

CDR**FoodLab**®

Fats & Oils Buyer's Guide



Find Out More:

www.Quartz-Analytics.com

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
Product Support

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FOODLab   CDR

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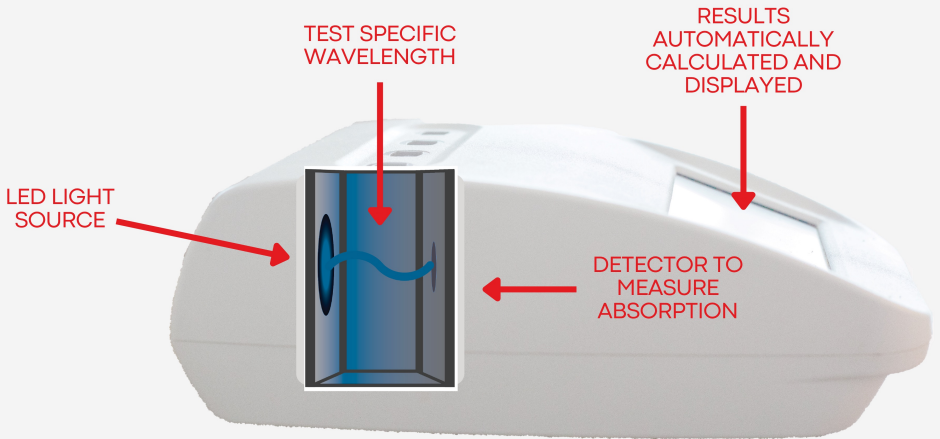
Avvicinare la pipetta e prelevare con
area 5 µl di campione.
Per azionare la pipetta: prelevare il
campione con la pipetta e rilasciarlo
su carta assorbente, ripetere
l'operazione 2-3 volte.

08 Nov 2021 18:29



HOW IT 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.



Download full user manual here:

CDRFoodLab®



CDRFoodLab® Jr



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® allows you to get accurate, reliable results within minutes.



Stay Up to Date

The CDR FoodLab® 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.

Analyzer Options

CDRFoodLab®



What's Included

- Micropipettes
- Cuvette Holder
- USB Cord
- Power Cord
- Cover

CDR FoodLab® Top | PN: **222003Z01**

\$7,940

INCLUDED ANALYSIS CONFIGURATIONS:

FATS & OILS

- Free Fatty Acid
- Peroxide Value
- p. Anisidine Value
- Soaps
- Iodine Value
- Total Polyphenols/OSI
(on olive oil)

DAIRY

- Lactose
- L-Lactic Acid
- Milk Urea Nitrogen (MUN)
- Alkaline Phosphatase (ALP)
- Ammonia
- Chloride
- Hydrogen Peroxide
- E-Fructosyl-Lisine (furosine)
- Peroxidase

BAKERY PRODUCTS

- Free Fatty Acid
- Peroxide Value
- p. Anisidine Value
- Lactose
- Alcohol by Volume
- Alcohol by Volume on
Preservative Solution

EGGS

- Lactic Acid
- D-3-Hydroxybutyric Acid
- Color (Beta-Carotene)
- Cholesterol

PUREES

- Chloride

POTATOES

- Glucose & Fructose
- Glucose, Fructose

CDRFoodLab® Jr

What's Included

- Micropipettes
- Cuvette Holder
- USB Cord
- Power Cord
- AC Adapter



CDR FoodLab® Junior FFA+PV | PN: 242300Z10-FFAPV
CONFIGURATIONS **\$4,470**

- Free Fatty Acid
- Peroxide Value

CDR FoodLab® Junior Basic | PN: 242300Z10
CONFIGURATIONS **\$5,700**

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

CDR FoodLab® Junior Iodine | PN: 242300Z10-IOD
CONFIGURATIONS **\$6,214**

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

OPTIONAL ADD ONS:

+ Battery Option | \$400

+ Sugars on Potatoes | \$520

REAGENT TEST KITS

The CDR reagent test kits are test specific. They come in pre-filled or bulk options and multiple quantity allotments to fit your needs.



Storage

When you receive your reagents it is very important to pay attention to the designated storage conditions. Storage specifications are located on the front of the reagent kit pouch, along with the expiration date, lot number, and part number.



