

Bilirubin (direct)	
Description	Direct bilirubin measures the conjugated bilirubin. Must be requested specifically, not assayed as part of the LFT.
Indication	Assists detection, diagnosis and control of hepatobiliary disorders and haemolytic disease. Measurement of conjugated (direct) and calculation of unconjugated (indirect) bilirubin assists in identifying the underlying pathological process causing hyperbilirubinaemia.
Additional Info	Bilirubin is produced during normal and abnormal degradation of erythrocytes in the reticuloendothelial system.
Concurrent Tests	LFT's
Dietary Requirements	N/A
Interpretation	Approximately 85% of total bilirubin produced is derived from haemoglobin released from senescent erythrocytes destroyed in the reticuloendothelial system. Bilirubin produced in peripheral tissues is transported to the liver bound to albumin. It is conjugated with glucuronic acid in the hepatocytes producing monoacid diglucuronides which are excreted into bile. Hyperbilirubinaemia may be due to excess of either/ both conjugated and unconjugated bilirubin. In liver disease, impaired excretion is the major cause and the retained bilirubin is conjugated. In haemolysis, hyperbilirubinaemia is due to increased bilirubin production which exceeds the capacity of the liver to remove and conjugate the products. This increase is unconjugated bilirubin. In the absence of liver disease, unconjugated bilirubin is most often due to either haemolysis or Gilbert's syndrome.
Collection Conditions	Haemolysed samples are unsuitable for direct bilirubin analysis.
Frequency of testing	Acute setting: Test at weekly intervals ¹

¹ National Minimum Re-testing Interval Project: A final report detailing consensus recommendations for minimum re-testing intervals for use in Clinical Biochemistry (2013). <http://www.acb.org.uk/docs/default-source/guidelines/acb-mri-recommendations-a4-computer.pdf?sfvrsn=2>