

CDR FoodLab® Jr for determination of **Urea in Milk**

 **FOODLab® Jr.**



Analysis system
for determination
of Urea in Milk

WHAT IS THE CDR FOODLAB® JR SYSTEM?

CDR FoodLab® Jr is composed of a thermostated analyzer based on photometric technology that uses solid-state emitters (LED); a kit with disposable pre-filled reagents with low toxicity, in package of 10 tests, 1 year shelf life, developed and produced by the research laboratories of CDR.

ANALYSIS KITS

The use of pre-filled reagents and the analytical methods, developed by the research laboratories of CDR, allow: quick and easy sample preparation, when needed at all; analytical methods extremely fast and easy; removing all needs for calibration procedures.



REDUCED TESTING TIMES

CDR FoodLab® Jr allows accelerating analysis procedures. It is possible to **analyze 3 samples at the same time** and constantly monitor the production process, obtaining exact and accurate answers in just a few minutes.



RELIABLE

The measuring system guarantees **high sensitivity**, a **wide measuring range**, and an **excellent repeatability of the test results** thanks to the photometric technology based on state-of-the-art **LED emitters** at fixed wavelengths (from ultraviolet to the visible spectrum, up to 6 OD). **The results of the analyses are correlated with the reference methods.**



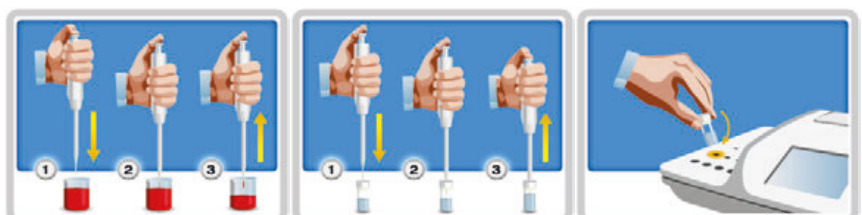
EASY TO USE

The system is designed to be used not only in a laboratory, but real time in the processing plant, even by staff with no previous specific lab tech experience.

The analysis methods are easier than the traditional ones and can be performed in few steps:

- 1 Adding the sample to the pre-filled reagent.
- 2 Following the displayed instructions and if there is ever a doubt, the HELP function will lead you through the process.
- 3 Results are automatically calculated, displayed and printed.

Each test is performed dispensing in the cuvette containing the reagent a determined amount of the sample. Thanks to the reagents created on purpose, it is generated a colorimetric reaction. The result of the test is printed immediately after the elaboration of the photometric reading, in its unit of measure.



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Milk Urea Nitrogen

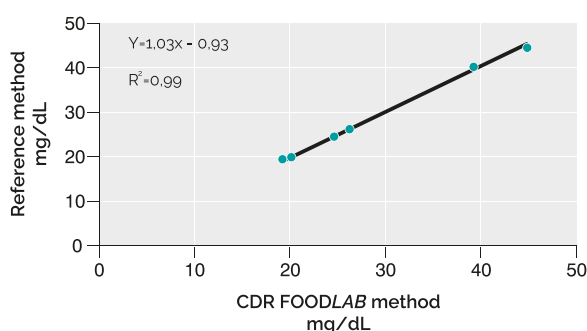
Chemical test carried out in whole, pasteurized and skimmed milk are becoming more important since they are used to control milk and dairy products quality, to monitor animal's health and to set up a correct diet reducing production costs. The percentage of urea in whole milk is influenced by the amount of proteins contained in the diet of the animal and therefore its value is used to define adequate protein content in the fodder.

With this test, it is possible to identify additions of urea in milk made to increase the total percentage of nitrogen, which is normally used to evaluate the proteins content of milk. Therefore urea test can be a useful tool, to differentiate between the content of urea and the real protein percentage, used by companies that process and package milk and dairy products, quality control units or research laboratories of milk industries. Urea test can be used to prevent many problems that may occur during the curdling process: high concentrations of urea are direct or indirect cause of many other issues like high coagulation time, formation of fragile and less structured curd, early development of abnormal fermentation and more intense proteolysis. **This test, due to its easiness and rapidity, can be carried out directly into the cowshed.**

Comparative tests

Comparative tests between the reference method and FoodLab's method were carried out by the Milk Standards Laboratory of A.I.A. (Associazione Italiana Allevatori - Italian Association of Farmers).

CDR FOODLAB method mg/dL	Reference method mg/dL
19.6	19.6
20.1	19.8
24.8	24.4
26.3	25.5
39.2	40.8
44.9	44.5



TESTS	Measuring range	Resolution	Repeatability
MUN	2.5 - 50 mg/dL	0.1 mg/dL	0.5 mg/dL
Urea	5.0 - 100 mg/dL	0.1 mg/dL	1 mg/dL

Technical specifications

Display	4.3" Wide TFT color LCD touchscreen
Connectivity	1 USB type B for technical service and PC connection - Bluetooth 2.1
Storage	4 GB internal memory to store the performed tests
Photometric module	37° C Thermostated block with 1 reading cell
Dimension and weight	15 x 22 x 8,3 cm (W x D x H) 0,80 Kg
Power supply	24 V or lithium battery (optional)



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