

Exp#5

Cholesterol

**Quantitative determination of total
.cholesterol in serum**

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Cholesterol is a fatty substance found in blood, bile
.and brain tissues

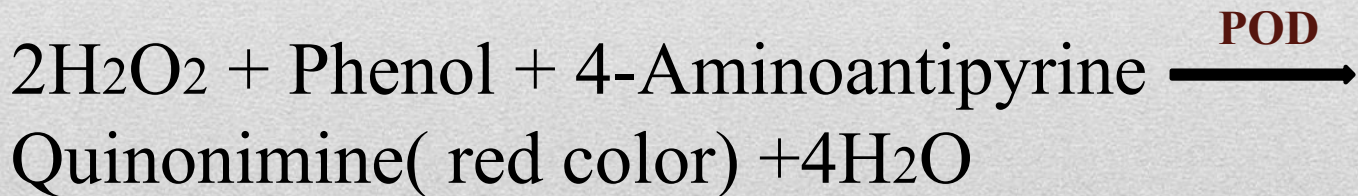
It serves as a precursor to bile acids, steroids and
vitamin D. The determination of serum cholesterol
is a major aid in the diagnosis and classification of
lipemias, hepatic and thyroid diseases

High blood cholesterol is one of the major risk-
.factors for heart disease

Major dietary sources of it cheese, egg yolks ,beef,-
fish, and shrimp

Principle

The cholesterol present in the sample originates a colored complex, according to the following reaction



CHE= cholesterol esterase

CHOD= cholesterol oxidase

POD= peroxidase

This dye is proportional to the cholesterol concentration of Cholesterol in the sample

:Specimen*

Serum or heparinized sample



Procedure

Test	STD	
1000	1000	WR - μ l
---	10	STD- μ l
10	---	Sample- μ l

Mix and incubate at 37C for 5 min, then read A at 505 nm

Calculation

$$\frac{(A \text{ test})}{A \text{ Std}} \times \text{Conc. Of Std}(200 \text{ mg/dl}) = \text{Chol (mg/dl)}$$

:Normal Range*

Desirable.....<200 mg/dl

High..... \geq 300 mg/dl
