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Tristel

**TRISTEL TECHNOLOGIES
PUROGENE FOR
WATER TREATMENT**

USER GUIDE

TRI/BIO/053

PUROGENE FOR WATER TREATMENT

A 2% stabilised chlorine dioxide solution used for potable water treatment, legionella control and biofilm removal in water systems.

Purogene brings the superior oxidising power of chlorine dioxide to a wide variety of disinfection and odour control applications in an easy-to-handle solution available in five, 25 and 210 litre containers. Purogene is probably the most powerful disinfectant available for general use. It is active against spores, mycobacteria, viruses, fungi and bacteria.

Purogene is more effective than other disinfectants such as chlorine, alcohol, glutaraldehyde, peracetic acid, quaternary ammonium compounds, and most other commonly available disinfectants. Purogene is non-volatile, non-flammable, non-corrosive and will neutralise most odours.

INSTRUCTIONS FOR USE

Purogene is easy to use. Simply pour the required amount into a suitable (plastic) container, add the required amount of activator, leave for five–10 minutes and dilute as required with water.

ACTIVATION AND DILUTION CHART

Activate the Purogene by adding one part by weight SCD activator crystals to 10 parts by volume Purogene. Stir to dissolve crystals if necessary.

- 1 g activator crystals to 10 ml Purogene.
- 50g activator crystals to 500 ml Purogene.
- 100g activator crystals to one litre Purogene.

If another acid is to be used, such as hydrochloric acid, adjust the pH of the Purogene to between pH 2–3 and wait five–10 minutes for activation to take place. As with all chemicals prepare in a well-ventilated area, avoid breathing any fumes that may be produced. If in doubt wear an approved filter mask with type ABEK-P3 filter(s).

After activation for five–10 minutes dilute with water as follows:

1 part activated Purogene to **20 parts water** for **1000 ppm** TACD

1 part activated Purogene to **25 parts water** for **800 ppm** TACD

1 part activated Purogene to **40 parts water** for **500 ppm** TACD

1 part activated Purogene to **100 parts water** for **200 ppm** TACD

1 part activated Purogene to **200 parts water** for **100 ppm** TACD

1 part activated Purogene to **400 parts water** for **50 ppm** TACD

1 part activated Purogene to **800 parts water** for **25 ppm** TACD

1 part activated Purogene to **4000 parts water** for **5 ppm** TACD

DISINFECTION OF WATER SYSTEMS TO REMOVE BIOFILM

Use a 1:400 dilution for a 50 ppm TACD concentration.

1. Calculate volume (litres) of water required to fill system.
2. Manually clean the storage tank if applicable.
3. Fill the storage tank with the required volume of water.
4. Divide this volume by 400 to give the number of litres of Purogene required.
5. Pour Purogene into a suitable container and activate as per instructions. Pour into the water tank and mix thoroughly as solution is heavier than water. NOTE: If water tank is not available prepare the 50 ppm solution to be used in an external vessel and introduce into the system via pump or another method.
6. Open each outlet in turn to run the disinfectant solution through the system.
7. When system is full leave to soak at for least one hour. Wipe the sides and lid of tank with solution using a clean cloth, as applicable.
8. After one hour flush disinfectant from system with clean water.

TREATMENT OF STORED WATER TO CONTROL BACTERIAL CONTAMINATION AND PROLIFERATION INCLUDING WATER BATH INCUBATORS

Use a 1:4000 dilution for five ppm TACD concentration.

1. Prepare active Purogene as per instructions above.
2. Pour into water to be treated. Mix thoroughly as solution is slightly heavier than water.
3. Test to ensure that five ppm has been achieved, see below.

TESTING

Use only the Tristel Technologies Test Kit or Oxystix dip sticks. Chlorine dioxide tests (DPD, Lissamine Green, Chlorophenol Red, etc.) do not work on Purogene solutions.

The Tristel Technologies Test Kit has a high range test (0–60 ppm) that is accurate to five ppm, and a low range test (0–10 ppm) that is accurate to one ppm. For solutions stronger than 60 ppm dilute the sample to within range using the dilution chart on the sample tube provided. e.g. for 100 ppm dilute two-fold and test to 50 ppm.