SDS Documents

Find SDS's for your reagent kits on CDR's resource website:
WWW.RESOURCES.CDRFOODLAB.COM

TEST KIT	SHELF LIFE	STORAGE TEMP	PART NUMBER	QUANTITY	PRICE
FREE FATTY ACID	12 Months	2-8°C	300128	10 Pre-Filled	\$65.00
			300125	100 Pre-Filled	\$558.00
			300118	125 Bulk	\$550.00
			300148	250 Bulk	\$709.00
			300234	500 Bulk	\$1,035.00
PEROXIDE VALUE	12 Months	15-25°C	300154	10 Pre-Filled	\$65.00
			300150	100 Pre-Filled	\$558.00
			300271	125 Bulk	\$550.00
			300161	250 Bulk	\$709.00
			300201	500 Bulk	\$1,035.00
ANISIDINE VALUE	12 Months	2-8°C	300503	10 Pre-Filled	\$145.00
			300500	100 Pre-Filled	\$1,435.00
			300504	125 Bulk	\$1,497.00
IODINE VALUE	6 Months	2-8°C	301395	10 Pre-Filled	\$65.00
			301390	100 Pre-Filled	\$558.00
			301389	125 Bulk	\$550.00
SOAPS	12 Months	15-25°C	301395	25 Bulk	\$100.00
			301390	125 Bulk	\$494.00

SPECIALTY KITS

TEST KIT	DESCRIPTION	SHELF LIFE	STORAGE CONDITIONS	QUANTITY	PART NUMBER	PRICE
EXTRAFLUID	Extraction solution for chocolates, baked goods, and more	24 Months	15-25°C	20	300133	\$15.00
DEMULSIFIER	Demulsifier powder used to break emulsions	12 Months	15-25°C	100	300595	\$74.00
DILUENT	Dilution for high peroxide value and free fatty acid values	24 Months	15-25°C	125 Tests	300219	\$83.00



Chop the product to be analysed.



Weigh 10 g of product and add 5 ml of Extrafluid reagent.



Centrifuge at a minimum speed of 5000 rpm. **10 minutes**



Remove the extracted oil and proceed with the analysis. **5 minutes**

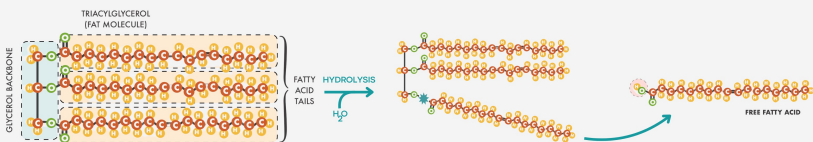
ACCESSORIES

ITEM	DESCRIPTION	PART NUMBER	QUANTITY	PRICE
CDR Easy Pipette 1-10uL	1-10uL Micropipette	215000Z01	1	\$223.00
CDR Easy Pipette Tips 1-10uL	Pipette tips for 1-10uL CDR Easy Pipette	215094	10	\$29.00
CDR Easy Pipette 20-25uL	20-25uL Micropipette	215001Z01	1	\$223.00
CDR Easy Pipette Tips 20-25uL	Pipette tips for 20-25uL CDR Easy Pipette	215093	10	\$29.00
CDR Easy Pipette 50-100uL	50-100uL Micropipette	215002Z01	1	\$223.00
CDR Easy Pipette Tips 50-100uL	Pipette tips for 50-100uL CDR Easy Pipette	215092	10	\$29.00
Printer Paper	Paper for Top Analyzer	AEP143	1	\$6.00
10uL White Minipet	Pipette for Peroxide Value R2	ACF012	1	\$23.00
30uL Purple Minipet	Pipette for Soaps R2	ACF033	1	\$23.00
100uL Blue Minipet	Pipette for Iodine Value R2	ACF013	1	\$23.00
Yellow Pipette Tips	Pipette tips for Minipets & Accumax 20-200uL	ACF058	1000	\$21.00
200-1000uL Pipette	Pipette for Filling Bulk Reagent Kits	ACF080	1	\$315.00
1000uL Pipette Tips	PipetteTips for 1000uL and 200-1000uL Pipettes	225245	224245	\$6.00
Mini Centrifiuge	Mini Centrifuge that holds 2mL tubes	222061	1	\$517.00
Mini Centrifuge Tubes	Tubes for Mini Centrifiuge	225246	100	\$37.00
Opticon PX-20 QR Code Scanner	Barcode Scanner	222084	222084	\$451.00
ZIP-IQ Centrifuge	Used for Flour & Meat Meal Extractions	ZIP-IQ TT	1	\$700.00
15mL Centifuge Tubes	Tubes for ZIP-IQ Centrifuge	225248	50	\$37.00



TEST PARAMETERS

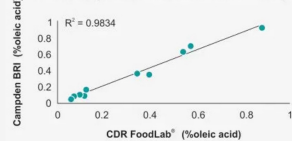
FREE FATTY ACIDS (FFAs) are created when a fatty acid chain is cleaved from its parent fat molecule. The level of FFAs is dependent on temperature, moisture content, and time. They also will vary depending on how the fat/oil is stored, processed, or heated. When fatty acids cleave from their parent molecule 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, since foods will absorb the FFAs causing excessively oily and discolored food with poor taste, and likely a shorter shelf life.



