

PT-BIO900 Bactericide

1. Product Characteristic

- Bactericidal ability: non-oxidizing bactericide with rapid antibiotic effect.
- Compatibility: compatible with all type of films.
- Broad Spectrum: can effectively kill algae, bacteria and fungi.
- Toxicity: Easy to be biodegraded into non-toxic and non-polluting substances.

2. Application Description

PT-BIO900 is a vibrant formula that uses advanced technology to synthesize a highly effective and broad-spectrum bactericide to control the growth of microorganisms throughout the reverse osmosis system. PT-BIO900 not only effectively control the growth of microorganisms in cellulose acetate film and composite film in reverse osmosis system, but also control the growth of microorganisms in all related equipment, like all interface parts such as water supply tank, multi-media filter, activated carbon filter, super Filtration system, pre-filter / water tank, piping and valves.

3. Product Feature

- Appearance: colorless to pale yellow liquid
- Density (20): $1.05 \pm 0.05 \text{g/cm}^3$
- pH(1.0%): 4.0 ~ 6.0

4. Dosing Introduction

PT-BIO900 bactericide can be used in the following two ways:

- CIP sterilization: formulated PT-BIO900 as a bactericide solution at 1.0%, pumped by the Scavenging Pump into the system, soak 60-90 minutes, then rinsed 15 minutes with demineralized water, over 99% of the microorganisms will be removed;

Note: Prior to soak by PT-BIO900, acid wash is required to remove any metal hydroxides that may be present on the surface of the film. After soaking, remove the dead bodies of organisms and organic residues of the organism by alkali washed.

- Impact type online injection: Before injecting PT-BIO900 into the security filter or ultrafiltration system, increase dosage for the initial dosing, dosage is around 100-250ppm. Reduce and maintenance the dosage to 50-100ppm until the obvious control effect is achieved. The impact dosing time is 60-120 minutes and the number of impact dosing is determined according to system contamination. Please contact POLYMER's product representative for the specific dosage.

Note: If the reverse osmosis product water is used in the food and beverage industry, RO water and

rejected water must be discharged at the same time during the dosing process. Continue to discharge RO water for 15 minutes after stop dosing PT-BIO 900.

5. Package Standard

25kg per original seal barrel, keep in a cool place. Please refer to MSDS (Material Safety Data Sheet) or COA (Certificate of Authenticity) for the utilization of this product. Products expire date: three years.

PT-BIO911 Bactericide

1. Product Characteristic

- Bactericidal ability: non-oxidizing bactericide with rapid antibiotic effect.
- Compatibility: compatible with all type of films.
- Broad Spectrum: can effectively kill algae, bacteria and fungi.
- Less Dosage: Only 300-500ppm required for each dosing to achieve the desired sterilization effect.
- Toxicity: Rapid degradation to relatively non-toxic products, fast react with nucleophile or organic substances in various type of water quality is the main degradation mode.

2. Product Feature

- Appearance: colorless to pale yellow liquid
- Density(20) : $1.20\pm 0.05\text{g/cm}^3$
- pH(1.0%) : 5.0 ~ 7.0

3. Application Description

PT-BIO911 is a broad-spectrum biological inhibitor that can rapidly sterilize at less dosage and is mainly used in reverse osmosis systems that are plagued by biological contamination. Dosing frequency can be determined by standardizing the performance of the system and also taking into account the biological activity of the influent, rejected and product water. Please contact POLYMER's product representative to determine the optimal dosage for your specific situation.

Use PT-ROClean921 or PT-ROClean931 before using PT-BIO911 to achieves the best effect.

4. Dosing Introduction

- **Use Clean in Place (CIP) dosing methods for systems with serious biological contamination**
- Switch RO to the CIP mode.
- Add a certain amount of RO water to the cleaning tank and dose PT-BIO911 to a concentration of 400ppm.
- Lower the pH value by adding citric acid or hydrochloric acid if the pH of the water is above 7.0. It can extend the half-life of PT-BIO911.
- Circulate for 45mins.
- Rinse the system with RO water after stop.
- **For system maintenance sterilization**

- Use PT-BIO911 bactericide for CIP sterilization every 1 or 2 weeks. The dosage is 300-500ppm generally to prevent the regrowth of microorganisms. The dosage time is 20 minutes or 30 minutes, then rinse with RO water for 15 minutes to resume production.

- For the handling of microbial contamination, it takes a certain amount of time to be solved separately from the pretreatment and the RO ontology. Specific solutions can be consulted to POLYMER's Engineer.

5. Package Standard

25kg per original seal barrel, keep in a cool place. Please refer to MSDS (Material Safety Data Sheet) or COA (Certificate of Authenticity) for the utilization of this product. Products expire date: three years.