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ACCUCARE
CREATININE
Alkaline Picrate Method

Quantitative determination of Creatinine in serum & urine
Only for *In Vitro* Diagnostic use

ORDER INFORMATION

REF	Cont.
CRE 100	2 X 50 ML
CRE 200	2 X 100 ML
CRE 500	2 X 250 ML
CRE 1000	2 X 500 ML

CLINICAL SIGNIFICANCE

Creatinine is the catabolic product of high energy storage compound, Creatinine Phosphate formed in muscle. The amount of creatinine produced is fairly constant and is primarily a function of muscle mass. Creatinine is excreted out of body entirely by the kidneys.
Elevated levels are found in renal dysfunction, reduced renal blood flow (shock, dehydration, congestive heart failure) diabetes acromegaly. Decreased levels are found in muscular dystrophy

PRINCIPLE

Creatinine reacts with alkaline picrate to produce orange coloured complex. Intensity of the colour formed during the fixed time is directly proportional to the amount of creatinine present in the sample.

REAGENT COMPOSITION

Reagent I : NaOH Reagent
Reaent II : Picrate reagent
Creatinine Standard : 2 mg/dl (0.16 mmol/L)

SAMPLE COLLECTION AND PRESERVATION

Serum, heparinized plasma or urine collected by standard procedures.
Anticoagulants other than heparin should not be used.
Creatinine in serum or plasma is stable for 1 day at 2-8ºC.
Urine (24 hr) : Dilute sample 1/20 with distilled water. Mix. Multiply results by 20 (dilution factor); Creatinine stability: 7 days at 2-8ºC.

REAGENT PREPARATION

Mix equal volumes of the two reagents prior to use. A measuring cylinder may be used for this as the exact volumes are not critical, eg: to 5 mL of Picric Acid reagent add 5 mL of NaoH reagent.

REAGENT STORAGE AND STABILITY

Prior to use:
When stored at 15-30°C and protected from direct sunlight, the reagents are stable until the expiry date stated on the bottle and kit box labels.
Working Reagent:
The working reagent is stable for 3 days when stored capped at 2-8°C

REFERENCE VALUES

	MEN	WOMEN
SERUM	0.8 - 1.4	0.7 - 1.2 mg/dl
24h URINE	1.0 - 2.0	0.8 - 1.8 G/24h

The reference values are to be considered as indicative only. Every laboratory should establish its own normal range.

AUTOMATED PARAMETERS	
Wavelength	500 nm
Measurement	Against D/W blank
Cuvette	1 cm light path
Reaction Temperature	Room Temperature
Reaction Type	Fixed Time
Reaction Direction	Increasing
Sample Volume	100 µl
Reagent Volume	1000 µl
Delay/Lag/Time	30 sec.
Interval Time	60 sec.
No. of Readings	01
Low Normal at 37°C	0.8 mg/dl
High Normal at 37°C	1.4 mg/dl
Linearity at 37°C	25 mg/dl

MANUAL ASSAY PROCEDURE

PIPETTE INTO TEST TUBES

	BLANK	STD	SAMPLE
Sample	-	-	100 µl
Standard	-	100 µl	-
Working Reagent	1000 µl	1000 µl	1000 µl

Mix and after 30 secs at R.T., read initial absorbance and start timer simultaneously. Read again after 1 min. determines ΔAbs/min. of standard (As) and sample (Ac) against reagent blank.

CALCULATION

Creatinine mg /dl Serum	ΔA / Δ As x C
Creatinine mg /dl Urine	ΔA / Δ As x C x 20
Urine Creatinine g/24 Hrs	Urine Creatinine in g/L x Vol. of urine in 24 Hrs.

C = Concentration Standard

LINEARITY

The method is linear to a concentration of 25 Mg/dl

QUALITY CONTROL

It is recommended to run a normal and a pathological control serum which is commercially available to verify the performance of the measured procedure. The value of controls should fall within the established limit.

REFERENCES

Henry, J.B, Young D.S. teitz N.W, Vasilades, J, Can. Chem (1972), 18.

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