Uric Acid Assay Kit

(Cat/No.: BC035 Size:96T)

1. Compositions (The kit is valid for 1 year)

Reagent	Format	Storage
Reagent I	1 Bottle, 18mL	store at 4℃ in the dark
Reagent II	1 Bottle, 6mL	store at 4℃ in the dark
Standard	0.2 mL × 1 vial (200 μmol/L)	store at 4℃ in the dark
An additional 96-well flat-bottom microplate is included.		

2. Principles of the Kit

$$\text{Ascorbic Acid} + O_2 \xrightarrow{\text{Ascorbate Oxidase}} \text{Dehydroascorbic Acid} + H_2O$$

$$\text{Uric Acid} + 2H_2O + O_2 \xrightarrow{\text{Uricase}} \text{Allantoin} + CO_2 + H_2O_2$$

$$H_2O_2 + 4-\text{AAP} + \text{TOOS} \xrightarrow{\text{POD}} \text{Dyes} + H_2O$$

Colorimetry is performed at a specific wavelength, and the concentration of uric acid (UA) can be calculated accordingly.

3. Storage Conditions and Shelf Life

All reagents (sealed or not) should be kept at 2-8°C and remain stable for 12 months when sealed or for 1 month after unsealing.

4. Instrumentation

Microplate Reader, Micropipette, Multichannel Pipette, 96-well Microplate (1 piece included).

5. Procedures

Reagents (μL)	Blank	Standard	Sample
Distilled Water	4		
Standard		4	
Sample			4
Reagent I	180	180	180
Gently agitate the plate to mix, incubate at 37℃ for 5 minutes, and read the absorbance at 550nm using the microplate reader (recorded as A1)			
Reagent II	60	60	60

Gently agitate the plate to mix the contents, incubate at 37℃ for 5 minutes, and then read the absorbance again at 550nm using the microplate reader (recorded as A2).Calculation $\Delta A=A_2- A_1$.

6. Calculation Formula and Reference Value

$$Uric\ Acid\ Conc._{\mu M} = \frac{\Delta A_{Sample} - \Delta A_{Blank}}{\Delta A_{Standard} - \Delta A_{Blank}} \times C_{Standard}$$

$C_{standard:}$ Concentration of the calibration sample, μmol/L

7. Parameters

1. Blank Absorbance: A_{Blank}≤0.1 (1cm path length).
2. Linearity Range:7～2800μmol/L， r^2≥0.995.
3. Accuracy: Relative deviation≤10%.
4. Precision: CV within a batch≤4%, CV among batches≤5%.

Sensitivity: When the concentration is 500 μmol/L, the ΔA value ranged from 0.01 to 0.05.

8.Notes

1. This assay kit is designed for research purpose only. Were the reagent split on the skin or in the eyes, wash the reagent with water. Please go for the doctor if swallowed.
2. If the instrument does not specify the wavelength, a wavelength of 600nm can be used instead. It is not recommended to mix different batches of reagents.
3. Implement safety protection measures and follow the operating precautions for laboratory reagents. All waste liquids should be disposed of in accordance with local regulations.
4. Before reading the data with the microplate reader, there should be no bubbles in the wells; otherwise, the results will be affected..