



PALMOILTester

Palm Oil



www.Quartz-Analytics.com

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Buyer's Guide

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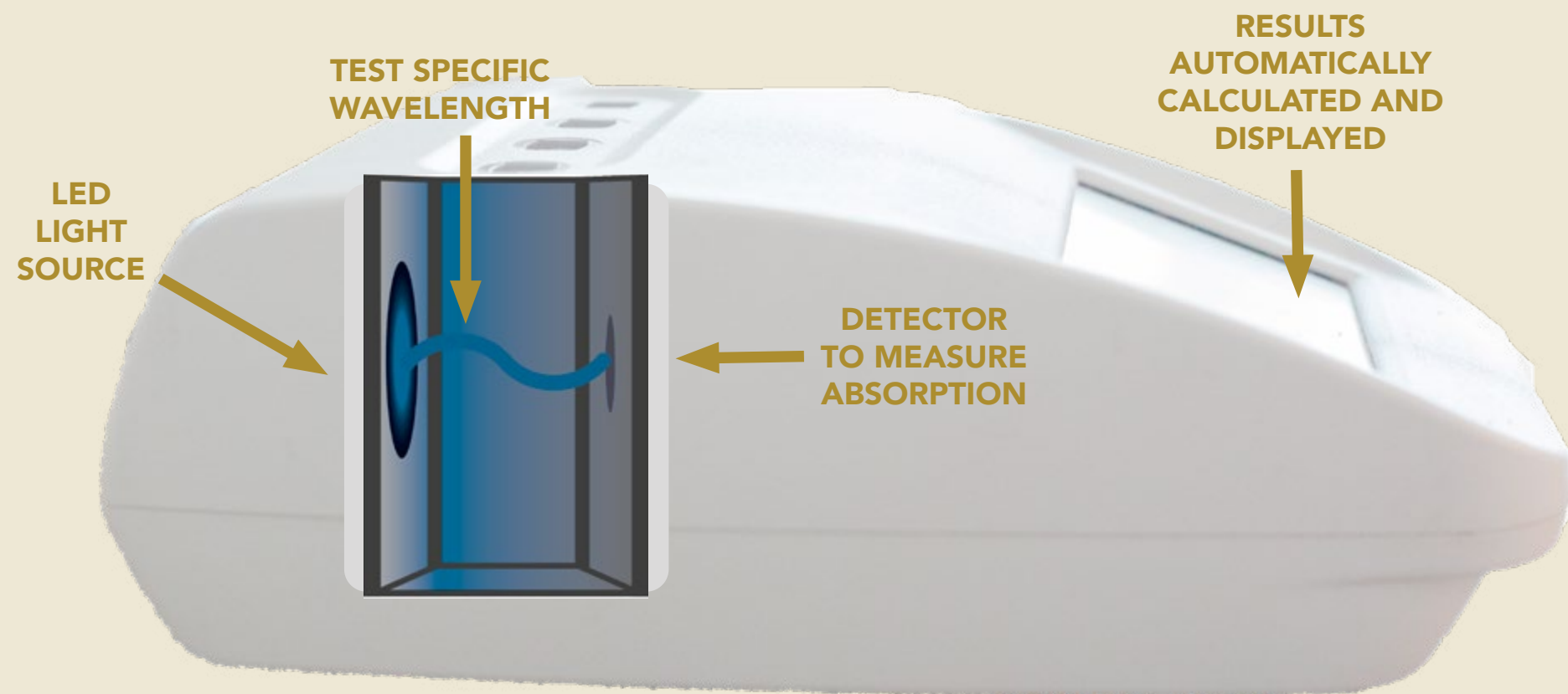
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Visit our website: www.quartz-analytics.com or contact us at orders@quartz-analytics.com

HOW THE PALMOIL Tester WORKS

The CDR FoodLab® line analyzers are pre-calibrated, easy to use photometers that utilize pre-filled reagent kits and LED technology in order to simplify the testing process of many foods and beverages.



