Carbondioxide (CO2) Test Kit

(Enzymatic)

【NAME】

Carbondioxide (CO_2) Test Kit (Enzymatic)

【INTEND USE】

This reagent is intended for the in vitro quantitative determination of Carbondioxide (CO2) in human serum. CO2 enrichment common in: metabolic alkalosis, respiratory acidosis (such as pulmonary heart disease, respiratory center depression, respiratory muscle paralysis, emphysema, bronchiectasis and pneumothorax). CO2 reduction common in: metabolic acidosis (such as severe diarrhea, kidney failure, diabetic ketoacidosis, septic shock, excessive acidic drugs service, etc.), chronic respiratory alkalosis.

【METHODOLOGY】

$$PEP + HCO_3^- \xrightarrow[MDH]{PEPC+Mg^{2+}} \text{Oxaloacetic acid} + H_2PO_4$$

$$\text{Oxaloacetic acid} + NADH + H^+ \longrightarrow \text{Malic acid} + NAD^+$$

【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.

【SPECIMEN COLLECTION AND HANDLING】

Serum or heparinized plasma.

Please separate the serum in time,and save it in 2 ~ 8 ℃;.

Samples can not be exposed to air.

To prevent the loss of carbon dioxide, the sample of separation will be sealed preservation,and complete testing within the short time after collection.

When the ascorbic acid concentration of sample≤1704 μ mol/L;bilirubin concentrations≤860 μ mol/L,hemoglobin hemoglobin≤5.00g/L, triglyceride concentrations≤15.8mmol/L,,was not observed clearly disturbance.

【APPLICABLE INSTRUMENT】

Fully automatic biochemical analyzer.

【SYSTEM PARAMETERS】

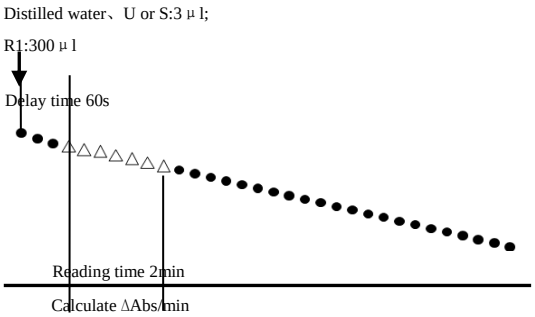
The following system parameters are recommended. Individual instrument applications are available upon request from the Technical Support Group

Temperature	37° C
Cuvette light path	1.0cm
Primary Wavelength	405 nm
Secondary Wavelength	546nm
Assay Type	Rate method
Direction	Decrease
Sample : Reagent Ratio	1:100
eg : Sample Vol	3μL
Reagent1 Vol	300 μL
Linearity	0～50mmol/L
Testing	Deducting the reagent blank

【OPERATION STEPS】

single reagent operation:

R: Reagent 1 S: Calibrator U: Sample



【CALCULATION】

Use the Calibrator

$$\text{Sample Concentration} = \frac{\text{Sample } \Delta\text{Abs/min}}{\text{Calibrator } \Delta\text{Abs/min}} \times \text{Calibrator Concentration}$$

【REFERENCE RANGE】

22～29mmol/L

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】

CO_2 testing 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≥1.0,(405nm,lcm optical path).

2.Precision: repeatability CV≤5%;batch variations R≤8%.

3.Accuracy: relative deviation ≤10%.

4.Linearity range: 0～50mmol/L, r≥0.990.

【ATTENTION】

1.Reagent contains sodium azide (toxic) preservatives, avoid contact with skin and mucous membrane.If necessary preventive measures should be taken use of reagents, reagent contact with skin and mucous membrane, please rinse with water, please go to a doctor if necessary.

2.The maximum linearity is 50mmol/L.If testing results is upper limit,dilute with 0.9% sodium chloride solution before test, results multiplied by the dilution ratio.

3.Liquid waste disposal: Suggest follow local regulations.

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

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