BIOBASE

Cholinesterase (CHE) Test Kit
(Butyrylthiocholine)

【NAME】
Cholinesterase (CHE) Test Kit (Butyrylthiocholine)

【INTEND USE】
The reagent is intended for the invitro quantitative determination of Cholinesterase (CHE) in human serum,plasma. Reduce CHE vitality is common in liver disease and cachexia, is liver cell damage and cancer progression marker. Clinical diagnostic assay CHE can be used in poisons of organophosphate pesticides or poisons in acute and chronic intoxication of war. In severely ill patients with liver disease, the patient is about four-fifths of CHE lowered to 60% of normal, critically ill patients can be reduced to 10% of normal. In addition, chronic active liver disease can lead to CHE viability decreased.

【METHODOLOGY】
Butyrylthiocholine generated butyric acid and glucosinolates choline under the catalysis of cholinesterase,The reaction of glucosinolates choline and 5, 5 - disulfide generation - 2 - nitro benzoic acid,generate 5 - mercapto - 2 - nitro benzoic acid and 2 - nitro benzoic acid - 5 - sulfonium glucosinolates choline,By testing - mercapto - 2-5 nitro benzoic acid at 405 nm absorbance changes, serum CHE activity can be calculated.

5, 5 - disulfide generation - 2 - nitro benzoic acid + Butyrylthiocholine $\xrightarrow{\text{CHE}}$ 5 - mercapto - 2 - nitro benzoic acid +2 - nitro benzoic acid - 5 - sulfonium glucosinolates choline

【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.

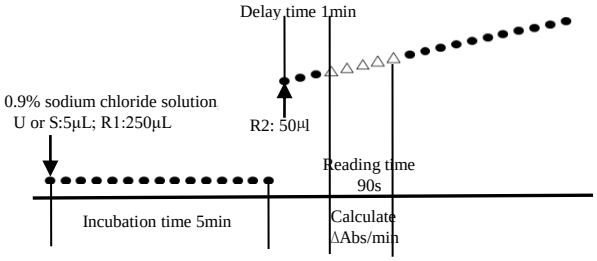
【SPECIMEN COLLECTION AND HANDLING】
Serum or Heparin plasma ,Do not use contaminated samples.
Stability of sample: 2~8℃ preservation stability in 3 days;
When the ascorbic acid concentration of sample≤1704 μmol/L;bilirubin concentrations≤770 μmol/L,hemoglobin hemoglobin≤10.00g/L, triglyceride concentrations≤15.8mmol/L, 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	660nm
Assay Type	Rate method
Direction	Increase
Sample : Reagent Ratio	1:36:18
eg : Sample Vol	5 μL
Reagent1 Vol	250 μL
Reagent2 Vol	50 μL
Linearity	20～15000U/L
Testing	Deducting the reagent blank

【OPERATION STEPS】
R1: Reagent 1 R2: Reagent 2 S: Calibrator U: Sample



【CALCULATION】
$$\text{CHE（U/L）} = \frac{\text{Sample } \Delta A/\text{min}}{\text{Calibrator } \Delta A/\text{min}} \times \text{Calibrator concentration}$$

【REFERENCE RANGE】
Female: 3930～10800 U/L Male: 4000～12600 U/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】
CHE 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: 20～15000U/L,r≥0.990.
5. Stability: All package reagent, unopened and avoid light, preservation in 2~8 ℃, stable 12 months, once opened, avoid light, preservation in 2~8 ℃,stable 30 days.

【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 15000U/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.This specification is applied to the double reagent.
5.Different batches reagents cannot mix, when replacing reagents batch number, please calibration again.

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