

Freiburg Medical Laboratory ME LLC, P.O.Box 3068, Dubai



HDL cholesterol

see also Lipoprotein electrophoresis

Total cholesterol

General:

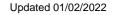
Cholesterol is an essential component of cell membranes and lipoproteins as well as a precursor for the synthesis of steroid hormones and bile acids. Cholesterol occurs in plasma - due to its low water solubility - exclusively as a complex with apolipoproteins. LDL bound cholesterol is transported to the peripheral tissues. Elimination of the excessive cholesterol to the liver occurs through HDL. Nutritionally supplied cholesterol is absorbed to only 40%. Endogenous cholesterol synthesis is normally prevented by high concentrations of LDL cholesterol in plasma and increased alimentary cholesterol supply. However oral supply of long-chain polysaturated fatty acids (triglycerides) or increased energy supply in general can lead to an increase of LDL cholesterol in plasma resulting in hypercholesterinemia and, as a consequence, to an elevated cardiovascular risk. Cholesterol elimination of LDL in plasma due to reduced transport of LDL cholesterol into the cell. Secondary hypercholesterolemia appears in cases of hypothyroidism or kidney disorders as well as in pancreas or liver disorders.

- Indication: Elevated serum cholesterol levels are considered a major risk factor of coronary heart disease.
 - Material: 1 ml serum
 - TAT: same day, FML
 - Stability: 7 days at 2 to 8°C
 - Units: mg/dl
 - Method: photometric
- Ref.- range: see report
 - Note: in case of values exceeding 200, HDL cholesterol and triglyceride determination is additionally recommended for the estimation of the LDL concentration (according to Friedewald).

Friedewald formula: LDL [mg/dl] = (Cholesterol total) - (HDL Cholesterol) - (Triglycerides/5)

(can be applied only in clear serum samples without chylomicrons and with triglyceride contents < 400)

Page 1 of 2





Freiburg Medical Laboratory ME LLC is accredited according to DIN EN ISO 15189.





• HDL cholesterol

General:

While LDL transports cholesterol to peripheral tissues, the HDL fractions are necessary for the return transport of excessive cholesterol to the liver. About 25% of the total serum cholesterol is transported in the High-Density Lipoprotein (HDL) class. HDL cholesterol is affected by several factors, e.g. smoking, sports, hormones, gender and age. In contrast to LDL, HDL is a protective factor in the development of coronary heart disease.

- Indication: hypercholesterolemia, risk estimation of atherosclerosis (e.g. heart attack), hypertriglyceridemia.
- Preanalytics: 12 hours fasting
 - Material: 1 ml serum
 - Stability: 7 days at 2 to 8°C
 - TAT: same day, FML
 - Units: mg/dl
 - Method: photometric
- Ref.- range: see report

LDL-cholesterol

- Indication: Hypercholesterolemia, risk evaluation of atherosclerosis (e.g. heart attack), xanthoma
- Preanalytics: after 12 hours fasting
 - Material: 1 ml serum
 - Stability: 7 days at 2 to 8°C
 - TAT: same day, FML
 - Method: photometric
 - Ref.- range: see report

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit http://www.fml-dubai.com/parameter-listings/

Page 2 of 2



Freiburg Medical Laboratory ME LLC is accredited according to DIN EN ISO 15189.

Updated 01/02/2022