

# Assays for Wellness

CR3000



# CR3000 analysers: *a revolution in point of care testing*

The CR3000 series are a range of instruments for screening and monitoring of primary care assays, especially created for the point of care setting, offering health care workers the latest technology on the market.

The instruments support point of care operators in offering new services to patients, providing improved patient care.

## User-friendly

- Automatic test procedure. Simply place the cuvette into the reading cell.
- The operator is completely guided by displayed operator prompts.
- CR3000 is operated by a touch screen making testing more user friendly compared to conventional keyboard operation.
- Testing is performed on small capillary blood samples.

The most common primary tests are performed using capillary blood samples.

The possibility of performing three tests simultaneously drastically reduces testing time whilst the reading cells heated at 37° C assure perfect testing conditions.

Once initiated, testing proceeds automatically and the user is guided by simple messages on the touch screen.

## Rapid

CR3000 instruments have been developed bearing in mind time is of essence for point of care users. Three reading cell analysers are available and results are supplied in a matter of minutes making CR3000 one of the most convenient Point of Care testing systems on the market.

- Rapid bar code reading system: the reader automatically recognises the test placed into the reading cell.
- Three assays are tested at the same time, dramatically reducing turn around time.
- One touch easy view of the procedure for each assay displayed on the screen.

## Instrument reliability

Instruments are built around solid state technology.

A self diagnostic program runs at the start-up of instruments and informs users of any defects found.

## Accuracy and Precision

Wet chemistry application assures accuracy and precision comparable to laboratory reference methods.

The reading cells are thermostated at 37° C which assures perfect testing conditions for temperature sensitive tests.

## Safety Aspects

Capillary blood samples are collected in capillary tubes, placed into cuvettes containing reagents and airtight caps. This procedure assures a cleaner, safer procedure when compared to conventional testing. At no time does the instrument come in contact with blood samples.

## Flexible

Various models are available, according to the assays performed (from 8 to 12) and number of reading cells required (1 or 3).



## Oxidative Stress Testing: why?

An excess production of free radicals causes oxidative stress. In the perfect situation, the body's normal cellular repair functions are able to repair the damage caused by oxidative stress. However, if an individual has an elevated level of free radicals and not enough antioxidants to balance them cellular damage results. Hence oxidative stress is an imbalance between free radicals production and existing antioxidant defences.

If this is undetected it can seriously affect health and performance from mild complaints to more serious illnesses. Consequently OS is a vital warning signal and of fundamental importance for preventative medicine and healthcare as well as the control of relevant therapies during pathologies in a wide range of fields.

CR3000 provides today's point of care operators with two revolutionary tests for professional OS testing (assessment of Free Radicals attack and Antioxidant Capacity) via a finger prick sample. Both tests are widely employed worldwide and at renowned healthcare sites.

Full scientific documentation and prestigious published articles on the assays are available.

## Cardiovascular Risk Assessment

Operators may assess the risk of cardiovascular event happening in the next 10 years in any individual according to scores obtained. The score is based on the American "Framingham Heart Study".

## Fields of Applications/Users

Various medical fields including, cardiology, oncology, diabetes, respiratory diseases, nutrition, neurology, general health care and prevention, the anti-ageing fields, research, doctor's surgeries, clinics, sports medicine, pharmacies and complementary medicine.



# Innovation in point of care diagnostics

The CR3000 series analysers provide PoC operators with an array of tests for screening and monitoring a number of conditions. Assays include:

- Complete lipid profile
- Primary haematology test
- Diabetic screening and monitoring
- Oxidative Stress Marker
- Cardiovascular risk

|                         | CR-TR    | CR-RC | CR-RCH |
|-------------------------|----------|-------|--------|
| TOTAL CHOLESTEROL       | ■        | ■     | ■      |
| HDL CHOLESTEROL         | ■        | ■     | ■      |
| LDL CHOLESTEROL         | ■        | ■     | ■      |
| GLUCOSE                 | ■        | ■     | ■      |
| TRIGLYCERIDES           | ■        | ■     | ■      |
| HAEMOGLOBIN             | ■        | ■     | ■      |
| LACTIC ACID             |          | ■     | ■      |
| GLYCOSURIA              |          | ■     | ■      |
| FREE RADICALS ATTACK    | ■        | ■     | ■      |
| ANTIOXIDANT CAPACITY    | ■        | ■     | ■      |
| URIC ACID               |          | ■     | ■      |
| HbA1c                   |          |       | ■      |
| CARDIAC RISK ASSESSMENT | OPTIONAL |       |        |
| READING CELLS           | 1        | 3     | 3      |

# Lifestat: software for recording patient data and patient management

Lifestat provides operators effective support for patient care and management and is extremely versatile.

