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CDR**Food**Lab[®]

for Dairy



Buyer's Guide

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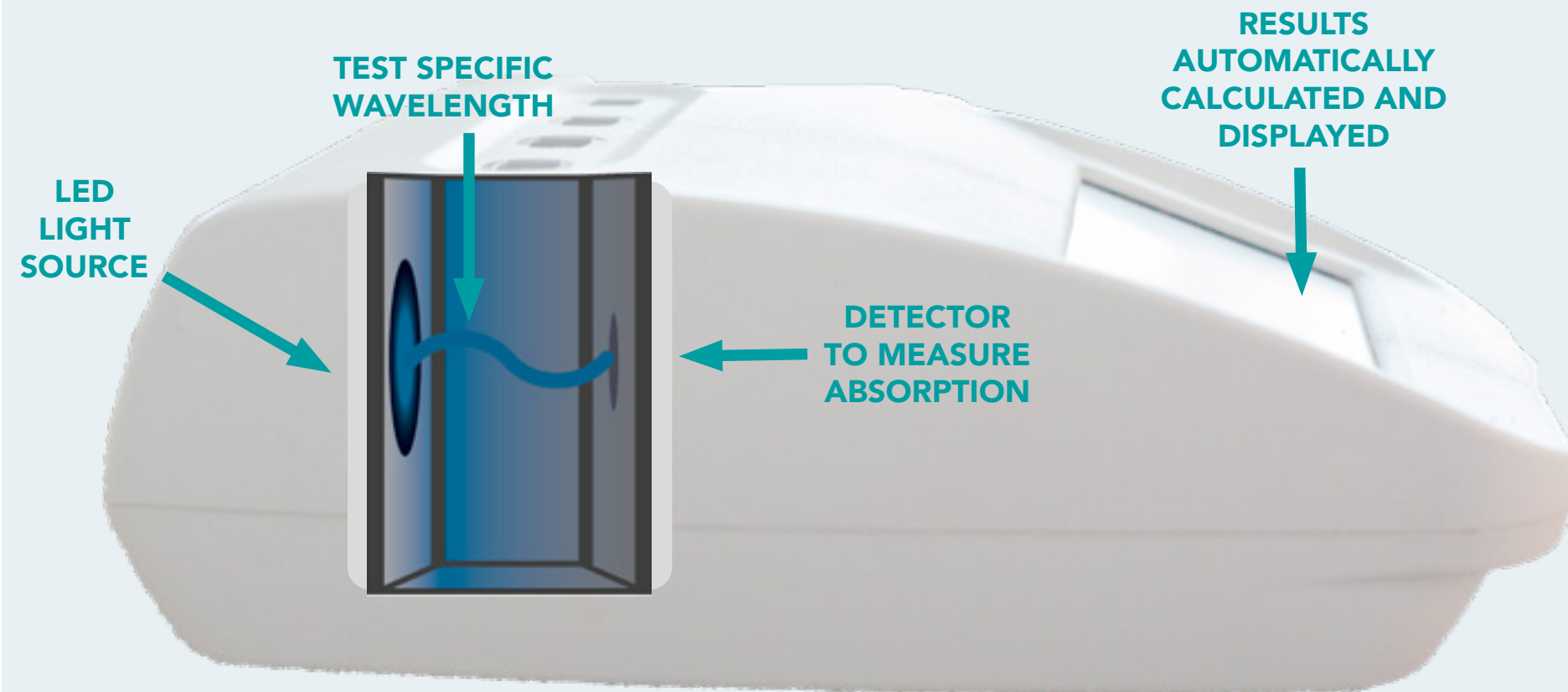
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HOW THE CDRFoodLab[®] WORKS

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.



CDR**Food**Lab[®]

CONFIGURATIONS | 222003Z01* **\$7,020⁰⁰**

FATS + OILS

Free Fatty Acid
Peroxide Value
p. Anisidine Value

Soaps
Iodine Value
Total Polyphenols/OSI *on olive oil*

BAKERY

Free Fatty Acid
Peroxide Value
p. Anisidine Value

Lactose
Alcohol by Volume
Alcohol by Volume on Preservative solution

DAIRY

Lactose
L-Lactic Acid
Milk Urea Nitrogen (MUN)
Alkaline Phosphatase (ALP)
Ammonia

