BIOBASE

Aspartate Aminotransferase (AST) Test Kit (IFCC Method)

【NAME】

Aspartate Aminotransferase (AST) Test Kit (IFCC Method)

【INTENDE USE】

This reagent is intended for the in vitro quantitative determination of Aspartate Aminotransferase (AST) in human serum or plasma.

AST is widely distributed with high concentrations in the heart, liver, skeletal muscle, kidney and erythrocytes. Damage or disease to any of these tissues such as myocardial infarction, viral hepatitis, liver necrosis, cirrhosis and muscular dystrophy may result in raised serum levels of AST.

【METHODOLOGY】

$$\text{L- aspartic acid} + \alpha\text{-ketoglutaric acid} \xrightarrow{\text{AST}} \text{Oxaloacetic acid} + \text{L-glutamic acid}$$

$$\text{Oxaloacetic acid} + \text{NADH} + H^+ \xrightarrow{\text{MDH}} \text{L- malic acid} + NAD^+ + H_2O$$

【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.

【SPECIMEN COLLECTION AND HANDLING】

It is best to fresh Serum, heparin or EDTA anticoagulant blood plasma.

Within 3 days of inactivation: store at 2 ~ 8 ℃: < 10%;

Stability of sample: store at -20℃ can stable 4 weeks.

When the bilirubin concentrations of sample≤1026 μmol/L,triglyceride concentrations≤11.4mmol/L, Hemoglobin concentration≤ 100 mg/dl, was not observed clearly disturbance.

【APPLICABLE INSTRUMENT】

Fully automatic biochemical analyzer.

【SYSTEM PARAMETERS】

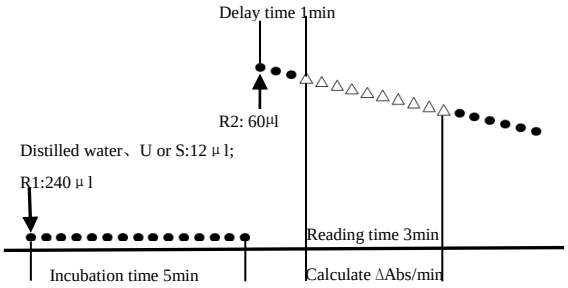
The following system parameters are recommended. Individual instrument applications are available upon request from the Technical Support Group

Temperature	37° C
Cuvette light path	1.0cm
Primary Wavelength	340 nm
Secondary Wavelength	405nm
Assay Type	Rate method
Direction	Decrease
Sample : Reagent Ratio	1:20:5
eg : Sample Vol	12 μL
Reagent1 Vol	240 μL
Reagent2 Vol	60 μL
Linearity	10～800U/L

【OPERATION STEPS】

Double reagent operation:

R1: Reagent 1 R2: Reagent 2 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】

Female:<31U/L Male:<40U/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 LIMITATION OF TEST RESULTS】

AST 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,(340nm,lcm optical path).

2.Precision:repeatability CV≤10%;batch variations R≤10%.

3.Accuracy:relative deviation ≤10%.

4.Linearity range: 10～800U/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 800U/L.If testing results is upper limit, dilute with 0.9% sodium chloride solution before test, results multiplied by the dilution ratio.

3.Do not use hemolysis sample.

4.Liquid waste disposal: Suggest follow local regulations

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