



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

Imidazole

Product Number **I 5513**
Store at Room Temperature

Product Description

Molecular Formula: $C_3H_4N_2$
Molecular Weight: 68.08
CAS Number: 288-32-4
 pK_a : 7.1
Melting Point: 90-91 °C²

Product I 5513 is a molecular biology grade. It has been tested for the absence of Dnase, Rnase, and protease.

Imidazole can be used to prepare buffers in the pH range of 6.2-7.8 at 25 °C. It is also a chelator for the binding of various divalent cations. The logs of the binding constants for various divalent cations are below:

Divalent Cation	Log binding constant
Ca^{2+}	0.1
Mn^{2+}	1.6
Fe^{2+}	3.3
Co^{2+}	2.4
Ni^{2+}	2.9
Cu^{2+}	4.2
Zn^{2+}	2.0

These values compare to an EDTA affinity constant log of 10.6 for Ca^{2+} .³

Imidazole can be used for the elution of histidine containing proteins from divalent cation resins (Product No. P 6611, His-Select™-HC Nickel affinity gel) and can also be used in reverse staining of SDS-PAGE gels for detection of proteins.⁴

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

Imidazole is soluble in water (approximately 500 mg/ml), yielding a clear solution.

Storage/Stability

Solutions can be successfully sterilized by autoclaving, and are stable for at least 2 years at 2-8 °C, protected from light.

References

1. Data for Biochemical Research, 3rd ed., Dawson, R. M. C., et al., Oxford University Press (New York, NY: 1986), p. 324-325.
2. The Merck Index, 13th ed., Entry# 4935.
3. Data for Biochemical Research, 3rd ed., Dawson, R. M. C., et al., Oxford University Press (New York, NY: 1986), p. 433, 409, 404-405.
4. Fernandez-Patron, C., et al., Reverse staining of sodium dodecyl sulfate polyacrylamide gels by imidazole-zinc salts: sensitive detection of unmodified proteins. *Biotechniques*, **12(4)**, 564-573 (1992).

HIS-Select is licensed under U.S. Patent No. 4,569,794.

ARO/RXR 2/03

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