



The Power to Question

CERTIFICATE OF ANALYSIS

Catalog Number: sc-476267
Lot Number: SAMPLE
Product Name: Piperazine phosphate
CAS Number: 14538-56-8
Molecular Formula: $C_4H_{13}N_2O_4P$
Molecular Weight: 184.13

Test	Specification	Result
Appearance		Off-white solid
Identification (1H-NMR)		Consistent with structure
Identification (13C-NMR)		Consistent with structure
Identification (31P-NMR)		Consistent with structure
Identification (Mass Spectrometry)		Consistent with structure
Purity (TLC)		98%
Atmosphere		Air
Melting Point		> 190 °C (dec.)
Solubility		Water (very slightly, sonicated)
Carbon Content	23.77%	23.64%
Hydrogen Content	7.48%	7.32%
Nitrogen Content	13.86%	13.64%
Phosphate		48.49% by Ion Chromatography

Satisfaction Guarantee: We appreciate your business and are committed to providing the highest level of quality and service. Any product that does not meet the performance standards indicated in our product literature will be replaced at no charge. Our policy is valid for one year from the date of your purchase.

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