

# CATTLE AND DAIRY

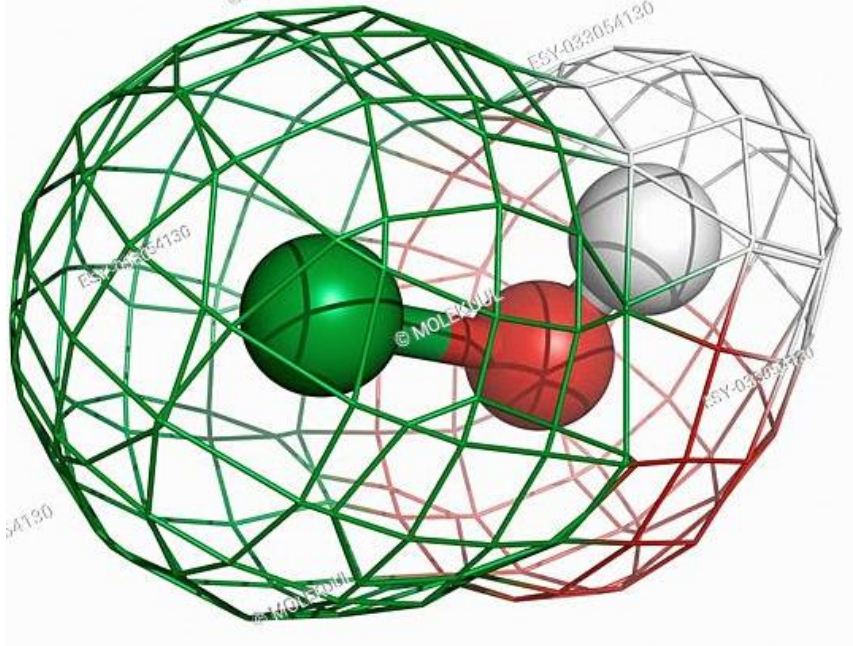


atm plus



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# Hypochlorous Acid (HOCl)



also known as

- electrolyzed water / electrolyzed reduced water  
**(ERW, EW)**
- electrochemically activated water  
**(ECA)**
- anolyte  
**(AEW, NEW, SAEW)**

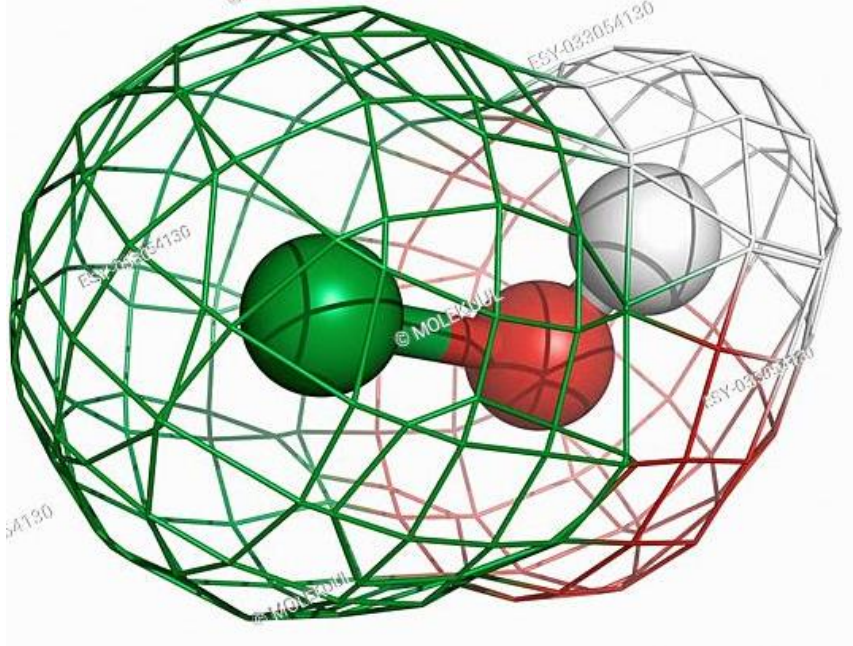
**atm plus** has a broad spectrum anti-microbial use



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# Hypochlorous Acid (HOCl)



