

Creatinine Assay Kit

Creatinine Assay Kit (urine normalizing assay)

CATALOG #
AAA71797

PRODUCT SYNONYMS

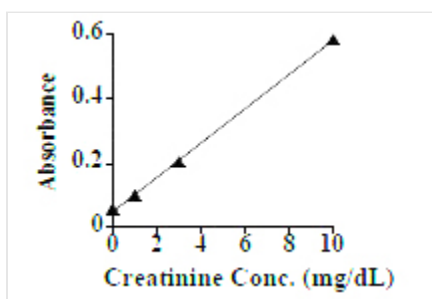
Creatinine; Creatinine Assay Kit (urine normalizing assay); Creatinine Microplate Assay; Creatinine assay kit

PRODUCT SPECIFICATIONS

Preparation and Storage

1. Store the components of this kit at the temperatures specified on the labels.
2. Unopened reagents are stable until the indicated kit expiration date.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Creatinine assay kit

Principle of the Assay: This is a colorimetric assay for the quantitative analysis of creatinine levels in urine. Urinary creatinine reacts with picric acid under alkaline conditions to produce an orange color, which can be quantified by absorption spectroscopy near the 500 nm wavelength. This reaction, known as the Jaffe reaction, also occurs non-specifically with other components in biological fluids. However, the specific color produced with creatine in this reaction is known to degrade rapidly under acidic conditions (Slot et al.). Heinegard and Tiderstrom showed that the difference in color intensity determined before and after the addition of acid is a direct estimate of creatinine concentration in the sample.

Background/Introduction: Creatine (Cr) is produced in the kidney, liver and pancreas, phosphorylated, and transported to the brain and muscle tissue. However, a small proportion of free Cr is converted irreversibly to creatinine (Crn) in the muscular tissue in proportion to the muscle mass. The amount of Crn excreted daily by an individual is relatively constant. Thus, urinary creatinine levels may be used as an index of standardization. 24-h urinary Crn excretion is used to estimate total muscle mass because the rate of non-enzymatic production of Crn from Cr is nearly constant and >90% of the total body Cr is found in muscle tissue. Normal urinary creatinine values for men and women range from 9.7 - 24.7 and 7.9 - 14.2 mmol/24h respectively. Changes in excretion rate may be indicative of impaired renal metabolism.

References

1. Slot, C.; (1965) Scand J. Clin. Lab. Invest. 17:381
2. Heinegard, D. and Tiderstrom, G.; (1973) Clin. Chim. Acta 43:305
3. Cook, J.G.H.; (1975) Ann Clin. Biochem. 43:305
4. Young, D.S., Editor; (1990) Effects of drugs on clinical laboratory tests. AACC Press, Washington
5. Wyss, M. and Kaddurah-Daouk, R.; (2000) Phys. Rev. 80:1107

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/assay-kits/creatinine/71797>