Easy to Use

The analysis methods of the CDR FoodLab® are easier than the traditional, official methods and can be performed in a few steps. Thanks to this design, the CDR FoodLab® is not only to be used in a laboratory, but also real time in the processing plant by staff with no previous lab experience. The analyzers feature touch screen technology and step-by-step directions through the testing process.



Reliable

The CDR FoodLab® system and its calibrations, which are correlated to the standard methods, guarantees high sensitivity, a wide measuring range, and excellent repeatability of test results due to its photometric technology utilizing LEDs.

Minimal Prep

Thanks to CDR's pre-filled reagent kits, there is no mixing of chemicals, cleaning of glassware, or exposure to highly toxic chemicals. The reagents come pre-filled and ready to use in specialized kits for each test.



Reduced Testing Times

The CDR FoodLab® line allows you to get accurate, reliable results within minutes.

Stay Up to Date

The CDR FoodLab® line utilizes state of the art technology and allows one to stay up-to-date with remote calibration checks, periodic software updates, the ability to store thousands of results, and export results to a computer.



PALMOIL Tester

CONFIGURATIONS

222003Z01* **\$7,020⁰⁰**

PALM OIL

Free Fatty Acid
Peroxide Value
p. Anisidine Value

Iodine Value
DOBI/Carotene

*Reagent Kits are NOT Included with Analyzer



Analyzer Specs

- 5.7" TFT color LCD touchscreen
- 2 USB 2.0 ports to transfer database of performed tests and update configuration and software
- USB type B port for technical service and PC connection
- Ethernet (LAN) port
- Internal memory to store thousands of results of analyses in CSV and XML files, compatible with all database formats
- 37C/98.6F incubation block with 16 sample prep positions
- Multitasking Mode
- Thermal Printer on board 80mm width

WHAT'S INCLUDED:

- | | | |
|------------------|----------------|------------|
| 1-10uL Pipette | 10uL MiniPet | Power Cord |
| 20-25uL Pipette | 30uL MiniPet | AC Adapter |
| 50-100uL Pipette | MiniPet Tips | Cover |
| 1mL Micropipette | Cuvette Holder | |
| 1mL Pipette Tips | USB Cord | |



