



chlorOrgano TM

NaOC- Organochlorine

Ready to Use, Concentrates, & On Demand Equipment

Synthetic Non-Regulated Hybrid Super Charged OCl- Species

Part of the AET Family of Methods (*Advanced Energy Transfer*)

By Paul E. Seaver

Summary: Chlorine shortages, toxic and dangerous production methods, foreign control of manufacturing and supply chain failures leaves a wide-open opportunity for improvement in chlorine manufacturing and supply. chlor *Organo* NaOC- provides alternative manufacturing methods which produce stable dissolved Green Chlorine Gas by advanced electrochemistry splitting H₂O. Using the oxygen from the molecule while stabilizing the process with the Hydrogen byproduct in an NaCl enhanced medium opening new doors to use in the most sensitive of ecological environments as well as commercial AG, commercial food processing, industrial food manufacturing, and retail food service to name a few.

Statement of the Problem : Chlorine is the most popular in sanitation because it is the most efficient. Chlorine itself is not the danger it is associated with; it is the method in which the chlorine is manufactured and stored. There are 1000's of chlorine species especially as you get into organochlorines. Organochlorines tell the story, if the organics exist in a toxic environment, they will produce a toxic organochlorine. If the organics exist in a clean environment, they will produce a non-toxic bio-selective organochlorine such as our human bodies produce when healthy.

When the objective is to produce a non-toxic bio-selective organochlorine for human compatibility one only needs to look at the chlorine species produced by the human body itself. This species is more easily understood by its manufacturing method and ingredients. The human body utilizes the power of electrolytes obtained through NaCl, these electrolytes are split 50% acidic (+) and 50% basic (-). They are dissolved using a low TDS weak acid (water) for ingestion. Our natural energy in dual polarity processes these electrolytes producing all sorts of vital properties including chlorine. This chlorine species has been taken out of context by companies marketing HOCl, I can assure you as HOCl is a regulated EPA pesticide, if one were to look at the EPA definition of HOCl its easy to understand this is not what our bodies produce. The human body produces an organochlorine at human pH (7.4~7.6 when healthy). HOCl is a range from 5.0 pH ~ 6.5 pH, a high 950 ORP and stored 750ppm, you're not going to find that in your body.



Popular EPA Regulated Pesticides:

<i>(+) HCl Hydrochloric Acid</i>	<i>3.0 pH</i>
<i>(+) H₂O₂ Hydrogen Peroxide</i>	<i>4.0 pH</i>
<i>(+) HOCl Hypochlorous Acid</i>	<i>5.5 pH</i>
<i>(-) ClO₂ Chlorine Dioxide</i>	<i>7.5 pH</i>
<i>(-) OCl- Hypochlorite</i>	<i>10.5 pH</i>
<i>(-) NaClO- Chlorine Bleach</i>	<i>12.0 pH</i>
<i>(-) OH- Sodium Hydroxide</i>	<i>13.0 pH</i>
<i>(-) OH- Lye</i>	<i>14.5 pH</i>

Single polarity HOCl generators produce products which have been rated for safe when used as directed under EPA, GRAS, & USDA-NOP which is fine. This is taken out of context in labeling as HOCl is still an EPA Regulated Pesticide and the EPA only regulates those things hazardous to organics (Humans). The fact is HOCl is a EPA regulated pesticide.

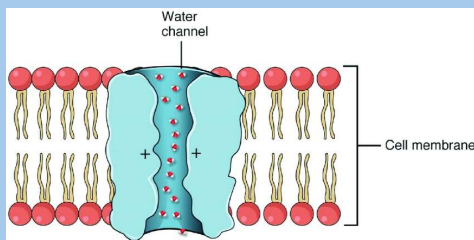
The reason HOCl is a Pesticide is simple, it must oxidize the membrane of a cell to deliver the Cl₂ gas past the membrane. For this reason, it must be in the acidic range lower than 6.5 pH, the typical pH is 5.5, ORP of these products is 950 (*must be over 800 to oxidize a membrane*) and they store the HOCl at 750 ppm for as long a shelf life as they can get, typically 3 months (*RTU is greater than 100 ppm and less than 200 ppm*). HOCl requires a balance of all 3 to deliver effectively (per the EPA-GRAS guidelines). The Cl₂ reading only tells you if any free chlorine is left, the ORP tells you if you can deliver it. The pH and ORP are indicators of delivery strength. As the ORP decreases, the pH rises.

chl_{or}Organo™ Bio Selective Absorption answers back to this opportunity presenting an alternative manufacturing method and as a result an alternative finished product to H₂O₂, HOCl, ClO₂, OCl⁻, and NaClO⁻ in operations where they are not safe, compatible, or needed to perform the tasks they are given. These products are overused in sensitive environments as “better than nothing” waiting on a compatible product.

Knowing problems with industrial chlorine products and production include the dangerous nature of the operations, restrictions in locations, the hiring of proper qualified personal, and so on makes it a challenge. No one wants a large chlorine manufacturing plant near them, just look at the most recent plants which blew up. Not too many people want to work at them either.

