

# Hyper Offensive Odor Control:

# 「BIOSUKEGAWA®TIGER」 バイオスケガワタイガー

## 1. Traditional Technology • Background

### Offensive Odor Control

There are 3 categories for 22 kinds of Offensive Odor Substances acted on the Offensive Odor Control Act.

### Research and Development

For 35 years, we specialize in selling and manufacturing 「Sukegawa Chemicals Chlorine Dioxide ®」 and other kinds of related technology as environmental hygiene Improvement(destroy and remove microbe・fungi and offensive odor control).



Stabilized Chlorine Dioxide can control only Sulfide Chlorine Dioxide and ammonia 「BIOTALK®」.(Self-Comparison)

16 Offensive Odor Substances among 22 substances acted on the Offensive Odor Control can be controlled with our new product technology, which allows them down to the lowest detection limit (detector use). Except 6 kinds of odor produced at oil refinery and others. Above success is the first in Japan.

## 2. Chlorine Dioxide

Supremely effective in destroying and removing microbes, and controlling fungi and odor.

The reaction is oxidation. Not the reaction with chlorine.

Physiological function is disruption of the ABC-transporter. Not carcinogen.

Selectively kill spores and virus guarding strongly.

No reaction of organic compound with Chlorine, so carcinogenic Trihalomethane is not produced. Oxidation reaction is 2.5 times as strong as Chlorite.

Chlorine Dioxide is safe substances that can use for drinking water treatment. (Extra at official gazette, February 23<sup>rd</sup>, 2000)  
(Standards of Management: Below at 0.6ppm all the time, Below 2 ppm at the most)

## 3. Usage

For offensive odor control, the amount, ways and following timing to add is changeable at each field condition.

Consequently, a proper usage is at your disposal.

Wear professional gas proof masks in case of a great deal of long disposal work.

Cover the upper pit keeping lots of deposit with sheet to keep Chlorine Dioxide inside after you scatter Activated Chlorine Dioxide 「BIOSUKEGAWA®」

- Checking out prospective dung as fertilizer must be required to know whether Chlorine Dioxide remains or not. Please use the Measuring Kits for Sukegawa Chemicals Chlorine Dioxide.

Unlike to Sodium Hypochlorite, Chlorine Dioxide naturalize with diatoms in biological treatment without damaging digest bacteria (diatoms)

- At food manufacturing factory, water is disposed at the biological treatment drainage. This treatment is as same as human excrement.

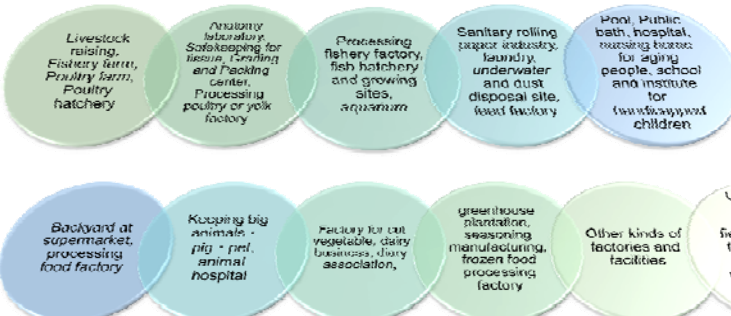
For a high risk to mix with other company's products, take a small experiment or consult expert in advance.

Chlorine Dioxide is prospective and helpful for offensive odor control in the near future. That is for efficiency against microbes, and safety for animals and people.

Chlorine Dioxide generates gas layer between deposit and air at 0.65 air specific gravity. Offensive Odor is controlled by passing through the gas layer.

Chlorine Dioxide is strong acid substance, and chemical reaction with organic matter is very fast. So, there must be almost no remains due to rapid speed of disappearance.

## 4. Field



## 5. Test Experiment and Result

First of all, for offensive odor control

Experiment with Stabilized Chlorine Dioxide liquid 「BIOTALK®」 against offensive odor substances.

If not enough,

Experiment again with Activated Chlorine Dioxide liquid 「BIOSUKEGAWA®」

### Result

16 kinds of offensive odor among 22 substances has controlled except odor produced from oil refinery industry (benzene, toluene, xylene).

Attention) The best way removing offensive odor which are odor produced at oil refinery is combustion even at high running cost.

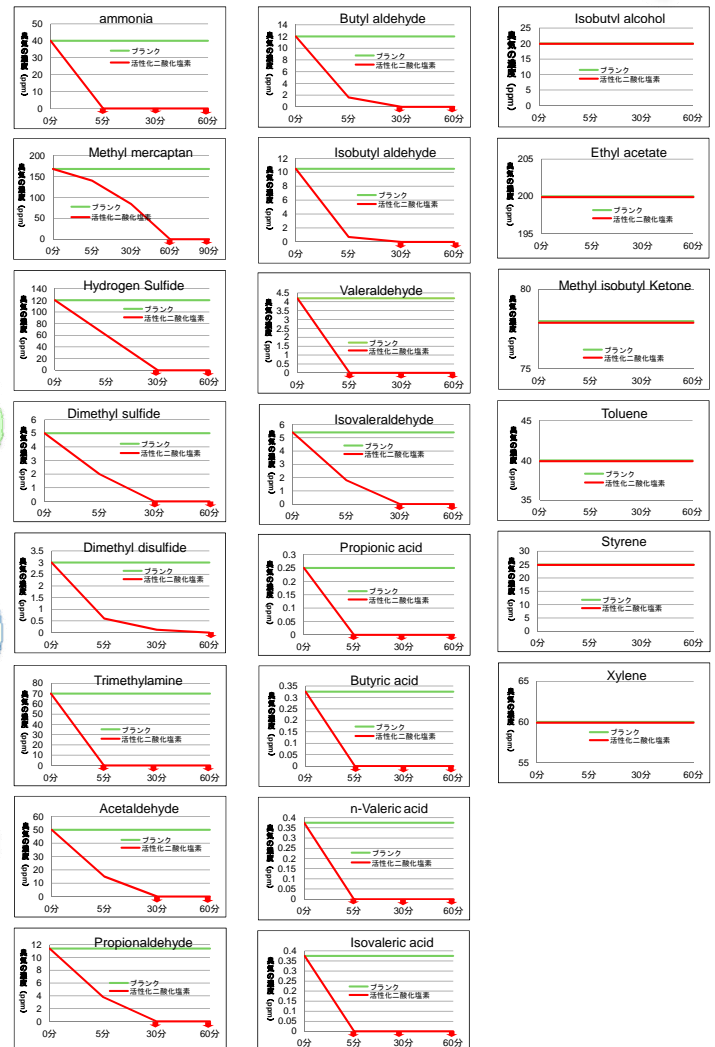
## 6. Experiment Data

Performance Test with products you can buy.

Vertical: The Offensive Odor Concentrations(ppm)  
Parallel: Sensitization Timeline

— :Blank

— :Activated Chlorine Dioxide liquid 「BIOSUKEGAWA®」



The 1<sup>st</sup> in Japan!!  
Almost perfect result against odor from animals and bacteria

## 7. Conclusion

Activated Chlorine Dioxide liquid 「BIOSUKEGAWA®」 possesses the most effective in destroying and removing microbe. So, you can rely on as environmental hygiene measures such as preventing Coccidiosis in chicken(assigned ownership), controlling Legionella pneumophila(assigned ownership)and Scuticociliatosis(International ownership assigned).

We hope you to review these data professionally to improve industrial environment. The field is, for example, poultry pig, fish and other kinds of animal farm and also waste sites.