PALMOIL Tester

Junior FFA + PV
CONFIGURATIONS

\$4,041⁰⁰

242006Z13-FFAPV*

PALM OIL

Peroxide Value
p. Anisidine Value

Junior Basic
CONFIGURATIONS

\$4,490⁰⁰

242006Z13*

PALM OIL

Free Fatty Acid
Peroxide Value
p. Anisidine Value
Soaps

Junior Palm
CONFIGURATIONS

\$4,790⁰⁰

242006Z13-IOD*

PALM OIL

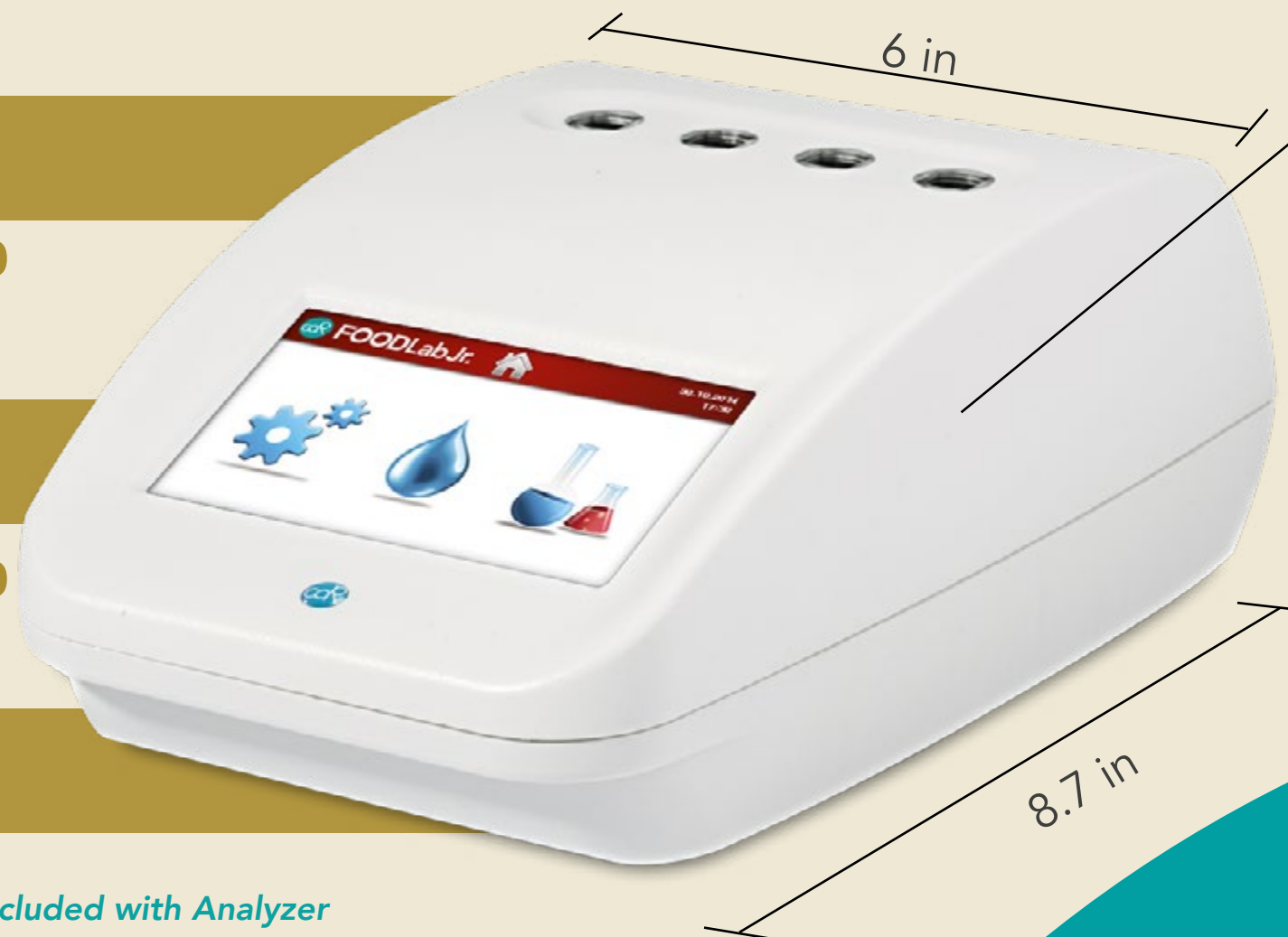
Free Fatty Acid
Peroxide Value
p. Anisidine Value
Soaps
Iodine Value

+ Battery Option \$410

*Reagent Kits are NOT Included with Analyzer

Analyzer Specs

- 4.3" TFT color LCD touchscreen
- 1 USB "B" - Bluetooth 2.1 port
- Internal memory to store thousands of results of analyses in CSV and XML files, compatible with all database formats
- 37C/98.6F incubation block with 3 sample prep positions



WHAT'S INCLUDED:

- | | | |
|------------------|----------------|------------|
| 1-10uL Pipette | 10uL MiniPet | Power Cord |
| 20-25uL Pipette | 30uL MiniPet | AC Adapter |
| 50-100uL Pipette | MiniPet Tips | |
| 1mL Micropipette | Cuvette Holder | |
| 1mL Pipette Tips | USB Cord | |

