



# dutrion

Chlorine Dioxide



Dutrion North America Ltd.



# Powerful Water Treatment



## WHAT YOU SHOULD KNOW ABOUT DUTRION®

Governments, water opinion leaders, specialists and scientists increasingly acknowledge that conventional water disinfectants such as chlorine, do not provide the simple and sustainable solutions that are required to meet the global water challenge. Using Dutrion® has unambiguously proven to them that its unique features and characteristics provide the desired disinfection alternative for which they have been looking for a long time.

Dutrion® powder and Dutrion® tablet are two simple delivery systems to generate an aqueous chlorine dioxide solution that is applied to (drinking) water without any by-products.

Dutrion® Powder is delivered as a transportable, non-explosive powder kit of two components that, once added to a specific volume of water, reacts into one of the purest chlorine dioxide solutions.

To generate a liquid chlorine dioxide solution with Dutrion® Tablet is a simple task; just add the right amount of composite tablets into a specific volume of water. It, reacts quickly and safe. Within a short period of time the stock solution contains 0.2% chlorine dioxide and can be used for as long as 2 months.

With Dutrion® products we are able to provide customers a total concept of safe water treatment with an excellent yield and performance without the disadvantage of the traditional applications of chlorine, peroxide, ozone, UV-systems or other chlorine dioxide products.

Dutrion North America Ltd. is located in Western Canada and licence holder for the North American markets. Dutrion® is distributed through exclusive distribution partners.

Our customers can be found in a variety of industries and applications where safe and clean water is required. Dutrion® products comply with the highest regulatory purity standards for drinking water, such as NSF.60 standards.

Dutrion® provides an economical and safe answer for our generation and children!



**dutrion**  
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## HOW DOES IT WORK

Chlorine Dioxide is a water disinfectant which can most effectively be applied in the final state of water treatment, i.e. after filtration.

Unlike chlorine, which starts to oxidize all inorganic and organic matters in the water first before starting to kill the microorganisms, Dutrion® is a highly selective oxidizer, designed to kill the microorganisms first instead of oxidizing organics in the water.

This has numerous advantages vis-à-vis chlorine, such as the short contact time (typically 2-10 minutes, whereas chlorine needs a much longer time).

Due to its selectivity, the consumption of Dutrion® is low. Often, up to 60-80% of the initial concentration can be found at the tail end, which gives Dutrion® its residual disinfection capacity throughout distribution systems (up to 72 hours, whereas chlorine only has limited time such residual).

Last but not least, Dutrion® does, contrary to chlorine, not hydrolyse into the water to react with organic matters to form disinfection by-products (DPBs).

**dutrion®** can be applied in many applications such like drinking water for humans and animals, a variety of industrial activities and food & beverage industry as a better and safer alternative for microbial control. It requires very simple dosing and measuring equipment. **dutrion®** is an in-expensive choice for a lot of real applications.

**dutrion® & PUBLIC PLACES**

Post treatment of drinking water  
 THM control  
 Biofilm removal in water networks  
 Taste and odor improvement  
 For cities, towns, villages, acreages, etc.  
 Hospitals, schools, hotels, pools, etc.

**dutrion® & FOOD**

Meat processing industry  
 Beer & beverage production  
 Chilling water disinfection  
 Fish & ice industry  
 Microbial control in refriderators  
 CIP applications

**dutrion® & AGRICULTURE**

Improve animal drinking water  
 Barn & equipment sanitation  
 Greenhouses and field crops  
 Microbial control irrigation water  
 Washing fruits and Vegetables  
 Hatchery & biosecurity purposes

**dutrion® & INDUSTRY**

Cooling & process water control  
 Wastewater sanitation  
 Iron & manganese removal  
 Paper & pulp  
 Pipeline and tank cleaning  
 Truck washing

**dutrion® powder**

dutrion® powder is a transportable, non-explosive powder kit of two components that, once added to a specific volume of water, reacts fully into a long lasting chlorine dioxide solution with a concentration of 0.2- 0.4%.

#1 Choice for medium & large operations

replace chlorination  
 no capital investment  
 best economical solution

**dutrion® tablet**

dutrion® tablet is a transportable, non-explosive one component tablet, once added to a specific volume of water, reacts quickly and safe into a long lasting chlorine dioxide solution with a concentration of 0.2%.

#1 Choice for small & medium operations

safe concept  
 simple handling  
 very cost effective

**Differences dutrion® and Chlorine**

Chlorine and chlorine type disinfectants (e.g. sodium hypochlorite, calcium hypochlorite etc) generate so called "free chlorine". This free chlorine, also known as hypochlorous acid, is the biocidal component that does the actual killing of pathogens but also form very dangerous by-products in water (THM, HAA, Mutagen X, etc.)

Free chlorine is released by chlorine and chlorine type disinfectants when applied in water. The by-products are too dangerous to accept anymore in potable water or our food. If disinfection is needed we need to look at better alternatives. Chlorine is still used in large quantities because it's mainly inexpensive and easy to use.

Dutrion® works on the biocidal component chlorine dioxide. Although chlorine can be found in the name it is NOT a chlorine type of disinfectant. Dutrion® does not release free chlorine (hypochlorous acid) to provide its biocidal function. When Dutrion® is applied the chlorine dioxide molecules take over the biocidal kill of the full spectrum of bacteria, algae, fungi, protozoa, yeast, methanogens and viruses. From this reaction none of the above harmful by-products are disposed in our water and food.







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**A SMART CHOICE  
FOR POWERFUL  
WATER TREATMENT**



	<i>Regular CLO2 Products</i>	<b>Dutrion Powder</b>	<b>Dutrion Tablets</b>
<i>Packaging</i>	■ ■	■ ■	■ ■
<i>Safe Handling</i>	■	■ ■	■ ■ ■
<i>Release time</i>	■ ■	■	■ ■
<i>Approvals</i>	■ ■ ■	■ ■	■ ■
<i>Kinetic halftime</i>	■ ■	■	■
<i>Economical</i>	■ ■	■ ■	■
<i>Water volume</i>	■ ■	■ ■	■ ■

■ Disadvantage    ■ Standard    ■ Advantage

Manufactured at Facility #2 Duka  
Duka  Production Ltd.



**Powerful Water Treatment**

**Dutrion North America Ltd.**

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