

StressXpress®
Blood Urea
Nitrogen (BUN)
Detection Kit

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

Product Name

Blood Urea Nitrogen (BUN) 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

0.042 mg/dl

Assay Range

0.156 - 10 mg/dl

Precision

Intra-Assay Precision (Within Run Precision) To determine Intra-Assay Precision, three samples of known concentration were assayed at different times, with different operators. The intra-assay coefficient of variation of the BUN within assays was determined to be <10%. Inter-Assay Precision (Between Run Precision) To determine Inter-Assay Precision, three samples of known concentration were assayed at different times, with different operators. The inter-assay coefficient of variation of the BUN between assays was determined to be <20%.

Incubation Time

30 minutes

Number Of Samples

88 samples in duplicate

Other Resources

Kit Booklet Lot No. SU188700 , MSDS

Field Of Use

Not for use in humans. Not for use in diagnostics or therapeutics. For in vitro research use only.

Properties

Storage Temperature

4°C and -20°C

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 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 Overview

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

SKC-213E

Urease Enzyme

2 vials

Cite This Product

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

Biological Description

Alternative Names

BUN, Blood urea nitrogen

Research Areas

Cardiovascular System, Cell Signaling

Scientific Background

Urea is a nitrogenous waste product formed in the liver during protein metabolism and excreted by the kidneys. Blood Urea Nitrogen (BUN) levels are commonly used to assess renal function, with normal adult values ranging from 7–21 mg/dL. Elevated BUN (azotemia) may indicate kidney dysfunction, dehydration, or systemic illness.

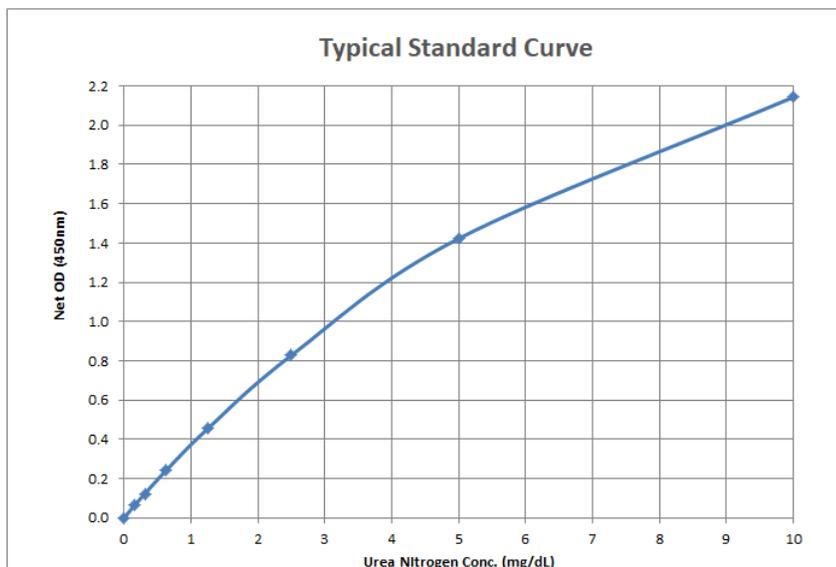
In neuroscience, impaired renal clearance of urea and other metabolites can contribute to cognitive dysfunction and neuroinflammation. Uremic toxins have been implicated in the development of encephalopathy and may exacerbate neurodegenerative conditions.

Non-invasive sampling of urea in urine or saliva, alongside serum creatinine, provides a valuable tool for monitoring systemic health in neurological research.

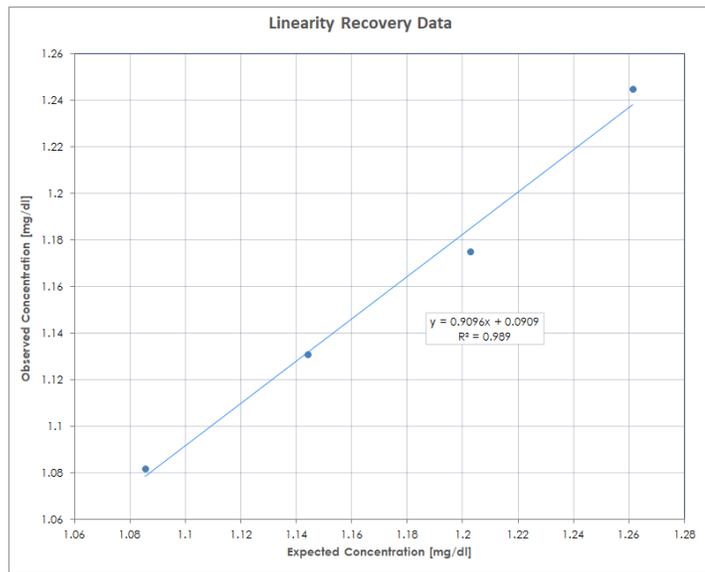
References

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. Iglasiase, 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-Khoury. (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 the 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.