REAGENT KITS

TEST	MEASURING RANGE	TESTING TIME	SHELF LIFE	STORAGE CONDITIONS	QUANTITY	PART NUMBER	PRICE
FREE FATTY ACID	0.01-12.6% Palmitic Acid 0.01-10.60 % Lauric Acid	1 min	12 months	2-8 C	10 Pre-Filled	300128	\$57.00
					100 Pre-Filled	300125	\$496.00
					100 Bulk	300120	\$354.00
					250 Bulk	300148	\$490.00
PEROXIDE VALUE	0.01-550.0 meqO2/Kg	4 min	12 months	15-25 C	10 Pre-Filled	300154	\$57.00
					100 Pre-Filled	300150	\$496.00
					100 Bulk	300190	\$354.00
					250 Bulk	300161	\$490.00
					10 Pre-Filled	300503	\$128.00
					100 Pre-Filled	300500	\$1,260.00
p. ANISIDINE VALUE	0.5-100.0 AnV	2 min	12 months	2-8 C	100 Bulk	300510	\$1,062.00
					25 Bulk	300109	\$89.00
SOAPS	1-3000 ppm	2 min	12 months	15-25 C	100 Bulk	300108	\$354.00
IODINE VALUE	2-100g/100g	2 min	12 months	-20 C	10 Pre-Filled	300561	\$57.00
					100 Pre-Filled	300560	\$496.00
					100 Bulk	300555	\$354.00
DOBI/CAROTENE	0.1-20 DOBI 0.1-1500.0 ppm	6 min	12 months	15-25 C	100 Bulk	300195	\$295.00



PRE-FILLED VS. BULK

Pre-filled test kits come with the reagent in cuvettes, ready to use. Bulk test kits you fill empty cuvettes with 1mL of pre-mixed bottled reagent. Bulk test kits come with everything you need to fill the cuvettes and test.

SPECIALTY KITS

Unsure if you need a specialty kit?

Contact: support@quartz-analytics.com

KIT	DESCRIPTION	SHELF LIFE	STORAGE CONDITIONS	QUANTITY	PART NUMBER	PRICE
EXTRAFLUID	Extraction solution for chocolates, baked goods, and more	24 Months	15-25 C	100 Tests	300133	\$13.00
DEMULSIFIER	Demulsifier powder used to break emulsions	12 Months	15-25 C	20 Tests	300595	\$65.00
EXTRACTION KIT FLOURS	Extraction solution for flours	12 Months	15-25 C	30 Tests	300136	\$13.00
DILUENT KIT	Dilution for high peroxide and free fatty acid values	24 Months	15-25 C	100 Tests	300129	\$59.00

ACCESSORIES

● Indicates items that come with the CDR PalmOil Tester analyzers

DESCRIPTION	QUANTITY	PART NUMBER	PRICE
● CDR Easy Pipette 1-10uL	1	15000Z01	\$185.00
● CDR Easy Pipette Tips 1-10uL	25	15094	\$25.00
● CDR Easy Pipette 20-25uL	1	15001Z01	\$185.00
● CDR Easy Pipette Tips 20-25uL	25	15093	\$25.00
● CDR Easy Pipette 50-100uL	1	15002Z01	\$185.00
● CDR Easy Pipette Tips 50-100uL	25	15092	\$25.00
● 10uL White Minipet	1	ACF012	\$20.00
● 30uL Purple Minipet	1	ACF033	\$20.00
● Printer Paper	1	AEP143	\$5.00
● Mini Centrifuge	1	222061	\$415.00
● 2.0mL Tubes	100	225246	\$32.00
● Nut Press + Cups	1	OEP18	\$900.00
● ZIP-IQ Centrifuge	1	ZIP-IQ TT	\$635.00
● 15mL Centrifuge Tubes	50	225248	\$35.00
● Opticon PX-20 QR code-Barcode Scanner	1	222084	\$400.00
● Minipet Pipette Tips	1000	ACF058	\$20.00
● 200-1000uL Micropipette	1	ACF080	\$300.00
● 200-1000uL Micropipette Tips	100	225245	\$5.00