Chloride
Hydrogen Peroxide
E-Fructosyl-Lisine (Furosine)
Peroxidase

EGGS

Lactic Acid
D-3-Hydroxybutyric Acid

Color (Beta-Carotene)
Cholesterol

PUREES

Chloride



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 | |

*Reagent Kits are NOT Included with Analyzer

CDR**FoodLab**® Jr

Junior Milk

CONFIGURATIONS | 242005Z01*

\$4,490⁰⁰

YOUR CHOICE OF 3 DAIRY TESTS

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

+ Additional Dairy Test \$360⁰⁰

Junior MUN

CONFIGURATIONS | 242007Z01*

\$4,041⁰⁰

DAIRY Urea/MUN

+ 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
LACTOSE MILK	0.01-5.5g/100g	10 min	12 months	2-8 C	10 Pre-Filled	300010	\$59.00
					100 Pre-Filled	300015	\$529.00
	DILUTION KIT	-	12 months	15-25 C	10 Pre-Filled	300047	\$8.00
					100 Pre-Filled	300043	\$70.00
MILK UREA NITROGEN MILK	5-10mg/dL	3 min	12 months	2-8 C	10 Pre-Filled	300004	\$32.50
					100 Pre-Filled	300000	\$286.00
L-LACTIC ACID MILK	2-250 ppm Milk	8 min	12 months	2-8 C	20 Pre-Filled	300076	\$132.00
	1.5-150 ppm Cream				100 Pre-Filled	300075	\$520.00
	0.02-0.43g/100g Ricotta				20 Pre-Filled	300376	\$66.67
CHEESE	0.1-1.5g/100g Mozzarella				100 Pre-Filled	300375	\$520.00
AMMONIA MILK, CHEESE	1-80 ppm	8 min	12 months	2-8 C	10 Pre-Filled	300054	\$52.00
					100 Pre-Filled	300050	\$468.00
CHLORIDE MILK					10 Pre-Filled	300104	\$52.00
					100 Pre-Filled	300100	\$468.00
WATERY SOLUTIONS	50-400 mg/dL NaCl	3 min	12 months	15-25 C	10 Pre-Filled	300028	\$44.20
					100 Pre-Filled	300025	\$416.00
CHEESES/SAUCES					10 Pre-Filled	300204	\$66.00
					100 Pre-Filled	300200	\$520.00
HYDROGEN PEROXIDE MILK	2-25 ppm H2O2	6 min	12 months	2-8 C	10 Pre-Filled	300329	\$52.00
					100 Pre-Filled	300325	\$468.00
e-FRUCTOSYL-LYSINE MILK	10-1000 U/L E-fructosyl-lysine 10-500mg/100g Furosine	6 min	12 months	15-25 C	10 Pre-Filled	300404	\$143.00
					100 Pre-Filled	300400	\$1,300.00
PEROXIDASE MILK	100-8000 U/L Peroxiase (POD) 13.60-17.70% Seroprotein	10 min	12 months	2-8 C	10 Pre-Filled	300528	\$117.00
					100 Pre-Filled	300525	\$520.00
FREE FATTY ACID FAT	0.01-1.10% Oleic 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 FAT	0.01-5.50 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
ALKALINE PHOSPHATASE MILK	0.1-7 U/L ALP	30 min	12 months	2-8 C	10 Pre-Filled	300228	\$41.60
					100 Pre-Filled	300225	\$390.00

ACCESSORIES

	DESCRIPTION	QUANTITY	PART NUMBER	PRICE
CDR Easy Pipette 1-10uL	● 1-10uL Micropipette	1	15000Z01	\$185.00
CDR Easy Pipette Tips 1-10uL	Pipette tips for 1-10uL CDR Easy Pipette	25	15094	\$25.00
CDR Easy Pipette 20-25uL	● 20-25uL Micropipette	1	15001Z01	\$185.00
CDR Easy Pipette Tips 20-25uL	Pipette tips for 20-25uL CDR Easy Pipette	25	15093	\$25.00
CDR Easy Pipette 50-100uL	● 50-100uL Micropipette	1	15002Z01	\$185.00
CDR Easy Pipette Tips 50-100uL	Pipette tips for 50-100uL CDR Easy Pipette	25	15092	\$25.00
10uL White Minipet	● Pipette for Peroxide Value R2	1	ACF012	\$20.00
Printer Paper	Paper for Touch Analyzer	1	AEP143	\$5.00
ZIP-IQ Centrifuge	Used for flour and meat meal extractions	1	ZIP-IQ TT	\$635.00
15mL Centrifuge Tubes	Centrifuge tubes for ZIP-IQ Centrifuge	50	225248	\$35.00
Opticon PX-20 QR code-Barcode Scanner	Barcode Scanner	1	222084	\$400.00
Minipet Pipette Tips	● Tips for minipets	1000	ACF058	\$20.00
200-1000uL Micropipette	● Adjustable Micropipette 200-1000uL	1	ACF080	\$300.00
200-1000uL Micropipette Tips	● Pipette tips for 200-1000uL Micropipette	100	225245	\$5.00

● Indicates items that come with the CDR FoodLab® analyzers



TEST PARAMETERS...

Lactose

Lactose is a reducing sugar that is found in milk and is formed from galactose and glucose. Lactose makes up around 4.5-5% of milk (by weight). The lactose molecule is indispensable for many fermentation processes that take place within milk. The reduced secretion of the lactase enzyme in human beings is associated with an intolerance to lactose.