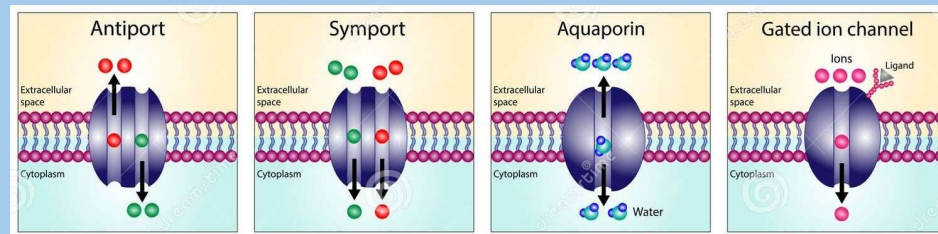
Pesticides work through oxidation (acidics) and or corrosion (basics) by destroying the membrane wall of a cell causing irreparable damage much the same as a Free Radicle, this is what makes them EPA Regulated dangerous class 8 corrosives to ALL organics. We need to go back to human compatibility; our delivery must be bio selective. We must increase the power of the medium to 6.45 IP structure free, but we can not use 200-degree heat the only other energy source powerful enough to reach 6.45 IP is dual polarity neutral electrochemistry ionics for water.

chl_{or}Organo does not deliver by oxidation or corrosion the delivery is by 6.45 IP structureless single ions capable of transportation through aquaporin channels. Passing the membrane of a cell with out damage to the membrane aka bio selective absorption.



Requirements for aquaporin transport
aka absorbing water are:

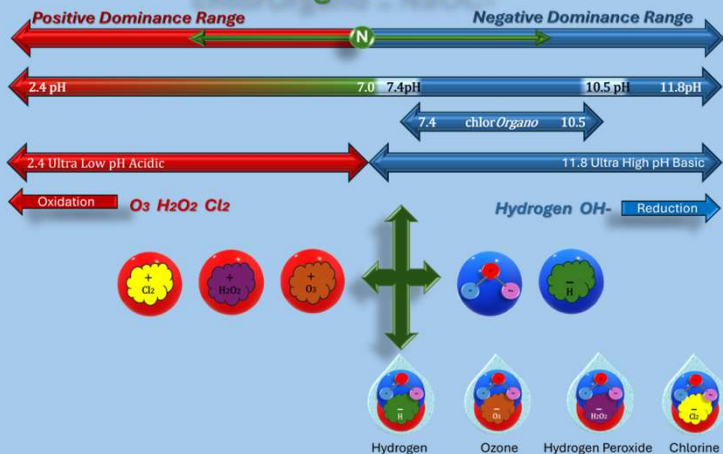
Dissociated -1 Negative Basic charge
Dissociated 1 Positive Acidic charge
-1/1 Perfect Neutral Availability
(-1/1 = Bonded Neutral chl_{or}Organo)



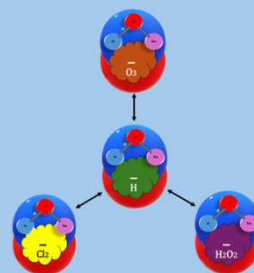
chl_{or}Organo is powered to 6.45 IP, the restructured dual polarity bonded single ion -1/1 is compatible with transport through aquaporin pathways, the pH and ORP are meaningless for oxidation, they are now used for human compatibility as such they can not be a pesticide if they are organic compatible and therefore unregulated by the EPA and or any other agency which regulates hazards. I have gone my rounds with EPA pre label review as well as Florida Department of AG. chl_{or}Organo NaOC⁻ is officially a non-regulated product made of only H₂O and NaCl.

chl_{or}Organo RTU as a non-regulated product has no restrictions or guidelines for safe use as they are not required. chl_{or}Organo concentrate if stored, marketed, and sold for private use may need a registration as a concentrate, as OnDemand equipment it does not.

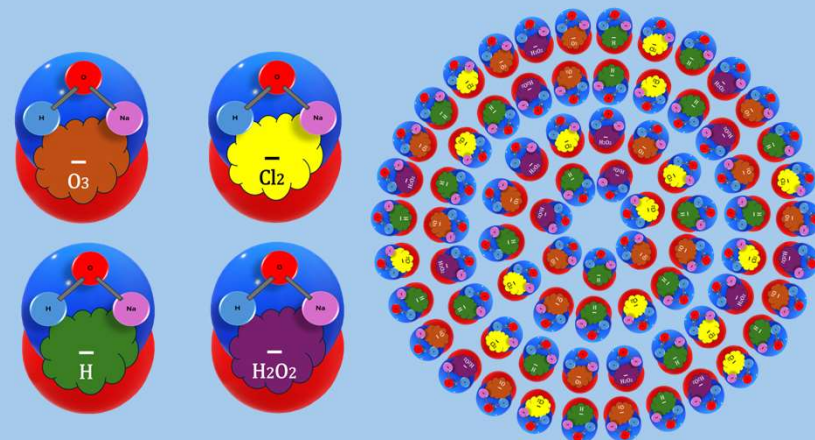
chl_{or}Organo™ NaOC-



6.45 IP Isolation Separation



chl_{or}Organo NaOC- Electronically Splitting H₂O Dissolved Green Gases ~ Dissolved Bonded Ions



To simplify the introduction let's stick to the OCl⁻ for water treatment as the example and comparison of total ROS delivery, we will use chlorine as OCl⁻ mainly for the comparison although we will also reference H₂O₂ and O₃ typically not discussed with OCl⁻.

