



JOURI LABS

Bilirubin

Liquid stable reagent
Colorimetric method (T & D)

PRINCIPLE

In the presence of caffeine, Total Bilirubin reacts with Diazotized sulfanilic acid. In the absence of caffeine, only the Direct Bilirubin reacts.

REFERENCE VALUES

Total Bilirubin	Up to 1.0 mg/dl (17 μmol/L)
Direct Bilirubin	Up to 0.25 mg/dl (4.3 μmol/L)

These ranges are given for orientation only, each laboratory should establish its own normal ranges.

SAMPLES

Serum, heparinized or EDTA plasma. Bilirubin is light sensitive and it is recommended that serum be stored in the dark.

REAGENTS

R₁	Sulfanilic acid Hydrochloric acid	29 mmol/l 0.17 mol/l
R₂	Sodium nitrite	25 mmol/l
R₃	Caffeine Sodium benzoate	0.26 mol/l 0.52 mol/l
R₄	Tartrate Sodium Hydroxide	0.93 mol/l 1.9 mol/l

All reagents are ready to use and stable at 15-25°C until the expiry date stated on each label.

PROCEDURE

Total Bilirubin	578 nm
Direct Bilirubin	546 nm
Temperature	Room temperature
Method	Endpoint - increasing

Total Bilirubin

	Adult		Pediatric	
	Blank	Sample	Blank	Sample
R ₁	0.1 ml	0.1 ml	0.1 ml	0.1 ml
R ₂	-	25 μl	-	25 μl

Mix well before the addition of R3

R ₃	0.5 ml	0.5 ml	0.5 ml	0.5 ml
Sample	100 μl	100 μl	20 μl	20 μl

Mix and incubate 5 minutes at 15-25°C

R ₄	0.5 ml	0.5 ml
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Mix and read the optical density (O.D) after 5 minutes incubation against the Blank Sample .

The final color is stable for at least 30 minutes.

Direct Bilirubin

	Blank	Sample
R ₁	0.1 ml	0.1 ml
R ₂	-	25 μl
Nacl (9 g/L)	1 ml	1 ml
Sample	100 μl	100 μl

Mix and read the optical density (O.D) after 5 minutes incubation against the Blank Sample.

CALCULATION

Total Bilirubin

Adult assay: (mg/dl) = OD x 10.8
(μmol/L) = OD x 185

Pediatric assay: (mg/dl) = OD x 50
(μmol/L) = OD x 856

Direct Bilirubin

(mg/dl) = OD x 14.4
(μmol/L) = OD x 246

LINEARITY

Up to 25 mg/dl.

SPECIFICATION

Lipid 4g/l, glucose 10g/l and ascorbic acid 0.5g/l don't interfere with the assay up to the given levels.

NOTES

- Bilirubine in serum stable for 4 days at 2-8°C and 1 days at 15-25°C (avoid direct exposure to light).
- R4 contains sodium hydroxide which is caustic.

PRESENTATION

2 X 120 ml Cat No 0901 240 tests x2

BIBLIOGRAPHY

- Jendrassik, L. and Grof. P., Biochem. Z. 81. 297(1938).
- Matimck R.G. Clin. Chim. Acta 13. 161 (1966).

The following symbols are used on labels



For in vitro diagnostic use



Use day (last day of the month)



Temperature limitation



Batch code



Code