Swemed DIAGNOSTICS

CHOLESTEROL KIT

Method: CHOD/POD
PRINCIPLE:

The enzymatic reaction sequence employed in the assay of Cholesterol is as follows:

$$\text{Cholesterol Esters, } + H_2O \xrightarrow{\text{CHE}} \text{Cholesterol + Fatty Acid}$$

$$\text{Cholesterol} + O_2 + 4 - \text{Aminoantipyrine} + \text{PHENOL} \xrightarrow{\text{POD}} \text{CHINONIMINE (Red Coloured Complex)}$$

REAGENTS PROVIDED & STABILITY:
1. Cholesterol Reagent : Ready – To – Use
2. Cholesterol Standard : Ready – To – Use

The unit is stable at 2-8°c until the expiry date mentioned on the label.
Avoid Contamination of Ready-To-Use Reagents. Always use fresh pipette tips. Keep always the caps tightly closed.

COLLECTION AND HANDLING OF SPECIMEN:
1. Serum is the sample of choice. Heparinized or EDTA Plasma can also be used.
2. Anticoagulants like fluoride & oxalate will cause falsely elevated values.

Equilibriate all reagent tubes at 37^0 C before adding sample/standard.

Assay Parameter
Mode : End point.
Reaction Slope : Increasing.
Wave length : 505nm.
Temperature : 37^0 C, 1 cm path length Cuvette.
Blank Reagent : Blank.
Reagent Volume : 1000ul.
Sample Volume : 10ul.
Incubation time : 10 min.
Standard concentration: 200mg / dl.
Linearity : 700 mg.
Units : mg/dl.

Manual Assay

Pipette into cuvettes	Macro (ul)	Semi-Micro (ul)
Reagent	1000	500
Sample/Standard	10	5

Mix & incubate for 10 minutes at 37°c and read the absorbance of all the cuvettes at 505 nm, within 60 mins against Reagent Blank.

CALCULATION:

$$\frac{\text{Abs. (Sample)}}{\text{Abs. (Standard)}} \times \text{Concentration of Standard (mg/dl)} = \text{mg/dl CHOLESTEROL}$$

Note: Lipaemic sera require a serum blank with saline.

EXPECTED VALUES : 150 – 250 mg/dl

RISK CLASSIFICATION: Desirable < 200 mg/dl
Borderline High 200 - 239 mg/dl

LINEARITY: The kit is linear to 700 mg/dl

REFERENCES:

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