TEST PARAMETERS

Free Fatty Acid

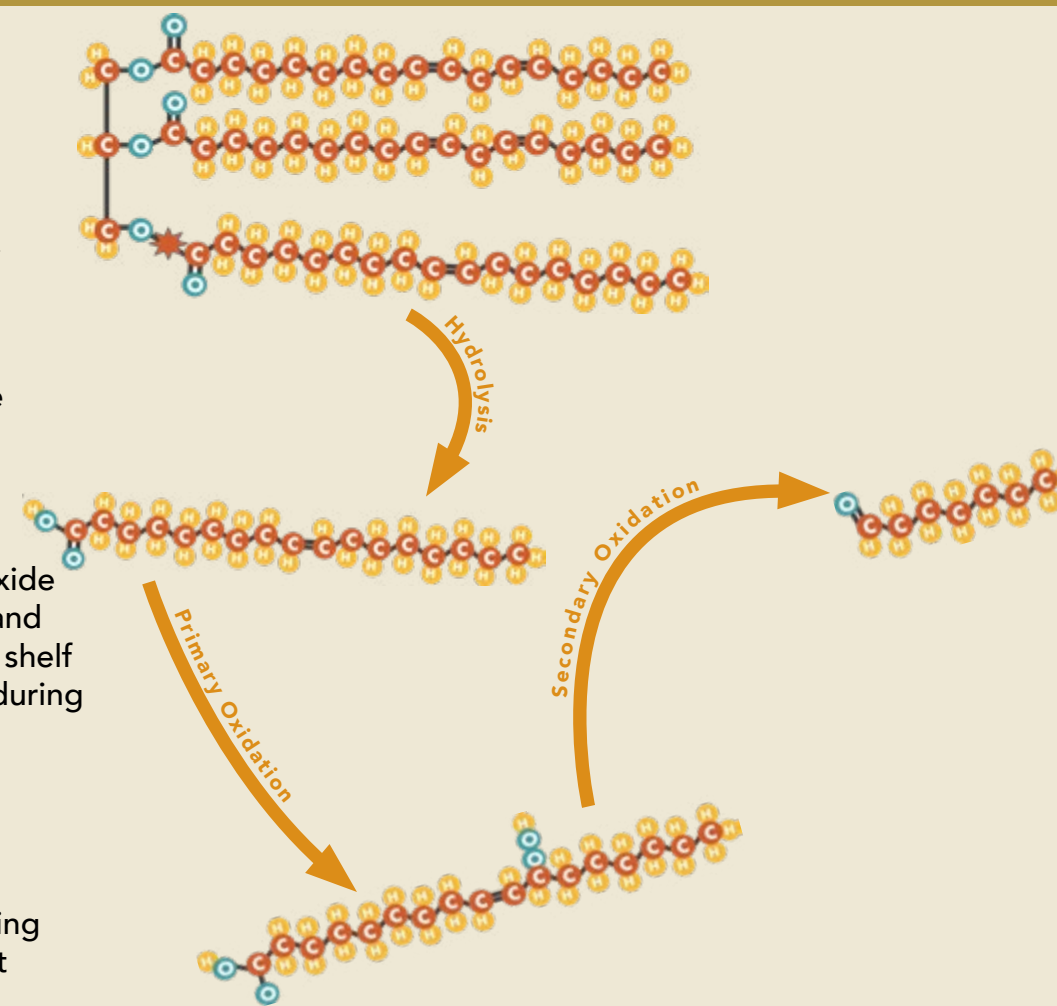
Free Fatty Acids (FFAs) are created when a fatty acid chain is cleaved from its parent fat molecule. The level of FFAs is dependent on temperature, moisture content, and time. They also will vary depending on how the fat/oil is stored, processed, or heated. When fatty acids cleave from their parent molecule and become a FFA, they are much less stable and more prone to oxidation and to turning rancid. Therefore, testing for free fatty acids is beneficial to monitor the health of your frying oil and final product, as foods will absorb FFAs causing excessively oily and discolored food with poor taste and likely a shorter shelf life.

Peroxide Value

Peroxides are a result of primary oxidation in oil and is defined as the amount of peroxide oxygen per 1 kg of fat/oil. Peroxides are very unstable and can easily become rancid and develop into aldehydes. With that being said, peroxides are a key indicator of shorter shelf life, rancid odors, and poor flavor. The free fatty acids that are absorbed by the food during the frying process oxidize into peroxides and shorten shelf life.

