/Kg	3 mins
Total polyphenols (biophenols)	200 – 1000mg/Kg tyrosol	1 mg/Kg	34 mg/Kg	5 mins
Stability index	9.0-40.0 h	0.1 h	0.8 h	
K270	0.020 – 1.570	0.001	0.03	5 mins
Sugars in olives	0.5 – 50.0 g/L	0.1 g/L	0.3 g/L	6 mins

Acidity (FFA)

The acidity content of an oil is the amount of free fatty acids resulting from hydrolytic rancidity. Acidity (FFA) therefore represents a fundamental index of product quality as well as defining its product classification according to European legislation.

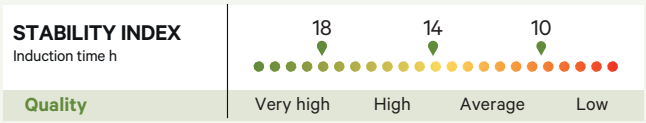


Peroxide value

The peroxide value of an oil indicates its primary oxidation state and thus its tendency to go rancid. The lower the peroxide value, the better the quality of the oil and its state of conservation.

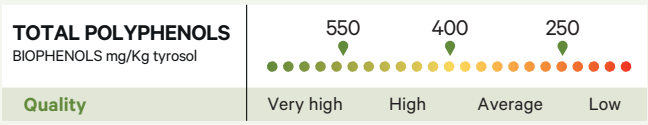
Stability index

Oxidative stability indicates the oil's resistance to oxidation and rancidity, thus determining its ability to last over time.
The CDR OxiTester method is a valid alternative to the Rancimat reference method.
The analysis of the Oxidative Stability is carried out with the CDR OxiTester method indirectly through the analysis of Total Polyphenols, with extremely short times compared to the Rancimat system.



Total Polyphenols

Polyphenols are among the most valuable components of olive oil. They protect the oil from going rancid and also have a powerful antioxidant effect on our bodies.
The amount of polyphenols contained in the oil depends on the type of cultivar, harvest time, soil characteristics and extraction process. The higher the concentration of polyphenols in an oil, the better its organoleptic qualities.



K270

The spectrophotometric reading of the K270 makes it possible to recognise refined oil added to virgin olive oil. Refined oils have significantly higher U.V. absorption values than virgin and extra virgin olive oils.

Sugars in olives

The measurement of glucose and fructose can give important indications on olive ripening. By determining the total amount of fermentable sugars, the sum of glucose and fructose, it is possible to assess the correct period for harvesting olives.

	CDROxiTester	CDROxiTester Jr
		
Analyses	Acidity (FFA), Peroxide Value, Polyphenols/Stability index, K270, Sugars in Olives	Acidity (FFA), Peroxide Value, Total Polyphenols (optional), Stability index (optional)
Samples that can be analysed simultaneously	16	3
Multitasking Mode	Yes	No
Calibration	Pre-calibrated No periodic calibration is necessary	Pre-calibrated No periodic calibration is necessary
Maintenance costs	No	No
Storage of results	Sufficient internal memory for storing thousands of analysis results in CVS and XML files compatible with all database formats (e.g., XLS, SQL)	Sufficient internal memory for storing thousands of analysis results in CVS and XML files compatible with all database formats (e.g., XLS, SQL)
Photometric module	Up to 6 wavelengths in 4 reading cells	Up to 6 wavelengths in 4 reading cells
Incubation module	37 ° C thermostated block with 16 positions	37°C thermostated reading block with 3 positions with incubation function
Connection with barcode and QR code scanners	Yes, via Bluetooth	No
Display	5.7” TFT colour LCD with touch screen	4.3” TFT colour LCD with touch screen
Connectivity	1 USB port type B for transferring the performed analysis database, configuration and software update, PC connection 1 USB port type A for technical service and computer connection 1 Ethernet port (LAN) for connection to intranet Bluetooth 4.0	1 USB port type B for transferring the performed analysis database, configuration and software update, PC connection Bluetooth 2.1
Printer	80 mm wide printer with integrated graphics	Wireless connection for external printer
Dimensions and weight	32 x 29.5 x 13 cm (W x D x H) 2.80 kg	15 x 22 x 8,3 cm (W x D x H) 0,80 Kg
Power supply	24 V	24 V or optional lithium-ion battery

CDROxiTester Jr

Portable Model with lithium battery powered, bluetooth printer and rigid carrying case.

rev 7.0

CDROxiTester

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