

# **Diagnostic / Reagent Grade**

### **GUANIDINE THIOCYANATE**

TECHNICAL PRODUCT SHEET

INTENDED FOR USE IN DIAGNOSTIC AND LABORATORY APPLICATIONS

Guanidine Thiocyanate is a chaotropic agent. As one of the strongest protein denaturants, it inactivates nucleases more than twice as fast as Guanidine Hydrochloride. Guanidine Thiocyanate is preferred for the purification of RNA because it dissociates the RNA into its nucleic acids and protein forms. Higher molarity solutions of Guanidine Thiocyanate irreversibly inactivate RNase.

Guanidine Thiocyanate causes proteins to dissolve readily, thus disintegrating cellular structures.

$$\begin{array}{c} \text{NH} \\ \\ \text{H}_2 \text{N} \\ \end{array} \quad \text{NH}_2 \quad \cdot \text{HSCN}$$

CAS #: 593-84-0

Molecular Formula:  $C_2H_6N_4S$ Solubility in Water (g/L): 1,600

**F.W.:** 118.16 g/mol **pH @ 20°C:** 5.0 - 7.0

BIO ULTRA GRADE / Product Code: GTHI-5220 | Previously: GT5220

NH<sub>2</sub>C(NH)NH<sub>2</sub>·HSCN · F.W. 118.16 · CAS#: 593-84-0

These are general specifications. BioSpectra will customize our products to meet your quality based requirements.

| ANALYSIS                  |        | SPECIFICATIONS   |
|---------------------------|--------|------------------|
|                           | 280 nm | 0.400 a.u. max.  |
| Absorbance                | 300 nm | 0.070 a.u. max.  |
|                           | 340 nm | 0.050 a.u. max.  |
| Appearance and Color      |        | White / Crystals |
| Assay, Dried Basis        |        | 99.0% min.       |
| Identity (FTIR)           |        | Passes Test      |
| Melting Range             |        | 115 – 121 °C     |
| pH (5% solution)          |        | 5.0 – 7.0        |
| Solubility (35% solution) |        | Passes Test      |

### **General Product Description:**

• Guanidine Thiocyanate is a White/Colorless Crystalline or Powder product.

Molecular Formula: C<sub>2</sub>H<sub>6</sub>N<sub>4</sub>S

Molecular Weight: 118.16 g/mol.

CAS Number: 593-84-0.

Synonyms: Guanidine Isothiocyanate.



## Quality Assurance / Regulatory Support / Quality Control

#### **GMP Compliance:**

Material represented by this grade is suitable to be used only as the following: Quality System Manufactured Process Chemical for use in further manufacturing or as a reagent for laboratory and research. The material represented by this grade is not suitable to be used as an Excipient, Active Pharmaceutical Ingredient, Drug, Drug Product or household item.

#### **Expiration/Retest Date:**

BioSpectra does not assign expiration or retest dates for Bio Ultra Grade materials.

#### **Storage and Shipping Conditions:**

Ship and Store in ambient temperature.

#### Package Sizes:

10kg, 25kg and 50kg pails.