atm plus

most effective disinfectant in the chlorine family

- No polar charge
- Low molecular weight

PERFECT structure to penetrate CELL WALLS

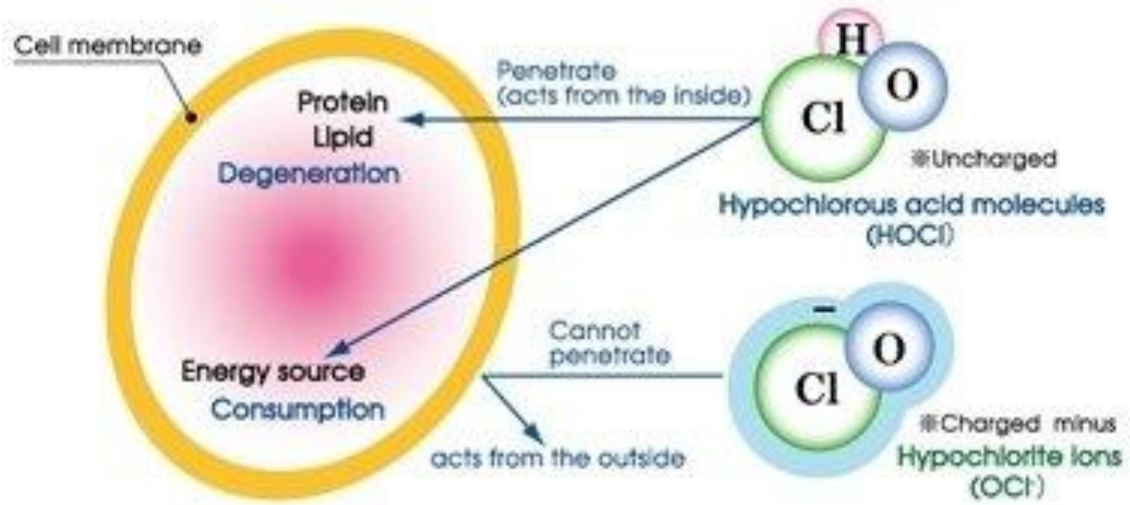
- HOCl is a WEAK ACID
- At a pH of 4 – 8.5 most available Chlorine is HOCl

NO RESIDUE after dissolving in water

- Solution stays active for  
7 – 10 DAYS



# Hypochlorous Acid (HOCl)



[hypochlorousacid.com/about](http://hypochlorousacid.com/about)

- HOCl diffuse through cell membrane
- Without a polar charge it is not repelled
- OCl<sup>-</sup> (BLEACH) is unable to penetrate cell membrane due to **negative charge**
- Bleach can only clean on the EXTERIOR
- HOCl acts from INSIDE

**atm plus** most effective disinfectant in the chlorine family

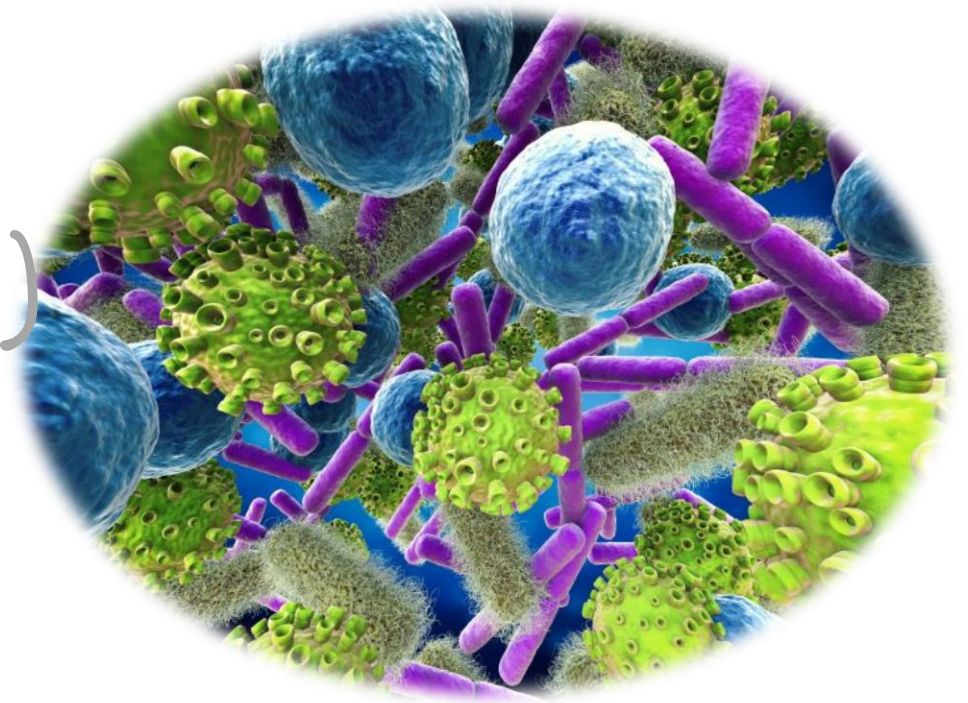


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# NATURE of Hypochlorous Acid (HOCl)

- Natural component of our own immune systems
- Fights against infection
- Reduces inflammation
- Bio-degradable in the environment

**atm plus** organic, lethal, cost effective



**“Hypochlorous acid is  
LETHAL to every pathogen  
it has been tested against  
but completely HARMLESS  
to humans and other  
mammals.”**



# phagocytosis

[ fag-uh-sahy-toh-sis ]

*noun*

*Physiology.* the ingestion of a smaller cell or cell fragment, a microorganism, or foreign particles by means of the local infolding of a cell's membrane and the protrusion of its cytoplasm around the fold until the material has been surrounded and engulfed by closure of the membrane and formation of a vacuole: characteristic of amoebas and some types of white blood cells.



