



ISO 9001 CERTIFIED  
ISO 13485 CERTIFIED

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CERTIFICATE OF QUALITY

**Product:** PIPES, FREE ACID (Piperazine-N-N'-bis(2-Ethane Sul

**Grade:** HIGH PURITY GRADE

**Code:** 0488

Appearance: White crystalline powder, free flowing

Mol. Formula: C8H18N2O6S2

Mol. Weight: 302.37

Description:

<u>Assay:</u>	<u>Min</u>	<u>Max</u>	<u>Units</u>	<u>Disposition</u>
Abs. @260nm (1%, 1N NaOH)		0.05		PASS
DNase		NONE	P/F	PASS
Heavy Metals (as Pb)		< 5	ppm	PASS
pKa	6.7	6.9		PASS
Protease		NONE	P/F	PASS
Purity	98.0		%	PASS
Residue after Ignition		0.3	%	PASS
RNase		NONE	P/F	PASS
Solubility (1%, 1N NaOH)	PASS			PASS

Storage: Store at room temperature. Protect from moisture.

0488HPG

This signature indicates that the above material has met all quality specifications and has been reviewed by a quality representative.

Signature:

Title:

QC MANAGER

Date:

6/22/2012