

**1.0 Formulation**

Dry formulation of *Virginiamycin*, *calcium carbonate*, and carboxymethyl cellulose, and specific for use in fuel ethanol production only.

**2.0 Properties**

*Arrestol V* is utilized to control Gram-positive bacterial infections, due to its stability at low pHs and high temperatures 170° F (77° C). Therefore, *Arrestol V* antimicrobial is effective throughout the entire fermentation process. In addition, *Arrestol V* can be added in conjunction with chlorine dioxide to provide an unprecedented level of antimicrobial control.

**3.0 Mode of Action**

*Virginiamycin* is efficacious to the growth of Gram-positive organisms like *Lactobacillus*. These Gram-positive bacteria are present during alcohol fermentation, and responsible for producing lactic acid. *Virginiamycin* exhibits two molecules (M & S factors) that inhibit protein synthesis at two different ribosomal sub-unit locations in the bacterial cell.

**4.0 Dosing**

If Gram-positive bacterial control is needed, *Arrestol V* antimicrobial is added to the yeast propagator, fermentor, slurry tank, and liquefaction tank, prior to or during fermentation. Normal recommended dosage rates are between 0.10 ppm to 3.0 ppm, dependent upon the level of bacteria present. Concentration is calculated using the ratio of 1.0 ppm equals 1 lb. in 54,000 gallons. Dosage should not exceed 6.0 ppm during the fermentation cycle.

**5.0 Packaging**

One-half pound biodegradable bags contained in 25 lb. circular fiberboard drums.

**6.0 Shelf Life**

Product has a shelf life of one year from the date of packaging, and must be stored dry.

**7.0 Precautions**

Avoid inhalation of *Arrestol V* dust and avoid eye skin contact. In case of contact, wash thoroughly with soap and water. In the event of irritation or allergic symptoms, seek immediate medical attention.

Replace container lid and seal after use to preserve the integrity of water soluble packaging.

**8.0 Specifications on  
Certificate of Analysis**

<i>Virginiamycin</i> :	50% activity
Appearance:	Brown uniform mixture

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**WARNING: ARRESTOL V IS NOT INTENDED OR SUITABLE FOR USE IN ANIMAL FEED**