HOW IT WORKS ON THE CDR FOODLAB®

Free fatty acids of the sample, at pH<7,0, react with a chromogenic compound and decrease its colour. The decreasing of color, read at 630 nm, is proportional to the acid concentration of the sample, expressed as % of oleic acid, % palmitic acid, or % linoleic acid.

Free Fatty Acid content method comparison



The CDR FoodLab® is pre-calibrated for Free Fatty Acid in correlation to the AOCS Official Method Ca 5a-40

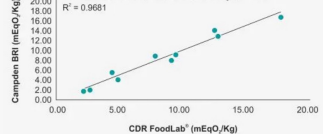
PEROXIDES are a result of primary oxidation in oil and is defined as the amount of peroxide oxygen per 1 kg of fat/oil. Peroxides are very unstable and can easily become rancid and develop into aldehydes. With that being said, peroxides are a key indicator of shorter shelf life, rancid odors, and poor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



HOW IT WORKS ON THE CDR FOODLAB®

R-O-O-R peroxides oxidize Fe²⁺ ions. The Fe³⁺ ions resulting from oxidation are grouped and form a red complex. Its colorimetric intensity, measured at 505 nm, is directly proportional to the concentration of peroxides in the sample. Results are expressed as meqO₂/Kg.

Peroxide value method comparison



The CDR FoodLab® is pre-calibrated for Peroxide Value in correlation to the AOCS Official Method Cd 8-53

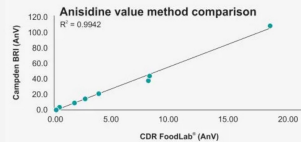
WHY TESTING IS IMPORTANT.

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.



HOW IT WORKS ON THE CDR FOODLAB®

Aldehydes, a product of secondary oxidation, react with the p-anisidine resulting in a variation in absorbance, measured at 366nm.

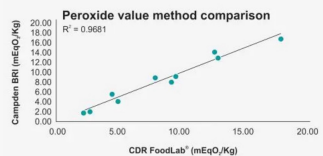


The CDR FoodLab® is pre-calibrated for p. Anisidine Value in correlation to the AOCS Official Method Cd 18-90.

The most important application of the **IODINE VALUE** is to determine the amount of unsaturation contained in the fatty acids that make up oils. This unsaturation is in the form of double bonds which react with iodine compounds. The higher the iodine value, the greater the unsaturation present in the fatty acid. The iodine number is used as a quality or process control parameter but it can also be used as a characterization parameter because each type of oil or fat has an iodine value included in a range that identifies the product itself.

HOW IT WORKS ON THE CDR FOODLAB®

Double bonds react with iodine in alcoholic solution determining a variation in the reagent's absorbance. This amount measured at 446 nm is indirectly related with concentration of double bond in the sample, expressed as IV (Iodine Value).



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.

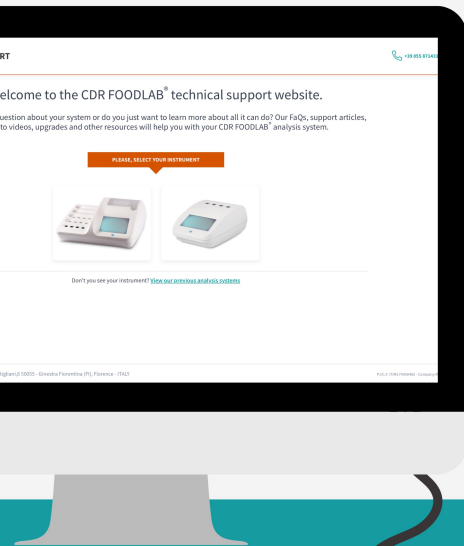
HOW IT WORKS ON THE CDR FOODLAB®

At specific pH values soaps mixed with bromophenol generate a blue color. Its intensity, measured at 604nm, is directly proportional to the concentration of soaps in the sample.

PRODUCT SUPPORT

To register your CDR FoodLab® analyzer for the extended 3 year warranty, find software updates, SDS documents, FAQs, procedures, and more, please visit:

www.resources.cdrfoodlab.com



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.



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