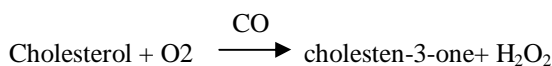
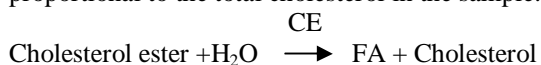


PRINCIPLE:

Cholesterol esterase (CE) catalysis the hydrolysis of cholesterol ester into free cholesterol and fatty acid (FA). The free cholesterol is then oxidized to cholesten-3-one and hydrogen peroxide in the presence of cholesterol oxidase (CO). Phenol and 4-aminoantipyrine (4-AAP) then combine with the hydrogen peroxide in the presence of peroxidase to produce red quinoneimine. The intensity of the colour thus produced is directly proportional to the total cholesterol in the sample.



REAGENT COMPOSITION:

1. Cholesterol monoreagent
2. Cholesterol standard (200mg/dl)

REAGENT PREPARATION:

Reagent is ready to use.

STORAGE & STABILITY:

Store at 2-8° C, and keep away from light. Unopened reagent is stable until expiry date stated on the label.

AUTOMATED PARAMETERS:

Parameter	Test
Reaction type	Endpoint (CHO-PAP)
Wavelength	505 nm (490-520 nm)
Reaction temperature	37° C
Incubation	10 min.
Blank	Reagent
Reagent blank limit	< 0.2 O.D
Sample volume	10 µl
Reagent volume	1000 µl
Standard concentration	200mg/dl
Linearity	600mg/dl

SAMPLE:

Unhemolysed serum or heparinised plasma can be used.

PROCEDURE:

Let stand reagents and specimens at room temperature.

Tube	Blank	Standard	Test
Reagent	1000µl	1000 µl	1000 µl
Standard	-	10 µl	-
Sample	-	-	10 µl
Mix and Incubate @ 37 °C for 10 min. Read the absorbance at 500 (460-560nm) against reagent blank within 30 minutes.			

CALCULATIONS:

Calculate the result as follows:

$$\text{Cholesterol (mg/dl)} = \frac{A_{\text{sample}}}{A_{\text{standard}}} \times 200\text{mg/dl.}$$

Expected Value:

Adult : upto 200mg/dl

Each lab should optimize its own normal range.

REFERENCE:

1. Richmond,W, Clin. Chem. 19, 1350-1356 (1973)
2. Thomas,L, Labor and Diagnose, 2 Aufl. (1984).
3. Flegg,HM, Ann. Clin.Biochem 10,79-84 (1973).