Lumigenex

# Pro Chek® Dry Chemistry Analyzer

Chronic Disease Management Expert

## Features

- Accuracy: Relative Deviation(RD) ≤ 10%
- Precision: Coefficient of Variance (CV) ≤ 5.0%
- Linearity: Correlation coefficient ($r^2$) ≥ 0.980
- Sample Volume: 20~40 μL fingernail blood
- Results within 60~180 seconds
- Bluetooth enabled


**LP-100**


**Total-F**

**Under Development**

## Features

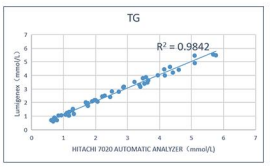
- User Friendly: Easy-to-use operation with a touch screen design
- Accurate: Comparable with conventional chemistry analyzers
- Convenient: Device is portable and ready to use at any time
- Extensible: Compatible with multiple upcoming parameters
- Data Management: Via WIFI, NFC, IoT, Bluetooth

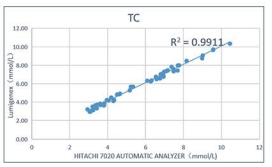
# Lipid Panel Test Strips

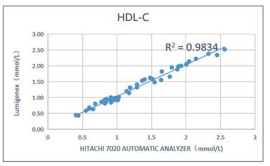
(Dry chemical method)

- Hyperlipidemia refers to one or more levels of blood lipid components such as cholesterol, triglyceride and total fat that exceed the normal standard.
- The Lipid Panel Test Strips are intended to directly measure the concentration of cholesterol (TC), HDL cholesterol (HDL-c) and triglycerides (TG) ,the concentration of LDL-c and the ratio of TC and HDL-c can be calculated according to the test results of TC,HDL and TG in whole blood.
- The combined detection of three blood lipids ( total cholesterol , high-density lipoprotein cholesterol and triglyceride) can help to provide clinical reference for the diagnosis and treatment of lipoprotein metabolism disorders such as hyperlipidemia, atherosclerosis, nephropathy, liver disease and coronary heart disease. diabetes, atherosclerosis, nephropathy, liver disease and coronary heart disease.

| | |
|---|---|
| Sampling volume | 40μL whole blood |
| Accuracy | Relative Deviation (RD) ≤15% |
| Measuring range | TC: 2.59-11.70mmol/L(100-450mg/dL)<br>HDL: 0.39-2.59mmol/L(15-100mg/dL)<br>TG: 0.50-6.00mmol/L(45-530mg/dL)<br>LDL-C to be calculated value<br>TC/HDL-C to be calculated value |
| Within-batch variation | ≤15% |
| Batch-to-batch variation | ≤15% |
| Cut-off | TC: <5.18mmol/L (200mg/dL)<br>TG: <1.70mmol/L(150mg/dL ) LDL-C：<3.35mmol/L (129.54mg/dL)<br>HDL-C: ≥1.04mmol/L (40mg/dL) TC/HDL-C：<4.98 |
| Package | 15T/Kit (CAT#: P13015)<br>50T/Kit (CAT#: P13050) |



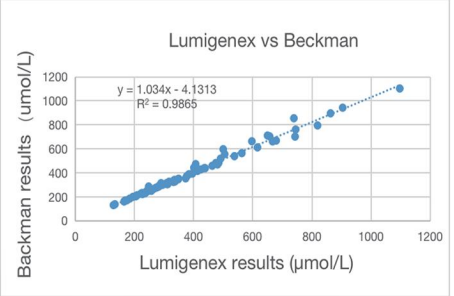




# Uric Acid Test Strips

(Dry chemical method)

- The uric acid test strips are suitable for in vitro quantitative detecting the concentrations of uric acid in whole blood or serum samples.
- Quantitative determination of uric acid excretion can help to determine the treatment regimen for hyperuricemia, and to determine whether patients should be treated with uric acid-stimulating excretion drugs for increased renal excretion, or treated with allopurinol to inhibit purine synthesis.

| | |
|---|---|
| Sampling volume | 20μL whole blood |
| Accuracy | Relative Deviation (RD) ≤15% |
| Measuring range | 120μmol/L-1200μmol/L |
| Within-batch variation | ≤15% |
| Batch-to-batch variation | ≤15% |
| Cut-off | Male: 208μmol/L-428μmol/L (3.5mg/dL-7.2mg/dL)<br>Female: 155μmol/L-357μmol/L (2.6mg/dL-6mg/dL) |
| Package | 15T/Kit (CAT#: P29015)<br>50T/Kit (CAT#: P29050) |

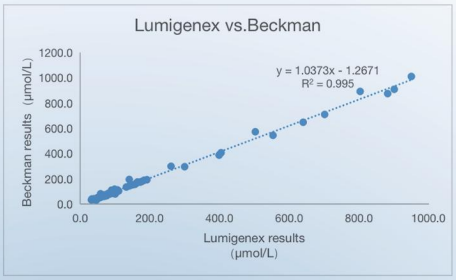



# Creatinine Test Strips

(Dry chemical method)

- The creatinine test strips are suitable for quantitative determination of creatinine concentration in whole blood or serum in vitro.
- Creatinine concentration can reflect the glomerular fifiltration rate. It is clinically used as a routine item for the monitoring and analyzing of renal function.

| | |
|---|---|
| Sampling volume | 20μL whole blood |
| Accuracy | Relative Deviation (RD) ≤15% |
| Measuring range | 30.0μmol/L-1300umol/L |
| Within-batch variation | ≤15% |
| Batch-to-batch variation | ≤15% |
| Cut-off | Male: 20-59 years old 57-97μmol/L; 60-79 years old 57-111μmol/L<br>Female: 20-59 years old 41-73μmol/L; 60-79 years old 41-81μmol/L |
| Package | 15T/Kit (CAT#: P30015)<br>50T/Kit (CAT#: P30050) |

