

NycoCard Reader for Quantitative Determination of

- ❖ **HbA1c**
- ❖ **U-ALBUMIN**
- ❖ **CRP**
- ❖ **D-DIMER**

Test procedure



1. Apply 50 µl of R2/washing solution to the test device. Allow to soak



2. Apply 50 µl of platelet-free citrated plasma to the device. Allow the sample to soak (approx 50 seconds).



3. Apply 50 µl of R1/conjugate to the device and to soak (approx 50 seconds).



4. Apply 50 µl of R2/washing solution to the test device and allow to soak



5. Read the result within two minutes using NycoCard READER

D-Dimer

Determines fibrin degradation product D-Dimer in plasma

What is D-Dimer?

D-Dimer is a protein that is released into the circulation during the process of fibrin blood clot breakdown.

D-Dimer represents an area of cross-linked fibrin degradation product that originated from the breaking down of the fibrin clot network during the body's repair mechanisms.

D-Dimer present in circulation is used as an indicator of a blood clot being formed and broken down somewhere in the body

D-Dimer measurements are of interest in the following clinical situations:

- Exclusion of deep venous thrombosis • Exclusion of pulmonary embolism
- DIC disseminated intravascular coagulation • Preeclampsia • Cancer
- Follow up of acute myocardial infarction • Bacterial sepsis

Advantages of NycoCard D-Dimer :

- Accurate D-dimer results within two minutes with NycoCard READER
- Combines the speed and simplicity of the latex methods with the analytical quality of ELISA methods
- No dilution of plasma • Defined positive control included in the kit
- Available both as card and single test • No time dependent incubation step
- Well documented

Characteristics

Measuring range :	0.1-20mg/L
Sample Material :	50 µl of undiluted platelet-free citrated plasma
Test Principle :	Solid phase, sandwich-format, immunometric assay using a gold antibody conjugate.
Expected values :	Normal values < 0.3mg/L

Available Pack Size of Kits

NycoCard® HbA1c	: 24T
NycoCard® U-Albumin	: 24T
NycoCard® CRP	: 24T/48T
NycoCard® D-Dimer	: 24T



3 minutes' test time

Test procedure



1. Add 5µl whole blood to the R1 reagent . Mix well. incubate for 2-3 minutes.



2. Mix again . Apply 25µl reaction mixture to the Test Device. Allow to soak



3. Add 25µl R2/Washing Solution. Allow to soak



4. Read the result within 5 minutes using the NycoCard READER

HbA1c

Determines the quality of metabolic control

The importance of good metabolic control

Several studies have shown the importance of good metabolic control in preventing - and slowing - the progression of diabetic late complications - for person with type I (DCCT study) and type II (UKPSD) diabetes. Measurement of glycated hemoglobin has proven to be an important tool in determining the quality of the metabolic control.

Time-saving for you and your patients

NycoCard® HbA1c is rapid and provides an accurate HbA1c result within 3 minutes during the patient consultation - making a revisit to alter the treatment regime no longer necessary.

Standardisation

The International Federation of Clinical Chemistry (IFCC) has established a working group on glycohaemoglobin standardisation. This will be based on HbA1c, as it is the easiest component to define. Methods that measure total hemoglobin, such as affinity methods, can also be standardised against HbA1c, as their respective values correlate well.

NycoCard® HbA1c is standardised according to the recommendation of the ERL laboratory (European Reference laboratory) at DCCT-level and is certified in accordance with the ERL Check-Up Protocol.

Characteristics

Measuring range: 3-18% HbA1c

Reference range: 4.5-6.3% HbA1c

Sample material: 5µl Whole blood

Test result within 3 minutes

No interference of hemoglobin variants or derivatives

Precision

Coefficient of variation below 5% both within and between run.



4. Apply 50 µl R3/Washing Solution to the Test Device.



4. Read the test result within 5 minutes using NycoCard Reader

Characteristics

Measuring range: 5-200 mg/L albumin

Sample Material: 50µl urine

Rest principle: Solid phase, sandwich-format, immunometric assay using a gold-antibody conjugate.

