DATA SHEET

> Imidazole

cat. no.	amount	note
STS-IMI 10	10g	powder
STS-IMI 100	100g	powder

Imidazole is an amphoteric (i.e. it can function as both an acid and as a base. As an acid, the pKa of imidazole is 14.5, making it less acidic than carboxylic acids, phenols, and imides, but slightly more acidic than alcohols), highly polar compound that is incorporated into many important biological molecules, such as the aminoacid Histidine (His).

Imidazole can be used to prepare buffers in the pH range of 6.2-7.8 at 25 °C.
Imidazole 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+}.

Imidazole can be used in the purification and elution of His-tagged proteins bound to Ni ions attached to the surface of beads in the chromatography column: an excess of imidazole is passed through the column, which displaces the His-tag from nickel co-ordination, freeing the His-tagged proteins.
Imidazole can also be used in reverse staining of SDS-PAGE gels for detection of proteins.

Chemical Name
1,3-Diaza-2-,4-cyclopentadiene
Formulation
$C_3H_4N_2$
Molecular Weight
68,1

Solubility
Soluble in water.Clear colorless to faint yellow solution at 500mg/ml in water.

Storage
Store dry at 2-5°C.

FOR RESEARCH USE ONLY