- Results are downloaded to a PC.
- Recording patient data and creation of customer files.
- Recording medication and treatment history.



Display and easy consultation of all results for each patient's history.

| Assay type      | Result     | U.L. |
|-----------------|------------|------|
| Cholesterol     | 262 mg/dL  |      |
| Triglycerides   | 919 mg/dL  |      |
| Glucose         | 0 mg/dL    |      |
| Creatinine      | 0.1 mg/dL  |      |
| Hemoglobin      | <20 %      |      |
| Hemoglobin      | 0.1 g/dL   |      |
| HbA1c (average) | 0.1 mg/dL  |      |
| Glucose         | 0.1 mg/dL  |      |
| Lactic Acid     | <1.9 mg/dL |      |
| PCO2            | 1.88 mmHg  |      |
| PO2             | 431 mmHg   |      |
| Uric Acid       | 0.1 mg/dL  |      |
| Urea            | 0.1 mg/dL  |      |

The Lifestat questionnaire aids operators in understanding the risk factors associated with lifestyles and eating habits of patients according to the profiles carried out by the CR3000.

**Questionnaire**  
Miguel Ortega [11]

Assess advised

**GENERAL CONDITIONS**

1-10

☐ Do you smoke?

☐ Are you overweight?

☐ Do you suffer from high blood pressure?

☐ Do you often feel tired?

☐ Do you feel under stress?

☐ Do you suffer from any known allergy?

☐ Do you often have cold hands or feet?

☐ Are you often thirsty?

☐ Do you suffer from polyuria?

☐ Do you exercise regularly?

**DIET**

☐ Are you vegetarian?

☐ Do you consume less than 5 servings of fruit a week?

☐ Do you consume more than 20 g of alcohol (approx. 2 drinks) per day?

☐ Do you often eat fast, in particular, several times?

☐ Do you consume meat more than 4 times per week?

**PHYSICAL ACTIVITY AND WEIGHT**

☐ Iron and/or vitamin B12 and folic acid supplements

☐ Statins

☐ Oral hypoglycemic treatment

☐ Mineral and vitamin supplements and/or other antioxidants

☐ Hormone treatment

**CLINICAL HISTORY OF DISEASES**

☐ Anemia, hemolytic disorders, polycythemia

☐ Hypertension and/or

☐ Cardiovascular events (heart attack, stroke)

☐ Diabetes

Cardiovascular Risk Assessment

**Cardiovascular risk**

For further information click on the "Info" icon

Name: Susan  
Surname: Brown

Gender: ☐ Male ☒ Female

Age: 65

Systolic pressure: 130 mmHg

Total cholesterol: 250 mg/dL  
HDL cholesterol: 55 mg/dL

Arteriovenous: ☐ Yes ☒ No

Smoker: ☒ No ☐ Yes

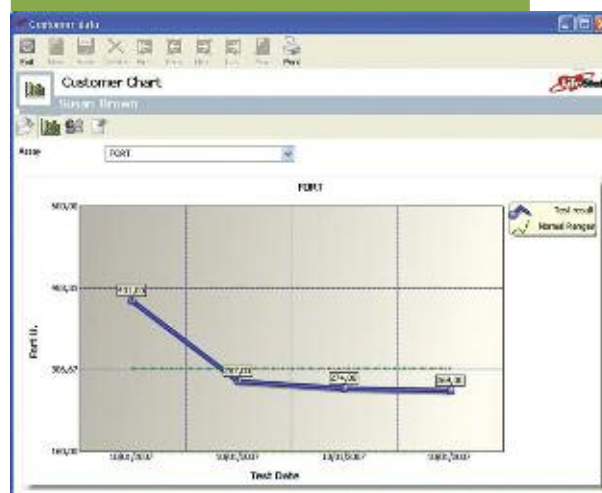
Diabetic: ☒ No ☐ Yes

Pregnancy: ☒ No ☐ Yes

Cardiovascular Risk: 4

Calculator

Statistical analysis of results provides operators clear feedback on the patient's clinical history.



**CR3000**