

Bile Acids

General:

Conjugated bile acids, coupled to glycine or taurine, have a substantial function in fat resorption by the production of micelles. About 90% of bile acids secreted by the biliary gland are actively reabsorbed in the ileum and are subject to the enterohepatic cycle. Micelle formation can be impaired by the bacterial over-colonization (e.g. anaerobes) or in inflammatory disorders (M. Crohn). Thus non-absorbed bile acids reach the colon and cause a bile induced steatorrhea and diarrhea (bile acid loss syndrome).

Bile acid loss can lead to compensatory over-production in the liver thus leading to increased lithogenicity of the bile with cholesterol gallstone formation. As a further consequence, steatorrhea can lead to increased absorption of oxalic acid (intestinal binding of calcium with fatty acids) with a tendency of oxalate stone formation in the kidney.

The following tests are available:

- **Bile acids in stool**

Indication: Suspicion of decompensated bile acid loss syndrome, hepatocellular dysfunction, bile induced steatorrhoea, maldigestion, ileum dysfunction

Material: 5 g stool

TAT: 7-10 days*

Method: ezymatic test

Units: $\mu\text{mol}/100\text{g}$

Ref.- range: 200 – 900

- **Bile acids in blood (choleglycin)**

Indication: DD of steatorrhea / diarrhea, increased oxalate kidney stone formation, cholelithiasis.

Material: 1 ml serum

TAT: 7-10 days*

Method: ezymatic test

Units: $\mu\text{mol}/\text{l}$

Ref.- range: < 10.0

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