Without getting too deep into the science, this is all about manufacturing methods and the application of energy. The common is chlorine.

EPA Regulated OCl⁻ is manufactured by infusing a concentrated industrial Cl₂ gas into industrial grade OH⁻ to store the Cl₂ as concentrated OCl⁻ at 10.5pH. In this method only Cl₂ can be stored to the OH⁻ as industrial concentrated H₂O₂ and O₃ gases are not compatible for stabilized multi gas infusing they are volatile with each other.

chl_{or}Organo non-regulated is manufactured much differently. The electrolyte is a single salt NaCl only, non-toxic to organics, vital to organic life. The difference comes from the manufacturing method, the power (Cl₂) stored, and how the power is released.

The power of chl_{or}Organo is stored in the OH⁻ ions dissolved in the single molecules of H₂O controlling the dissolved single bubble gases (Cl₂), it is not a short-lived clustered chemical reaction initiated by dissociation with the water source.

The product is stable as the gases are packaged in a molecule of H₂O they are not free to randomly kill such as pesticide and or free radicle ROS does. The neutral molecule delivers the contents to the intercellular space of bad bacteria, if there is none present it destabilizes back to neutral NaCl no harm to the other cells. The dissolved Hydrogens mission is oxidation reduction bringing back life and freshness depending on the environment offsetting the presence of ROS gases not used.

The Opportunity: The chlorine market is over \$15B. There is a world chlorine shortage, and China is the king of chlorine

China - Produces the highest active chlorine capacity in the world and is expected to lead chlorine capacity additions by 2026. Other key countries in the chlorine industry include the US, Germany, India, and Japan, which together account for over 75% of the world's chlorine capacity.

USA - Olin Corporation (*worth \$5.63B*) is the leading manufacturer of chlorine elements in the chemical sectors of the U.S.A. The company was established in the year 1892, and its headquarters located in Missouri, United States. It majorly deals with the manufacturing of chlorine, sodium hydroxide, and ammunition. Aug 17, 2023

As of March 2024, Resource Wise reported that the US may face chlorine shortages in the coming years due to recent capacity shutdowns. In February 2024, liquid chlorine prices in the US increased by about 4.44%.

There are markets in Food Production, Food Processing, Food Service, Ecologically Sensitive Areas, Agriculture, and so on which have begrudgingly been using far too strong of industrial pesticides where they are not needed. This is the #1 problem in food borne pathogens in my research. The reason is people are afraid of pesticides, they are sensitive to them, and generally just do not want anything to do with them. So they use less than they should, do not apply correctly, or do not use at all. At my restaurants they had a problem with wait staff just using water as the sanitizer would make their hands raw, this is a common problem which is why the health dept spot checks and cites for weak or no sanitation. Much to the restaurant owners surprise, this problem is eliminated using chlor*Organo*. The wait staff have no problems, no sores, just smother healthy hands / nails and no burnt sinuses. The restaurant owners were trained on using TDS meters to measure the difference between water and chlorOrgano to know if an employee was cheating. No restaurant PBSWC Inc. services in S. Fl ever gets cited for weak sanitizers since switching to chlorOrgano, it is stable through out an entire shift, the other problem with mixed concentrates, they go dead.

I have found in all cases no matter where and the operation type, once you remove the fear of using a product by supplying a safe product the problems go away. No one wants to use a dangerous product, most people want to do a good job, give them a safe product and they will do a good job.

A lot of facilities think they may only use an EPA Regulated Pesticide, its simply not true, its cheating to use one and they come with too many rules. All they must do is prove a clean environment. I am a certified PCQI, I took this otherwise un-necessary certification to know and understand what is needed in commercial food production.

For an objective like HAB's in an eco sensitive area like S. Fl. you can not add anything to the surface water that is not already in the surface water, chlorOrgano qualifies as a water treatment being only H2O and 2% or less salt from NaCl. This is been one of my objectives from the conception, Lake Okeechobee water releases, a sensitive subject looking for a real solution from a qualified operation.

This is the most advanced system and medium for this purpose available on the planet. The equipment is already scaled, and time tested over decades of continuous advancements.

There is no scale limitations and a commercial manufacturing operation in need of chlorine products can produce a professional product on demand for use on site and/or manufacturing volumes safely with out dangerous hazards for packaging and sale.

The products are manufactured stable no matter the range. The higher the pH the longer the shelf life as any chlorine product.

Dissolved multi-ROS species NaOC- is a unique medium with the longest shelf life of any finished chlorine product produced, a measurement of power in products making chlor *Organo* undisputedly the strongest chlorine manufactured compared in equal strength ranges. As there are no hazards such as concentrated gases have, there is no know limitation on Cl2 ppm concentration or manufacturing restrictions.

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Brought to you by:



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