

## Reconstitution

Nutrapure™ certified organic coating is quick and easy to prepare. Simply add the Nutrapure powder to water and mix for 45 minutes with a propeller type stirrer (It is normal for the Nutrapure powder to have a clumpy appearance).

The coating suspension is typically recommended to be prepared at 10% solids concentration. Your Area Technical Manager can recommend the ideal solids for your specific Nutrapure formulation and your equipment.

### Materials

- Nutrapure powder
- Water, deionized or distilled preferred, ambient temperature (maximum 30 °C)

### Equipment

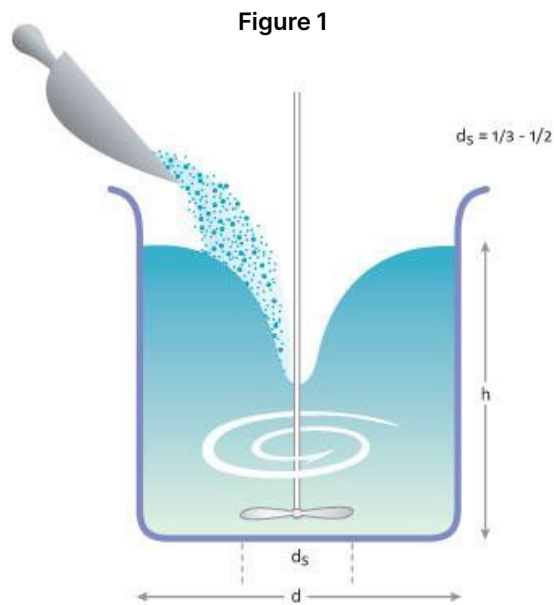
- Variable-speed mixer capable of producing and maintaining a vortex.
- Propeller stirrer. For optimum mixing, utilize a propeller with a diameter equivalent to  $1/3 - 1/2$  of the diameter of the mixing vessel. (Figure 1)
- Mixing vessel large enough to contain a liquid volume 15% to 25% greater than the total suspension being prepared. The liquid height and vessel diameter should be equal.

### Mixing Procedure

1. Weigh necessary quantity of Nutrapure powder.
2. Weigh necessary quantity of water into the mixing vessel.
3. With the propeller in the center and as close to the bottom of the vessel as possible, stir the water to form a vortex without drawing air into the liquid.
4. Steadily add the Nutrapure powder to the vortex. It is normal for the powder to have a clumpy appearance. Large clumps will easily disperse over the recommended mixing time.
5. After all the Nutrapure powder has been added, reduce the mixer speed to nearly eliminate the vortex. Mix for 45 minutes.

### Suspension Handling

The prepared Nutrapure dispersion can be pumped directly from the preparation vessel if desired.



## Suspension Hold Time / Microbial Considerations

Nutrapure is comprised of minimally processed, plant based food materials and, therefore, is susceptible to microbial growth once the dispersion is prepared and exposed to different environmental conditions (air and water). The water used can have varying levels of microbial quality (even if it complies with cGMP's), depending on the system and source supply.

It is recommended that Nutrapure dispersions, as prepared using this procedure, be used for coating immediately after preparation and not held for extended periods.

However, if desired, it is possible to extend the hold time of the Nutrapure dispersion by adding a small quantity of hydrogen peroxide\* (30% H<sub>2</sub>O<sub>2</sub>) at 0.04% w/w of total suspension quantity to the water prior to the addition of Nutrapure. Using this method, microbial growth in the dispersion can be controlled at very low levels for hold times up to 48 hours.

*\*Hydrogen peroxide is allowed for Organic use per: USDA Subpart G—Administrative. The National List of Allowed and Prohibited Substances; § 205.605 Non-agricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s))”; (b) Synthetics allowed.*

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