



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

| | | | |
|----------------------|--------------------------------|-----------------|-----------------------|
| Effective Date: | 14-Jul-2020 | 14-Jul-2023 | : Date of Next Review |
| Prepared By: | Amy Hosein | 20-001826 v.1.0 | : Supersedes |
| QA/QC Approval: | Carissa McCollian | Amy Yenko | : Management Approval |
| Reason for Revision: | See Revision History in ensur. | | |

CERTIFICATE OF ANALYSIS
GUANIDINE THIOCYANATE
BIO ULTRA GRADE / GT5221 – K025
LOT: GT5221-007-0920

NH₂C(NH)NH₂-HSCN * F.W. 118.16 g mol. * CAS#: 593-84-0
 Manufacturing/Packaging Date: 9/30/20 Retest Date: 9/30/22
 Packaging Site: 100 Majestic Way, Bangor PA, 18013

| ANALYSIS | SPECIFICATION | TEST RESULT |
|--------------------------------------------------|-----------------------|-----------------------|
| Appearance and Color | White / Crystals | White / Crystals |
| Assay, Dried Basis | ≥ 99.0% | 100.0% |
| Enzymes | DNase | None Detected |
| | RNase | None Detected |
| Heavy Metals (as Lead) | ≤ 5 ppm | <5 ppm |
| Identification (IR) | Conforms to Structure | Conforms to Structure |
| Solubility (Colour) | Colorless | Colorless |
| Solubility (Turbidity) 100mg/mL H ₂ O | Clear | Clear |
| Trace Metals | Barium (Ba) | ≤ 0.0005% |
| | Iron (Fe) | ≤ 0.0005% |
| | Potassium (K) | ≤ 0.005% |
| | Sodium (Na) | ≤ 0.5% |

TEST METHOD REFERENCE: 16-000043

INTENDED USE: Material represented by this Certificate of Analysis is suitable for use as a process chemical. The material represented by this Certificate of Analysis is not suitable to be used as an Excipient, Active Pharmaceutical Ingredient, Drug, Drug Product or Household Item.

Prepared by: Cc Date: 10/11/20 Job Title: QA SupervisorReviewed by: Wang Santz Date: 10/01/20 Job Title: QI Manager