

BIOSPECTRA

100 Majestic Way, Bangor, PA 18013 / www.biospectra.us

Effective Date:	23-Jun-2017	23-Jun-2020	: Date of Next Review
Prepared By:	Jamie Storm	16-000923 v.2.0	: Supersedes
QA/QC Approval:	Crystal Hamelburg	Dora Meissner	: Management Approval
Reason for Revision:	See Revision History in ensur		

GUANIDINE THIOCYANATE CERTIFICATE OF ANALYSIS BIO PHARMA GRADE / GT4220-K010 LOT: GT4220-113-0219

$\text{NH}_2\text{C}(\text{NH})\text{NH}_2 \cdot \text{HSCN}$ * F.W. 118.16 g/mol. * CAS# 593-84-0
 Manufacturing Date: 4/25/2018 Retest Date: 4/30/2020
 Manufacturing Site: 100 Majestic Way, Bangor PA, 18013
 Packaging Date: 2/14/2019
 Packaging Site: 100 Majestic Way, Bangor PA, 18013

ANALYSIS	SPECIFICATION	TEST RESULT	
Absorbance	280 nm	0.300 a.u. maximum	0.0964 a.u.
	300 nm	0.050 a.u. maximum	0.0122 a.u.
	340 nm	0.030 a.u. maximum	0.0025 a.u.
Appearance and Color	White / Crystals	White / Crystals	
Assay	99.5% minimum	99.74%	
	DNase	None Detected	None Detected
	Protease	None Detected	None Detected
Enzymes	RNase	None Detected	None Detected
	Identification (IR)	Passes Test	Passes Test
Loss on Drying	0.5% maximum	0.2265%	
Melting Range	115-121°C	119.3 – 120.3°C	
pH (5% solution)	5.0-7.0	5.48 @ 18.5°C	
Solubility (35%)	Clear	Clear	
	Arsenic (As)	5 ppm maximum	< 5 ppm
	Copper (Cu)	5 ppm maximum	< 5 ppm
	Iron (Fe)	5 ppm maximum	< 5 ppm
	Lead (Pb)	5 ppm maximum	< 5 ppm

COUNTRY OF ORIGIN: U.S.A.

TEST METHOD REFERENCE: DCN: 16-000043

INTENDED USE: Material represented by this Certificate of Analysis is suitable to be used only as the following: IPEC Compliant GMP Manufactured Chemical, for use in further Manufacturing or as a Reagent for Laboratory and Research. The material represented by this Certificate of Analysis is not suitable to be used as an Active Pharmaceutical Ingredient, Drug, Drug Product or Household item.

RESIDUAL SOLVENTS: Based on the manufacturing process and the controlled handling and storage of this product, there is no potential for any of the residual solvents listed in the current USP method <467> Tables 1, 2, 3, or 4 to be present at the specified limits; furthermore, if tested this product would comply with USP/NF requirements.

Prepared by: C. M. Date: 2/15/19

Reviewed by: H. Bennett Date: 2/18/19