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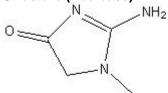
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TECHNICAL INFORMATION

Catalog Number: 101423, 101424, 153916

Creatinine

Structure (free base):



 Molecular Formula:
 $C_4H_7N_3O$ $C_4H_7N_3O \cdot HCl$ $C_4H_7N_3O \cdot HCl$ $(C_4H_7N_3O)_2 \cdot ZnCl_2$

 Molecular Weight:
 113.1
 149.59
 362.5

 CAS #
 60-27-5
 19230-81-0
 362.5

Synonyms: 2-Amino-1,5-dihydro-1-methyl-4H-imidazol-4-one; 2-Amino-1-methyl-4-imidazolidinone; 1-Methylhydantoin-2-imide; 1-Methylglycocyamidine; 2-Imino-N-methylhydantoin; 2-Imino-1-methylimidazolidin-4- one

Physical Description: White powder

Solubility:

Free Base: Soluble in 12 parts water; slightly soluble in ethanol; practically insoluble in acetone, ether, chloroform.¹

Hydrochloride: Soluble in water (50 mg/ml - clear, colorless to faint yellow solution) Zinc Chloride: Soluble in 1 N Hydrochloric acid (50 mg/ml - clear, colorless solution)

Description: The end product of creatine catabolism.¹ Normal constituent of urine; daily output about 25 mg/kg body weight.¹ Increased amounts in the urine are typically associated with substantially impaired renal function. Also found together with creatine in muscle tissues and blood.¹ Reacts with picric acid under alkaline conditions to form a Janovski complex. The rate of formation of the colored complex, measured at 480-520 nm is proportional to the creatinine concentration.

Availability:

Catalog Number	Description	Size
101423	Creatinine, free base	10 g 25 g
		100 g
153916	Creatinine Hydrochloride	10 g
		25 g
		100 g
101424	Creatinine Zinc Chloride	1 g
		5 g

References:

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- Nakamura, et al., "Creatones A and B. Revision of the structure for the product of oxidation of creatinine and creatine." *Bull. Chem. Soc. Jpn.*, v. 63(5), 1540-1542 (1990).
- Valcour, A.A. and Woodworth, R.C., *J. Magn. Reson.*, **v. 66**, 536 (1986).
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