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Lumigenex

# LTRIC-600 / LTRIC-300

**Nano-Enhanced Time Resolved Fluorescence Immunoassay Analyzer**


**LTRIC-600**


**LTRIC-300**

**Under Development**

## *Product Highlights*

- Nano-Enhanced TRFIA
- Rapid, sensitive and accurate quantitative POCT Platform
- Repeatability: CV< 10%
- Stability: σ < 10%
- Accuracy: Δn < 10%
- Linearity: r > 0.99
- Test Time: < 10 sec/strip

## Test Menu

| Item abbreviation | Storage temperature | Shelf-life | Sample type | Incubation time | Disease / Disorder | Sensitivity (LOD) |
|---|---|---|---|---|---|---|
| mALB/Cr (UACR) | 2-8°C | 18 months | Urine | 15min | Chronic Kidney Disease | mALB: 4mg/L<br>CR: 1mmol/L |
| cTnI | 2-8°C | 18 months | WB/P/S | 15min | Myocardial Infarction | 0.05ng/mL |
| CK-MB | 2-8°C | 18 months | WB/P/S | 15min | Myocardial Injury | 0.25ng/mL |
| Myo | 2-8°C | 18 months | WB/P/S | 15min | Myocardial Injury | 1.0ng/mL |
| cTnI / CK-MB / Myo | 2-8°C | 18 months | WB/P/S | 15min | Acute Coronary Syndrome | cTnI: 0 .05ng/mL<br>CK-MB: 0.5ng/mL<br>Myo: 20ng/mL |
| NT-proBNP | 4-30°C | 18 months | WB/P/S | 15min | Heart Failure | 30ng/L |
| D-Dimer | 2-8°C | 18 months | WB/P | 15min | DVT, PE | 0.2ug/mL |
| sST2 | 4-30°C | 18 months | WB/S | 15min | Diagnosis Of Aortic Dissection | 2.5ng/mL |
| PCT | 2-8°C | 18 months | WB/P/S | 15min | Serious Bacterial Infection | 0.1ng/mL |
| CRP | 2-8°C | 18 months | WB/P/S | 5min | Bacterial Infection | 0.2mg/L |
| SAA | 2-8°C | 18 months | WB/P/S | 15min | Virus Infection | 0.5mg/L |
| CRP / SAA | 2-27°C | 18 months | WB/S | 7min | Inflammation | CRP: 0.2mg/L<br>SAA: 0.2mg/L |
| PGI / PGII | 2-8°C | 18 months | WB/P/S | 15min | Gastric Adenocarcinoma | PGI: 2ng/mL<br>PGII: 1ng/mL |
| CA72-4 | 2-8°C | 18 months | WB/S | 15min | Cancer And Predicted Index For Gout | 2.5U/mL |
| HbA1C | 4-30°C | 18 months | WB/S | 15min | Diabetes | Under Development |
| 25-OH-VD3 | 4-30°C | 18 months | WB/S | 15min | Nutrition | Under Development |

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## Lumigenex

Point of care testing (POCT) enables rapid diagnostic tests to be performed while a patient is at a PoC facility, without the need for complex equipment or a wait of hours to days for reports from outside labs. But desired POCT still needs to be precise, accurate, cost-effective and highly sensitive.

Although they have not completely replaced centralized testing facilities, nanobiosensors have started to reshape POCT conventions. Conventional POCT kits use colloid gold particles or colored latex particles and provide only qualitative and semiquantitative results. Their sensitivities are too low to be practical for detecting trace amounts of biomarkers in early stages of disease, which is a critical requirement for managing conditions such as acute myocardial infarction and heart failure.

The labeling technology used for quantification has an important role in keeping detection limits and accuracy at satisfactory levels. Although in vitro diagnostics companies have developed several POCT platforms with photoluminescence labels to provide quantitative measurements with reasonable sensitivity, other issues related to measuring photoluminescence need to be overcome to further improve the performance of these bioanalytical assays.

The two main issues are (1) autofluorescence from biological samples that increases the background fluorescence and compromises sensitivity and (2) light scattering and absorption by colored sample matrices, which can severely compromise measurements. Time-resolved luminescence labels provide one solution to both issues through time-gated measurements.

Compared with standard luminescence-detection methods that use wavelength to differentiate target luminescence from background signal, time-resolved luminescence techniques separate the luminescence of interest from the background signal by measuring the lifetime difference as well as wavelength difference. After excitation of a luminescent label with a short pulse of light, long-lived luminescence is measured only a short time after autofluorescence and light-scattering effects have completely dissipated. Such time-resolved measurements can be repeated and combined to fine-tune signal-to-noise ratios and improve sensitivity. Overall, time-resolved luminescence measurements increase the sensitivity by two or more orders of magnitude relative to conventional luminescence measurements in liquid samples.

Along with its proprietary luminescence encapsulation technique for obtaining strong and long-lived luminescence labels, Lumigenex has been able to successfully leverage its time-resolved luminescence membrane assay technique, exclusively licensed from Kimberly-Clark Corporation, to commercialize several POCT kits. For example, the

detection limits of the company's Troponin I and N-terminal prohormone of brain natriuretic peptide (NT-proBNP) assays are 5pg and 4pg, respectively. Other ultrasensitive POCT kits using time-resolved luminescence technology are in development to meet the increasing demand for POCT kits for cardiology, women's health, infectious disease, oncology and drugs of abuse.

## CONTACT DETAILS

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**"Time-resolved luminescence measurements increase the sensitivity by two or more orders of magnitude relative to conventional luminescence measurements in liquid samples."**

Lumigenex®
光景生物