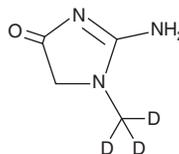


# PRODUCT INFORMATION



## Creatinine-d<sub>3</sub> Item No. 16763

**CAS Registry No.:** 143827-20-7  
**Formal Name:** 2-amino-1,5-dihydro-1-(methyl-d<sub>3</sub>)-4H-imidazol-4-one  
**MF:** C<sub>4</sub>H<sub>4</sub>D<sub>3</sub>N<sub>3</sub>O  
**FW:** 116.1  
**Chemical Purity:** ≥98% (Creatinine)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>); ≤1% d<sub>0</sub>  
**UV/Vis.:** λ<sub>max</sub>: 236 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Creatinine-d<sub>3</sub> is intended for use as an internal standard for the quantification of creatinine (Item No. 31164) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

### Description

Creatinine is synthesized in kidney, liver, and pancreas and transported in blood to muscle and brain where it is phosphorylated to phosphocreatine. Some free creatine in muscle is converted to creatinine. The amount of creatinine produced is proportional to muscle mass. In the absence of renal disease, the excretion rate of creatinine in humans is relatively constant.<sup>1</sup> Thus, urinary creatinine is commonly used as a key benchmark for the normalization of a variety of urinary biomarkers. Serum creatinine levels are a useful indicator of renal function.<sup>2</sup> Abnormal creatinine levels have been implicated in diabetes and in cardiovascular and circulatory diseases.

### References

1. Barrett, E. and Addis, T. The serum creatinine concentration of normal individuals. *J. Clin. Invest.* **26(5)**, 875-878 (1947).
2. Bowers, L.D. and Wong, E.T. Kinetic serum creatinine assays. II. A critical evaluation and review. *Clin. Chem.* **26(5)**, 555-561 (1980).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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