Total bilirubin (TBIL) Content Assay Kit

Note: Take two or three different samples for prediction before test.

Operation Equipment: Spectrophotometer

Catalog Number: BC5180

Size: 50T/48S

Components:

Reagent I: 55 mL×1. Store at 2-8℃.

Reagent II: 15 mL×1. Store at 2-8℃.

Product Description：

Total bilirubin (TBIL) is the sum of direct bilirubin and indirect bilirubin. Determination of serum total bilirubin is an important item in liver and gallbladder function tests. The content of direct bilirubin is of great significance for clinical diagnosis of latent jaundice. Total bilirubin could be oxidized by sodium nitrite to form biliverdin, which has absorbance in 450 nm. The content of total bilirubin can be calculated by detecting the wavelength change at 450 nm.

Reagents and Equipment Required but Not Provided：

Spectrophotometer, desk centrifuge, constant temperature foster box/water-bath, pipette, 1mL glass cuvette, ice and distilled water.

Procedure

I. Sample preparation:

Serum, plasma or other liquid samples: Detect sample directly. If the solution is turbid, perform the measurement after centrifuging.

II. Determination procedure：

1. Preheat spectrophotometer for 30min, adjust wavelength to 450 nm, set counter to zero with distilled water.

2. Determination:

Reagent (μL)	Test tube	Blank tube
Sample	65	-
Distilled water	-	65
Reagent I	800	800
Mix well. Avoid light and react at 37℃ for 5 minutes. Measure the absorbance at 450 nm, record as $A1_T$, $A1_B$;		
Reagent II	200	200

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Mix well. Avoid light and react at 37℃ for 5 minutes. Measure the absorbance at 450 nm, record as $A2_T$, $A2_B$. Calculate the $\Delta A_T = A1_T - A2_T$, and the $\Delta A_B = A1_B - A2_B$. Blank tube only need to be measured once or twice.

(when first step of 5min reaction completed and colorimetric in cuvette completed, the reagent II can be directly added to the cuvette for uniform reaction for 5min)

III. Calculations：

TBIL content (μmol/L) $=491.98\times(\Delta A_T-\Delta A_B)+18.478$

Note:

1. Bilirubin decomposes easily in light. Avoid light during measurement.
2. If the $\Delta A < 0.01$, it is recommended to increase the sample size before determination; If $\Delta A > 1.2$, it is recommended to dilute the sample before determination.

Examples:

1. Take mouse serum to follow the determination procedure to operate. Determination and calculate $\Delta A_T=A1_T-A2_T=0.348-0.124=0.224$, $\Delta A_B=A1_B-A2_B=0.009-0.006=0.003$. The calculated content is as follows:

   TBIL content (μmol/L) $=491.98\times(\Delta A_T-\Delta A_B)+18.478=127.2$ μmol/L.

Related products

BC5170/BC5175 Direct bilirubin (DBIL) Content Assay Kit

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