

Bilirubin



Synonyms

Total Bilirubin

Clinical Indication

Bilirubin is derived from haem and transported to the liver bound mainly to albumin (unconjugated bilirubin). In the liver bilirubin is conjugated with glucuronic acid (conjugated bilirubin) which makes it water soluble and is excreted in bile.

Serum bilirubin levels are a balance between production and clearance. The liver has a large capacity for conjugation of bilirubin. Bilirubin is therefore a relatively insensitive test of liver disease. The presence of conjugated bilirubin in the plasma always indicates a pathological process.

Gilberts syndrome is a common cause of isolated hyperbilirubinaemia due to increased unconjugated bilirubin (typically with bilirubin <100 umol/L).

Most common chronic haemolytic disorders present with mild unconjugated hyperbilirubinaemia. In adults, quantitation of conjugated bilirubin is seldom necessary unless intra-vascular haemolysis is suspected. However, measurement of conjugated bilirubin is important in assessment of neonatal jaundice.

Part of Profile / See Also

Liver Function Test

Request Form

Combined Pathology manual Blood form or ICE request

Availability / Frequency of Analysis

On request.

Turnaround Time

Same day

Patient Preparation

None required

Sample Requirements

Specimen Type

Serum and plasma

Volume

2 ml

Container



Green top (lithium-heparin) tube



Or Yellow top (SST) tube



Or Paediatric green top (lithium-heparin)

Plain serum samples may also be used.

Reference Range & Units

Total Bilirubin: 0 - 21 umol/L

Interferences

Bilirubin is photosensitive, and specimens should be protected from light when highly accurate measurements are required. This is especially important with specimens collected from neonates.

Interpretation & Clinical

Critical Difference 100%

Decision Value (if applicable)

Critical phoning limit >180 umol/L (paediatric only)

References

Beckman

Pathology Harmony Group, Clinical Biochemistry Outcomes, January 2011 (www.pathologyharmony.co.uk)

Association for Clinical Biochemistry Analyte Monograph - Bilirubin (2012)

Test code

L (part of the liver function test).

Lab Handling

Analysed from primary tube and stored at 4°C.

Serum and plasma stable at 2-8°C for 7 days.