BIOBASE

Lactic Acid (LAC) Test Kit

(Enzymatic Colorimetric)

【NAME】

Lactic Acid (LAC) Test Kit (Enzymatic Colorimetric)

【INTENDE USE】

Used to test the content of lactic acid (LAC) in human serum.

In muscle cells, the elevated lactic acid concentration showed that metabolic acidosis may be lactic acid poisoning. Acuteness activity related hypoxia can increase the serum lactic acid concentration. Caused by respiratory failure or low perfusion state of hypoxia, may occur life-threatening lactic acid poisoning. Severe dehydration can cause muscle cells decreased oxygen transfer. Lactic acid poisoning may often associated with diabetic ketone poisoning. Organization oxygen consumption increase, as seen in sepsis can also lead to lactic acid poisoning. The severity of lactic acidosis can help reveal the seriousness of the underlying disease.

【METHODOLOGY】

Lactic acid oxidase generated pyruvic acid and hydrogen peroxide oxidation lactic acid, hydrogen peroxide and 4-Aminoantipyrine, the chlorine phenol react into quinone red dye, the dye with maximum absorption peak in the 546 - nm, absorption intensity is proportional to the lactic acid content in the specimen.

$$LAC + O_2 \xrightarrow{LOX} \text{Pyruvic acid salt} + H_2O_2$$

$$H_2O_2 + \text{4-Aminoantipyrine} + \text{THBS} \xrightarrow{POD} \text{Benzoquinone (red)} + H_2O$$

【STABILITY AND STORAGE】

Unopened, avoid light preservation in 2 ~ 8 ℃, valid for 12 months;

Opened, avoid light preservation in 2 ~ 8 ℃, valid for 1 month.

Reagent is not allowed frozen.

【SAMPLE REQUIRMENT】

It is best to fresh Serum, heparin or EDTA anticoagulant blood plasma Plasma or serum should be separated from blood cells as soon as possible, otherwise the result will be higher.

When these composition in sample: Direct bilirubin≤20mg/dL、Ascorbic acid≤15mg/dL、Total bilirubin≤20mg/dL、hemolysis≤500mg/dL chyle≤1.6% no obvious interference found.

【APPLICABLE INSTRUMENT】

Fully automatic biochemical analyzer..

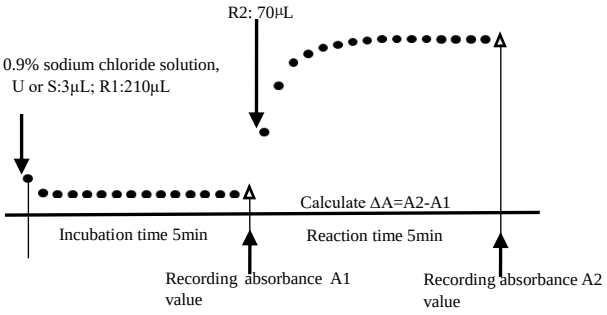
【SYSTEM PARAMETERS】

The following system parameters are recommended. Individual instrument applications are available upon request from the Technical Support Group

Temperature	37° C
Cuvette light path	1.0cm
Primary Wavelength	546nm
Secondary Wavelength	700nm
Assay Type	Two Point End
Direction	Increase
Sample : Reagent 1: Reagent 2 Ratio	3:210:70
eg : Sample Vol	3μL
Reagent1 Vol	210 μL
Reagent2 Vol	70 μL
Linearity	0～130mg/dl
Testing	Deducting the reagent blank

【OPERATION STEPS】

R1: Reagent 1 R2: Reagent 2 S: Calibrator U: Sample



【CALCULATION】

Use the Calibrator

$$\text{Sample HDL-C concentration} = \frac{\text{Sample}\triangle A}{\text{Calibrator}\triangle A} \times \text{Calibrator concentration}$$

【REFERRENCE RANGE】

5.7~22mg/dL

By clinical trials, choose no less than 100 women or men blood specimens, tested by automatic biochemical analyzer, and then processing the testing value with statistical method, calculating out the reference range.

Recommendation: The laboratory set up its own reference range!

【THE LIMITATIONS OF TESTING RESULTS】

LAC esting is just one of the standard that clinicist diagnose the patient. Clinical physicians should according to patients' bodies, history and other diagnostic program, to get comprehensive judgment.

【THE INTERPRETATION OF TEST RESULTS】

Human error, the processing of specimen, analysis instrument deviation, etc. all can affect the measurement result； When one sample deviates from the expected value too far, need to be tested again.

【PERFORMANCE INDEX】

1. Reagent blank absorbance≤0.3000,（546nm,1cm light path）.
2. Precision: repeatability CV≤5％;batch variations R≤8％.
3. Accuracy: relative deviation≤10％.
4. Linearity range: 0～130mg/dl,

【ATTENTION】

1.This reagent use to IVD diagnosis. Once contact with human body, please rinse with water.

2.If there is no specified wavelengths in the instrument, select wavelength close to main wavelength.

3.Reagents for scrap, please with plenty of water to dilute before processing.

4.Different batches reagents cannot mix, when replacing reagents batch number, please calibration again.

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