Product Name: Nitrofurantoin

Product Number: N006

CAS Number: 67-20-9

Molecular Formula: $\text{C}_8\text{H}_6\text{N}_4\text{O}_5$

Molecular Weight: 238.16

Form: Powder

Appearance: Yellow crystalline powder

Source: Synthetic

Water Content (Karl Fischer): < 1.0%

Storage Conditions: Store protected from light at ambient temperature.

Description: Nitrofurantoin is a unique bacteriostatic antibiotic. Nitrofurantoin is sparingly soluble in aqueous solution at 0.0795 mg/mL; however, it is highly soluble in DMF at 80 mg/mL.

To see all nitrofurantoin related products, click here.

Mechanism of Action: Upon entering a susceptible cell, nitrofurantoin is activated by bacterial enzymes and targets ribosomes and nucleic acids which inhibit bacterial growth.

Spectrum: Nitrofurantoin is a broad spectrum antibiotic frequently used to treat bacterial infections of the urinary tract. Nitrofurantoin has been found to be effective against certain β-lactam resistant strains of VRE or vancomycin resistant Enterococcus; a glycopeptide antibiotic resistant "superbug."

Microbiology Applications: Nitrofurantoin is commonly used in clinical in vitro microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against gram positive and gram negative microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options for infected patients. Representative MIC values include:

- *Escherichia coli* 32 μg/mL - 64 μg/mL
- For a complete list of nitrofurantoin MIC values, click here.
