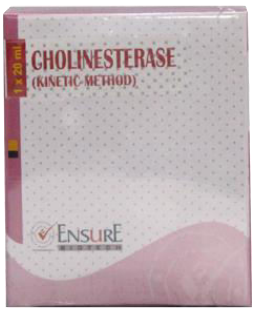
CHOLINESTERASE

(BUTYRYLTHIOCOLINE POTASSIUM HEXACYANOFERRATE (III) METHOD)



INTEND USE :

This reagent kit is intended for "***in vitro***" quantitative determination of Cholinesterase activity in serum/plasma.

CLINICAL SIGNIFICANCE

Cholinesterase measurements are used as a test of liver function, as an indicator of organophosphate insecticide poisoning, and as a means to investigate atypical, weakly active variants of the enzyme. Adecreased level of enzyme activity is an indication of any of the above conditions. The test is also used to identify patients with low enzyme activity who may enter a period of prolonged apnea following the administration of succinylcholine, a drug used as a muscle relaxant in surgery.

PRINCIPLE :

Bulyrylthiocholine is hydrolyzed by cholinesterase to produce thiocoline in the presence of potassium hexacyanoferrate (III), the absorbence decrease is proportional to the cholinesterase activity of the sample.

REAGENT COMPOSITION :

Reagent 1 : Buffrer Reagent

Reagent 2 : Butyrylthiocholine iodide Reagent Reagent

MATERIALS REQUIRED BUT NOT PROVIDED :

- Clean & Dry Glassware
- Micropipettes & Tips
- Colorimeter or Bio-Chemistry Analyzer.

SAMPLES :

Serum tree of hemolysis. Heparin or EDTA plasma.

WORKING REAGENT PREPARATION & STABILITY :

1. Mix4 Volume of Reagent1,with 1 Volume of Reagent
2. Working Reagent is stable for 30 days at 2°-8°C.

GENERAL SYSTEM PARAMETERS :

Reaction Type	Kinetic Reaction
Wave Length	405nm
Light path	1cm
Reaction Temperature	37°C
Blank/Zero Setting	With Distilled Water
Reagent Volume	1ml
Sample Volume	15 µl
Lag/Delay Time	60 Sec
Read Time	90 Sec
Interval Time	30 Sec.
Factor	73000
Low Normal at 37°C	4850 µl
High Normal at 37°C	12000 µl
Linearity	12000 µl
Max. AAbs/Min	0.164
Units	U/l

ASSAY PROCEDURE :

Mix and after 60 second incubation. measure the decrease in absorbance every 30 second interval during 90 seconds at 37°C.

Working Reagent	1000µl
Sample	15 µl

CALCULATION :

At 405nm with 1 cm Light path

CHOLINESTERASE Activity (U/I) = AA/min. x 73000

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LINEARITY :

Linear up to 12000 U/l
Dilute the sample appropriately and re-assay If Cholinesterase Activity exceeds 12000 U/l or AAbs / min Exceeds 0.164 . Multiply result with dilution factor.

REFERENCE NORMAL VALUE

4850 to 12000 U/l

The reference values are only indicative in nature. Every laboratory should establish its own normal ranges.

QUALITY CONTROL :

For accuracy it is necessary to run known controls with every assay.

LIMITATION & PRECAUTIONS :

1. Storage conditions as mentioned on the kit to be adhered.

2. Do not freeze or expose the reagents to higher temperature as it may affect the performance of the kit.

3. Before the assay bring all the reagents to room temperature.

4. Avoid contamination of the reagent during assay process.

5. Use clean glassware free from dust or debris.

6. Reagent to sample ratio as mentioned here above must be strictly observed as any change in to it will effect the factor.

Higher AST/GOT values may induce falsely low result due to depletion of the substrate (total consumption of NADH before reading of the result). if an analyzer is used verify the presence of depletion factors on application

BIBLIOGRAPHY :

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