



CERTIFICATE OF ANALYSIS

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1. Identification

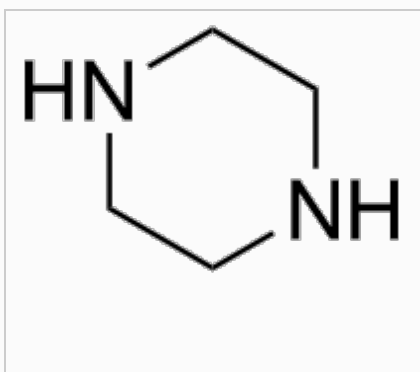
Catalogue Number: P479900

CAS Number: 110-85-0

Product: Piperazine

Synonym: 1,4-Diazacyclohexane; 1,4-Piperazine; Antiren; Diethylenediamine; Dispermine; Eraverm; Hexahydropyrazine; Lumbrical; NSC 474; Piperazidine; Pipersol; Pyrazine Hexahydride; Hexahydropyrazine; Tetrahydro-1,4-diazine; Uvilon; Vermex; Worm-A-Ton; Wurmirazin

Structure:



Molecular Formula:

C₄H₁₀N₂

Molecular weight:

86.14

Source of Product:

N/A

Solubility:

Chloroform (Slightly),
Methanol (Sparingly)

Lot Number: 711734681-7-1

Purity: 98%

Shipping Condition: This Product Is Stable To Be Shipped At Room Temperature

Storage Condition: 20°C

2. Warning

Warning 1:

Warning 2:

Warning 3:

3. Analytical Information

Tests:	Specifications:	Results:
Appearance	White to Off-White Solid	White to Off-White Solid
NMR	Conforms to Structure	Conforms
C NMR	Conforms to Structure	Conforms
GC Purity	Report Result	100.00%
MS	Conforms to Structure	Conforms
Elemental Analysis	Conforms	%C: 53.89, %H: 11.96, %N: 31.42

Additional Information: N/A

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of $\pm 2\%$. Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

4. Signatures

Reviewed By	Reviewed By	C of A Approved By	Test Date	Retest Date
Henry Tieu	Toni Rantanen	Christina Gouliaras	9/12/2023	9/10/2027