Precision: In controlled laboratory testing, a coefficient of variation(CV) of 5-8% is usually obtained.

Test procedure



1. Add 50 µl urine to the R1/ Dilution Liquid. Mix well.



2. Apply 50 µl diluted urine to the Test Device.



3. Apply 50 µl R2/Conjugate to the Test Device

U-Albumin (Microalbumin)

Pin-points patients at risk

Why measure urinary albumin concentrations?

Diabetic nephropathy is a frequent and serious secondary complication of diabetes mellitus, leading to increased morbidity and mortality, and to impaired quality of life in person affected. Early detection of the disease, at the stage of microalbuminuria, is important of its outcome and progression. If appropriate measures are taken, **microalbuminuria** can be halted or even reversed.

Microalbuminuria is defined as a persistent elevation of the **urinary albumin excretion** to 20-200 µg/min or 20-200 mg/L when using early morning urine. Studies have demonstrated that **microalbuminuria** independently predicts cardiovascular morbidity and all-cause mortality in essential hypertension. Monitoring of **microalbuminuria** is worth-while in order to monitor the effect of anti-hypertensive treatment on target-organ damage

Low-protein diets, lowering blood pressure and the use of anti-hypertensive therapy have all been reported to have a positive effect on decreasing the urinary albumin excretion . The DCCT Research Group has shown the importance of strict glycaemic control in preventing **microalbuminuria**

NycoCard® U-Albumin is simply quick and convenient - within only 3 minutes a quantitative test result is obtained using the NycoCard® READER

Test procedure



1. Drop 5 µl capillary with patient sample into the R1/Dilution Liquid tube-Mix thoroughly for 10 seconds



2. Apply 50 µl diluted sample to the test device. Allow to soak (approx 30 seconds).



3. Apply 1 drop R2/Conjugate to the test device. Allow to soak (approx 30 seconds).



4. Apply 1 drop R3/Washing Solution to the test device. Allow to soak (approx 20 seconds).



5. Read the result within 5 minutes. Use the CRP Whole Blood menu for reading blood samples and the Serum/Plasma menu for serum plasma samples

CRP Single Test

Determines C-Reactive Protein in serum, plasma and whole blood

What is C-Reactive Protein?

- An acute phase protein produced in the liver
- Correlates well to the degree of the disease
- Pathological concentrations reached after 6-12 hours
- Maximum level reached within 24-48 hours
- Pathological values up to 1-2 weeks after stimuli onset
- Decreases rapidly after removal of stimuli
- May increase 100-1000 times during the acute phase
- Increases rapidly after stimuli onset

CRP measurements has proven to be useful in the following clinical situations:

- “Screening” for an infection
- Monitoring extent and activity of disease
- Differential diagnosis
- Monitoring bacterial complications to diseases
- Post-operative infectious complications
- Monitoring effect of therapy
- As a risk indicator for cardiovascular diseases

How to evaluate the CRP result

- 0 -10 mg/L - Normal concentration
- 10 - 25 mg/L - Increased but diagnostically of less importance During antibiotic treatment CRP should be reduced below this level. Does not exclude bacterial infection if the disease has lasted short. Take a new sample some hours later
- 25 - 50 mg/L - There is “something”. Bacterial or viral?
- 50 - 100 mg/L - Occurs infrequently with viral infections - Common in bacterial infections
- > 100 mg/L - Seldom seen with viral infections Fairly common in bacterial infections

Advantages of NycoCard CRP Single Test:

With a quantitative and rapid point-of-care CRP test, the physicians have a valuable tool to avoid unnecessary prescription of antibiotics to patients with viral, or probably self-limiting superficial bacterial infection.

Characteristics

Measuring range : Whole blood samples : 8-250mg/L
Serum or plasma sample : 5-150mg/L

Sample Material : 5 µl of whole blood/serum/plasma

Test Principle : Solid phase, sandwich-format, immunometric assay using a gold antibody conjugate.

Expected values : Normal values < 5mg/L