L-Lactic Acid

Lactic acid is produced by fermentation of lactose, mainly through microbial activity. Its concentration depends on the total bacterial count and can be a useful indicator of a good state of preservation. In addition, heat treatment at high temps, such as with UHT milk, reduces the microbial load, but doesn't alter the concentration of lactic acid, thus becoming an indicator of the "history" of the product.

Milk Urea Nitrogen (MUN)

Urea content in raw milk is related to the amount of protein in the animal feed, confirming an adequate diet. This analysis also helps to identify any additions of urea in milk, introduced in order to fraudulently increase the protein content.



Peroxidase

The presence of lacto-peroxidase activity in pasteurized milk indicates the quality of a product. Raw milk with good microbiological quality can be put through a milk pasteurization process and not inactivate this enzyme. Traditional methods are often qualitative (present/not present). Quantifying lacto-peroxidase in pasteurized milk determines the nutritional quality of milk. A higher value of peroxidase means that the milk has preserved its original characteristics.

Hydrogen Peroxide

Hydrogen peroxide is used to sanitize milk handling equipment and its presence in milk indicates contamination. Testing for hydrogen peroxide is also used to check for the possible addition of hydrogen peroxide in raw milk before pasteurization to increase its shelf life.

E-Fructosyl-Lysine (Furosine)

e-Fructosyl-lysine is used to test the effects of milk thermal treatments, or to test if powdered milk or ultra high- temperature pasteurized (UHT) milk have been added to crude or pasteurized milk, without the need for high performance liquid chromatography (HPLC).

[See how the CDR FoodLab® correlates to the official methods](#)

...TEST PARAMETERS

Chloride

Testing for chloride allows identification of any added salt water in milk, a sophistication that the normal cyroscopic examination does not detect. This analysis quantifies the concentration of salt in products such as cheese, vegetable purees, sauces, and liquids.

Ammonia

Liquid ammonia is used to cool tanks of milk following pasteurization. The occupational safety and health administration for ammonia inhalation is 50ppm. Most people can detect the odor at 30ppm. This test allows confirmation of no ammonia contaminating the finished product.

Alkaline Phosphatase (ALP)

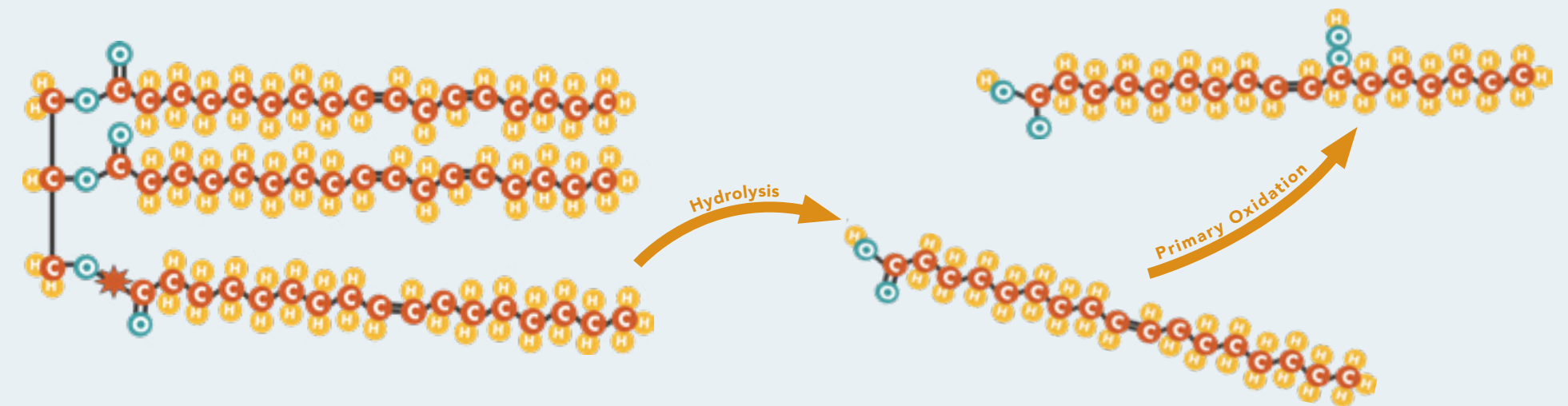
Alkaline phosphatase (ALP) is an enzyme normally present in raw milk and is inactivated during heat treatment. The temperature needed to inactivate ALP is slightly higher than the temperature needed to destroy pathogenic bacteria. Thus, the ALP test can be used on pasteurized milk to verify the pasteurization process was performed correctly.

Free Fatty Acid

Free Fatty Acids (FFAs) are created when a fatty acid chain is cleaved from its parent fat molecule. 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. In milk fat, FFAs are an indicator of how well the milk was stored, the quality of the dairy cow's nutrition, if bacteria contamination was an issue, and if good milk straining was practiced.

Peroxide Value

Peroxides are a result of primary oxidation in fat and are 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, higher peroxide values are a key indicator of shorter shelf life, rancid odors, and poor flavor.



PRODUCT SUPPORT

To register your **CDRFoodLab®** 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) 844 1239

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.