

Specification



Bicine Buffer grade

A1024

Synonym	N,N-Bis-(2-hydroxyethyl)-glycine
Solubility (20°C)	100 g/L (H ₂ O)
useful pH range	pH 7.6 - 9.0
pK_a (20°C)	8.35
Melting range	185 - 192°C
Formula	C ₆ H ₁₃ NO ₄
M	163.17 g/mol
CAS-No.:	150-25-4
HS-No.:	29225000
EC-No.:	205-755-1
Storage:	RT
LGK:	10 - 13
Disposal:	4
WGK:	1
Specification	
Assay (titr.)	min. 99 %
pH (1 %; H₂O; 20°C)	4.0 - 5.0
Heavy metals (as Pb)	max. 0.0005 %
Water	max. 1 %
A (1 cm/0.1M in H₂O)	
260 nm	max. 0.08
280 nm	max. 0.05
Literature	
	<ol style="list-style-type: none"> (1) Good, N.E. <i>et al.</i> (1966) <i>Biochemistry</i> 5, 467-477 Hydrogen ion buffers for biological research. (2) Good, N.E. & Izawa, S. (1972) <i>Methods Enzymol.</i> 24, 53-68 Hydrogen ion buffers. (3) Werb, Z. <i>et al.</i> (1974) <i>Biochem. J.</i> 139, 359-368 Interaction of α₂-Macroglobulin with Proteinases. (4) Vodicka, P. <i>et al.</i> (1995) <i>Carcinogenesis</i> 16, 1473-1481 DNA damage by styrene. (5) Eide, I. <i>et al.</i> (1995) <i>Carcinogenesis</i> 16, 1603-1609 Uptake of hemoglobin and DNA adducts after inhalation of C2-C8 1-Alkanes (Olefines) in rats. (6) Peterkofsky, A. <i>et al.</i> (1995) <i>Biochemistry</i> 34, 8950-8959 The <i>E. coli</i> adenylate cyclase complex: Requirements of the PTS protein for the stimulation by nucleotides.

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Comment

Bicine is a versatile buffer. Its applications last from enzyme reaction buffers (T4 polynucleotide kinase ref. 4; Micrococcus nuclease ref. 5; adenylate cyclase ref. 6) to electrophoresis buffers (3). Bicine interferes with the BCA and Lowry protein assay. Ferricyanide slowly oxidizes bicine. In addition, its strong binding of copper ions may be disturbing. The working concentration lasts from 3 to 100 mM.