Soaps

Soaps are salts of fatty acids obtained from a reaction that occurs between free fatty acids and sodium carbonate. Testing for soaps is a tool to determine the proper cooking oil treatment protocol using Filsorb. If soap levels rise too quickly, it can be a sign that the cooking oil is being treated too late, with too high of a FFA value, at too hot of a temperature, or if there is excessive amounts of moisture in the oil.



p. Anisidine Value

p. Anisidine Value (AnV) is the measure of aldehydes. Aldehydes are a result of secondary oxidation, when the hydroperoxides decompose. These are the compounds that give foods the rancid taste and smell. Testing for p. Anisidine values can give you an overview of the oxidation history of your oil and food products, which can help further pinpoint rancidity issues.

Iodine Value

Iodine Value is the measurement of the degree of unsaturation in palm oil. The higher the iodine value, the more unsaturated fatty acid bonds are present in a fat. As unsaturation increases, the more reactive, less stable, softer, and more susceptible the fat is to oxidation and rancidification, making iodine value an important parameter in process control as well as a quality parameter in traded palm oil products.

DOBI

The deterioration of bleachability index, also known as DOBI, is a quality control analytical parameter which helps indicate palm oil's "fitness for use." The test predicts the ease of refining of crude palm oil and indicates its oxidative status. DOBI is dependent on the quality of the fruit, as well as ripeness, and storage conditions. The higher the DOBI value, the milder the refining conditions, which in turn minimizes free fatty acid formation during deodorization and enables more of the natural antioxidants (tocopherols and tocotrienols) to be preserved in the final refined oil.

Carotene Content

Palm oil is the richest source of natural carotenes. Beta carotene is the reason for palm oil's gold red color and has an array of health benefits for the consumer, making it an important quality control parameter for crude palm oil.

[See how the CDR PALMOIL Tester correlates to the official methods](#)

PRODUCT SUPPORT

To register your PALMOIL Tester Analyzer for the extended 3 year warranty, find software updates, SDS documents, FAQs, procedures, and more, please visit:

www.resources.cdrfoodlab.com



For help or assistance, please email support@quartz-analytics.com or call us at (248) 923 3671

WARRANTY

CDR S.r.l. designs and manufactures its products in compliance with the quality management system under ISO 9001 standards, which envisage constant monitoring of the product through all the production stages.

Warning: OBLIGATION TO READ THE USER'S MANUAL: at the time of delivery of the goods the final customer must read the user's manual, to avoid damages at the product.

General warranty conditions:

- CDR declares to the original purchaser that each product manufactured and/or sold by CDR shall be free from defects in material workmanship and, under normal and proper use conditions, warrants it for a period of 12 months from the invoice date or 36 months if you have registered your analyzer. If you want to extend the warranty period to 36 months register your CDR Analysis System and upload a copy of your invoice.
- CDR's obligation is limited to repairing, replacing or modifying (at CDR's undisputed judgment) at CDR's factory - or elsewhere - the material whose defects have been verified, on condition that the Purchaser has informed CDR of any defects found within 8 days from receipt of the product or from discovery in case of defects which may not be identified in the normal inspection.
- Damages caused by or connected to transport are excluded. Transport to and from CDR's Factory will be at purchaser's charge and risk and shall be paid also for reshipment.
- This warranty certificate does not cover those parts which deteriorate or which are considered consumables or those parts or items which by their nature are normally required to be replaced periodically consistent with normal maintenance (including without limitation lamps, cuvettes and caps).
- Those instruments or accessories, which are supplied by CDR but are not of CDR manufacture will only benefit from the warranty conditions offered by the manufacturer.
- It's also understood that, following the purchase and delivery of the product, the purchaser shall be deemed liable for any losses, damages or complaints concerning persons or things incurred by the use or misuse of the instrument on behalf of the purchaser, his employees, co-operators or others.
- CDR does not assume any obligation or warranty engagement concerning precision and/or accuracy of the measurements as well as for any damage to the instrument directly or indirectly resulting from the use of reagents and/or consumables different from those produced by CDR specifically for its own instruments on the same properly tested.

To activate the warranty is necessary to register your CDR Analysis System and upload a copy of your invoice.