Reviews

Based on validation through cited publications.



StressMarq Biosciences

May 17, 2017:

Product Citations

93/100 Bioz Rating 36 Citations 10 Images

Bioz AI Summary: The

Search term

Techniques

- Search for Techniques
- Staining (STAIN)
- Enzyme-linked Immunosorbent Assay (ELISA)
- Western Blot (WB)
- Expressing (EXP)

Journals

- Search for Journals
- Frontiers in Pharmacology
- Evidence-based Complementary and Alternative Medicine : eCAM
- Journal of ethnopharmacology
- Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie
- Drug Design Development and Therapy

Dates

- CCK-8 Assay (CCK-8)
- Journal of pharmaceutical and biomedical analysis

Andrographolide Promotes Ferroptosis in Pancreatic Cancer via Targeting and Activating HSP90/GPX4 U

Asmat Ujjan, Hongyan Xing, ..., Zhi Min Jin

BioFactors (Oxford, England) | 2025 Nov 26 | 41292183 | [Read Article](#) | [Bioz AI Brief](#)

".. biochemical analysis of various ALT, AST, BUN, and Cre was performed using the protocol.. ALT activity assa 213) from StressMark Biosciences Inc.; and CRE (ab65340) from Abcam Limited." [More...](#)

ACT-A **AST**

- Modification (MOD)

- BioFactors (Oxford England)
- Chinese medicine

- AST Assay (AST)

- Frontiers in Immunology

Single-cell RNA sequencing revealed the association between proximal tubular epithelial cells and renal inte

Youcai Xu, Xiaoqin Ye, ..., Xinhui Liu

- Frontiers in Molecular Biosciences

Scientific Reports | 2025 Nov 24 | 41286490 | [Read Article](#) | [Bioz AI Brief](#)

• Animal Model

Article Snippet

"The evaluation of serum creatinine (Scr) and blood urea nitrogen (BUN) were measured by Creatinine Serum

Detection Kit and **Blood Urea Nitrogen Detection Kit** (StressMarq Biosciences, British Columbia, Canada),

respectively. [More...](#)

Figure Legend

".. **Animal Model**. E Serum creatinine levels. F **Blood urea nitrogen** levels. G Representative Western" [More...](#)

(CC)

[FUNC-A](#)

[STAIN](#)

[EXP](#)

[HISTOPATH](#)

• Chemiluminescence Immunoassay (CLIA)

• Journal of Cell Communication and Signaling

• Molecular Medicine Reports

• Molecular biology reports

• "Nephron

• Oxidative medicine and cellular longevity

• Renal Failure

• Scientific Reports

• Colorimetric Assay

(COLOR-A)

• Scientific Reports

Tri-domain protein 25 alleviates ischemia-reperfusion injury-induced acute kidney injury by promoting G

Chongxiong, Haishan Chen, ..., Shougang Zhuang

Journal of Cell Communication and Signaling... | 2025 Sep 18 | [Read Article](#) | [Bioz AI Brief](#)

"Serum creatinine (Scr) and **blood urea nitrogen (BUN) levels** were measured using kits purchased from StressMarq

manufacturer's instructions. All procedures were performed. [More...](#)

• Toxicology letters

[STAIN](#)

[OVER-EXP](#)

[CCK-8](#)

• Functional Assay (FUNC-A)

• Generated

(GENER)

• Histopathology

Triptolide improves microbial dysbiosis and metabolite disorder in db/db mice

Renal Failure | 2025 Sep 03 | [Read Article](#) | [Bioz AI Brief](#)

".. **Kit (bethyl Laboratories, Montgomery, tX, uSa). Mouse albumin ELISA Kit (bethyl Laboratories, Montgomery,**

blood urea nitrogen detection Kit purchased from **StressMarq biosciences** (british Columbia, Canada).. Cell C

[More...](#)

• Knockdown

[COLOR-A](#)

[MOLEC-W](#)

[ELISA](#)

[CCK-8](#)

• Lactate Dehydrogenase Assay

(LDH)

Cited 2 times lar Weight

GATA1 Transcriptionally Upregulates LMCD1 , Promoting Ferroptosis in Sepsis-Associated Acute Kidney

You-Qi Zhang, Wei-Xia Peng, ..., Wen-Guang Liu

The Kaohsiung Journal of Medical Sciences | 2025 Jul 12 | 40650665 | [Read Article](#) | [Bioz AI Brief](#)

"Serum levels of serum creatinine (Scr), **blood urea nitrogen (BUN)**, and LPS were determined using kits purch

recorded by measuring the OD value at 450 nm. The results were .." [More...](#)

• Over Expression

(OVER-EXP)

[qRT-PCR](#)

[STAIN](#)

[ELISA](#)

[KD](#)

• Quantitative RT-PCR

(qRT-PCR)

Results per page: 5 / 36

- ROS Assay
(ROS-A)
- Software
(SOFT)
- TUNEL Assay
(TUNEL)