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# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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StressXpress®

# Blood Urea Nitrogen Detection Kit

Quantitative colorimetric measurement of urea nitrogen
Catalog No. SKT-213

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

## Overview

**Product Name**

Blood Urea Nitrogen Detection Kit

**Description**

Quantitative colorimetric measurement of urea nitrogen

**Species Reactivity**

Species Independent

**Platform**

Microplate

**Sample Types**

Plasma, Saliva, Serum, Tissue Culture Media, Urine

**Detection Method**

Colorimetric Assay

**Assay Type**

Direct Quantitative Assay

**Utility**

Colorimetric assay used to quantitatively measure urea nitrogen in a variety of samples.

**Sensitivity**

0.030 mg/dl

**Assay Range**

0.156 - 10 mg/dl

**Precision**

Inter Assay Precision: Three human samples were further diluted in water and run in duplicates in twenty-eight assays run over multiple days by five operators. The mean and precision of the calculated concentrations were: Sample 1- 1.29 mg/dL, 3.1% CV
Sample 2- 2.35 mg/dL, 4.3% CV
Sample 3- 5.18 mg/dL, 3.3% CV

**Incubation Time**

30 minutes

**Number Of Samples**

88 samples in duplicate

**Other Resources**

MSDS

## Properties

**Storage Temperature**

4ºC

**Shipping Temperature**

Blue Ice

**Product Type**

Detection Kits

**Assay Overview**

The Blood Urea Nitrogen (BUN) Detection Kit is designed to quantitatively measure urea nitrogen in a variety of samples. A urea nitrogen standard calibrated to NIST reference materials is provided to generate a standard curve for the assay and all samples should be read off the standard curve. Samples are mixed with Color Reagents A and B and incubated at room temperature for 30 minutes. The colored product is read at 450 nm. The concentration of urea nitrogen in the sample is calculated, after making a suitable correction for any dilution, using software available with most plate readers. The results are expressed in terms of mg/dL urea nitrogen. If samples are to be expressed in terms of mg/dL urea, the data can be converted using the multiplier 2.14.

**Kit Components**

| Component No. | Item | Quantity / Size |
|---|---|---|
| **SKC-213A** | | |
| | Clear 96 Well Plates | |
| | | 2 Plates |
| **SKC-213B** | | |
| | Urea Nitrogen Standard | |
| | | 250 µl |
| **SKC-213C** | | |
| | Color Reagent A | |
| | | 15 ml |
| **SKC-213D** | | |
| | Color Reagent B | |
| | | 15 ml |

**Cite This Product**

Blood Urea Nitrogen Detection Kit (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SKT-213)

## Biological Description

**Alternative Names**

Blood urea nitrogen Detection Kit

**Research Areas**

Cardiovascular System, Cell Signaling

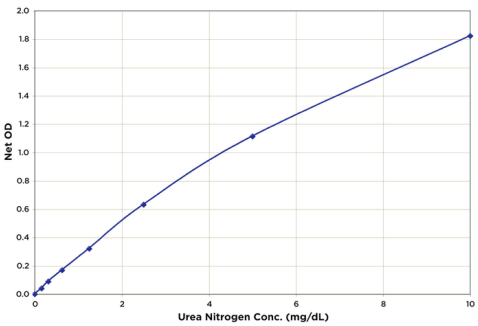
**Scientific Background**

Urea is a by-product of protein metabolism by the liver, and is therefore removed from the blood by the kidneys. Urea freely filters through the glomerulous, but is reabsorbed by the renal tubules in a flow-dependent fashion. The higher the flow rate, the greater amount of urea nitrogen is cleared from circulation and eliminated through the kidneys. As a result, the level of circulating urea nitrogen, along with serum creatinine, serves as a primary measure of kidney function. Normal adult Blood Urea Nitrogen (BUN) levels should be between 7 and 21 mg urea nitrogen per 100 mL blood (mg/dL) (1). Azotemia, poor kidney function, will cause elevated BUN levels (≥ 50 mg/dL) and is associated with acute kidney failure or injury, severe acute pancreatitis, congestive heart failure or
gastrointestinal bleeding (2-5). Azotemia also can occur with dehydration, as a result of alcohol abuse, or high protein diets. Lower than expected BUN levels are usually not clinically predictive, but are primarily associated with liver disease or malnutrition, including malabsorption and low protein diets (6). Urine and saliva are considered to be acceptable non-invasive samples for measurement of urea nitrogen (7).
Serum creatinine is another metabolic waste product freely filtered by the glumerulous, but does not undergo tubular reabsorption. Its steady rate of elimination is frequently used to generate an index or ratio with BUN values for normalized evaluations. Creatinine Urinary Detection Kit (SKT-200) and Creatinine Serum Detection Kit (SKT-217) are also available from StressMarq Biosciences.

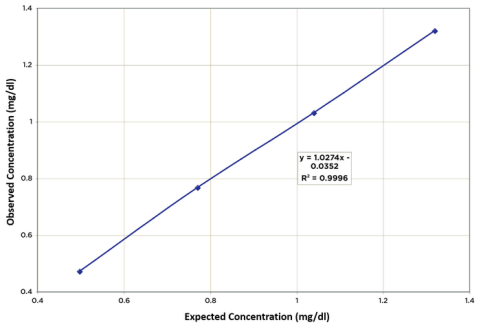
**References**

1. Laboratory reference values. Urea nitrogen (BUN). Rochester, Minn.: Mayo Foundation for Medical Education and Research; Nov. 2010.
2. Waiker, SS and JV Bonventre. (2008) Nephron Clin. Pract. 109:c192-c197.
3. Al Mofleh, IA. World J. Gastroent. (2008) Congestive heart failure. 14(5):675-684.
4. Iglesiase, J. et al. (2006) Nephrol. Dial. Transplant. 21:3458-3465.
5. Mayo Clinic. “Blood urea nitrogen (BUN) tests.” http://www.mayoclinic.com/health/blood-urea-nitrogen/MY00373/DSECTION=results
6. Lum, G and S Leal-Khouri. (1989) Clin. Chem. 35(4):639-640.
7. Akai, T, et al. (1983) Clin. Chem. 1983. 29(10):1825-1827.

## Product Images




Typical Standard Curve for Blood Urea Nitrogen Detection Kit StressXpress® – SKT-213. Assay Type: Coupled Enzyme Assay. Detection Method: Colorimetric Assay. Assay Range: 0.156 – 10 mg/dL.




Linearity was determined by taking two human serum samples with known BUN concentrations and mixing them in the given ratios. The measured concentrations were compared to the expected values based on the ratios used.

## Product Citations (0)

Currently there are no citations for this product.

## Reviews

There are no reviews yet.