

# Enzymatic Creatinine

FOR THE QUANTITATIVE MEASUREMENT OF CREATININE

**METHOD: ENZYMATIC (CREATININE AMIDOHYDROLASE); ENDPOINT**

Creatinine measurements are used as an aid to monitor and diagnose renal disease.

Sekisui's Enzymatic Creatinine assay utilizes a multi-step approach ending with a photometric end-point reaction. The assay accurately measures creatinine levels in serum, plasma and urine.

Generally, enzymatic methods have been shown to be more specific for the determination of creatinine levels than Jaffé-based methods.

## Features:

- No significant interference from samples with elevated levels of lipemia, hemolysis, icterus or ascorbic acid
- Excellent precision and specificity
- Liquid, ready to use reagent
- Applicable to multiple chemistry platforms
- Serum, lithium heparin plasma or urine acceptable

## Benefits:

- High reliability of testing
- Confidence in results
- Easy to use; no additional preparation required
- Laboratory flexibility
- Flexible sample types to meet different laboratory needs

## Performance Characteristics

### Precision

- Within-Run:  $\leq 0.6\%$
- Total Precision:  $\leq 2.7\%$

### Accuracy<sup>(a)</sup>

#### SERUM

- Slope: 1.03
- Intercept:  $-0.13 \text{ mg/dL}$  ( $-11.49 \text{ } \mu\text{mol/L}$ )
- Correlation Coefficient: 1.0000

#### PLASMA

- Slope: 1.01
- Intercept:  $-0.03 \text{ mg/dL}$  ( $-2.92 \text{ } \mu\text{mol/L}$ )
- Correlation Coefficient: 0.9997

#### URINE

- Slope: 1.04
- Intercept:  $1.06 \text{ mg/dL}$  ( $93.70 \text{ } \mu\text{mol/L}$ )
- Correlation Coefficient: 0.9995

### Linearity

- Serum/Plasma:  $0.03 - 30.0 \text{ mg/dL}$   
( $3 - 2652 \text{ } \mu\text{mol/L}$ )
- Urine:  $0.02 - 175.0 \text{ mg/dL}$   
( $2 - 15470 \text{ } \mu\text{mol/L}$ )

### No Significant Interferences Up to Levels Indicated

- Hemoglobin:  $1000 \text{ mg/dL}$  ( $155.0 \text{ } \mu\text{mol/L}$ )
- Intralipid:  $1000 \text{ mg/dL}$  ( $3000 \text{ mg/dL}$   
( $33.9 \text{ mmol/L}$ ) Simulated Triglycerides)
- Ascorbic Acid:  $3000 \text{ } \mu\text{g/dL}$  ( $170 \text{ } \mu\text{mol/L}$ )
- Unconjugated Bilirubin:  $16 \text{ mg/dL}$   
(serum) ( $273.6 \text{ } \mu\text{mol/L}$ );  $40 \text{ mg/dL}$  (urine)  
( $684 \text{ } \mu\text{mol/L}$ )
- Conjugated bilirubin:  $40 \text{ mg/dL}$   
( $474 \text{ } \mu\text{mol/L}$ )

### Reference Range<sup>(1)</sup>

#### SERUM/PLASMA

- Males:  $\leq 1.2 \text{ mg/dL}$  ( $\leq 104 \text{ } \mu\text{mol/L}$ )
- Females:  $\leq 1.0 \text{ mg/dL}$  ( $\leq 84 \text{ } \mu\text{mol/L}$ )

#### URINE 1ST MORNING

- Males:  $40 - 280 \text{ mg/dL}$   
( $3500 - 25000 \text{ } \mu\text{mol/L}$ )
- Females:  $30 - 230 \text{ mg/dL}$   
( $2600 - 20000 \text{ } \mu\text{mol/L}$ )

(a) The performance of this method (y) was compared with the performance of a similar method (x) on an Advia® 1650.

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## Ordering information

	Configuration	Catalog Number
<b>Enzymatic Creatinine</b>	R1 3 x 100mL R2 1 x 100mL	265-30
<b>DC-Cal Calibrator</b>	5 x 3mL	SE-035
<b>DC-Trol Level 1</b>	10 x 5mL	SM-052
<b>DC-Trol Level 2</b>	10 x 5mL	SM-056

(1) Heil, W., Koberstein, R., Zawta, B. Reference Ranges for Adults and Children, Roche Diagnostics, Mannheim, 2002.

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