- Neutrophils (WHITE BLOOD CELLS) seek out pathogens (VIRUSES AND BACTERIA) and destroy them using HOCl
- HOCl causes necrosis (RUPTURING OF THE CELL) and destroys the cell contents
- While disinfecting, HOCl is {OXIDISED} and consumed
- The only by-product is slightly salty water





# EFFECTIVENESS OF HOCl

## atm plus

disinfects and destroys:

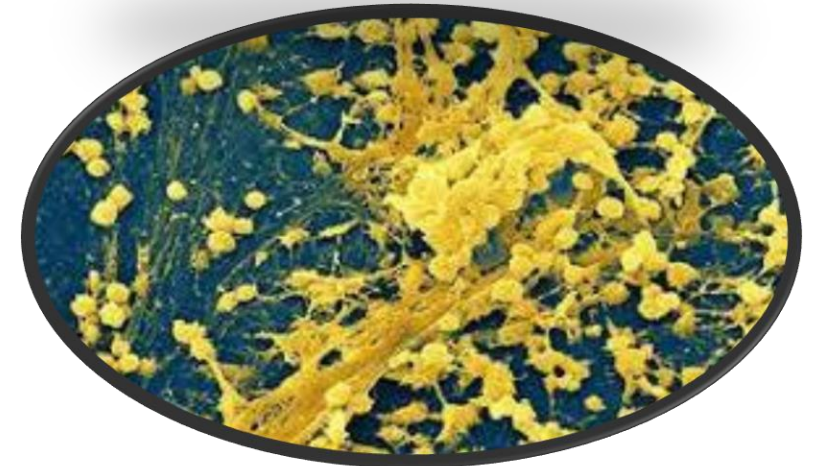
- ✓ VIRUSES
- ✓ BACTERIA
- ✓ MOULDS
- ✓ FUNGI
- ✓ SPORES
- ✓ BIOFILMS

defends against:

- ✓ INFECTION
- ✓ RESISTANCE/TOLERANCE
- ✓ PATHOGENS BENEATH BIOFILMS
- ✓ FERMENTATION IN STORAGE

## atm plus

80 – 100 times more effective than bleach



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# PROVEN EFFECTIVE AGAINST SARS-CoV-2

The latest peer approved scientific papers conclusively show that **HOCL effectively kills the SARS-Covid 2 virus**. The papers also compare HOCL to other disinfectants showing its comparative performance with other disinfectants such as bleach.

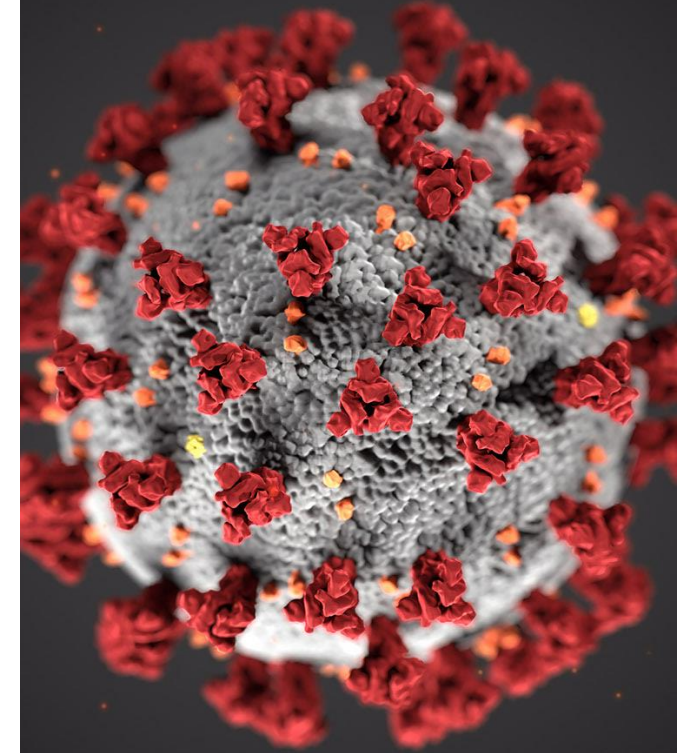
Chan K-H, Sridhar S, Zhang RR, Chu H, Fung AY-F,  
Chan G, Chan JF-W,  
To KK-W, Hung IF-N, Cheng VC-C, Yuen K-Y,  
Factors affecting stability and infectivity of SARS-  
CoV-2,  
*Journal of Hospital Infection*,  
<https://doi.org/10.1016/j.jhin.2020.07.009>.

‘The surgeon needs to have an **inexpensive, available, nontoxic, and practical** disinfectant that is effective in sanitizing against the COVID-19 (Coronavirus Disease 2019) virus.’

‘The results indicate that this material can be used with a **high predictability** for disinfecting against the COVID-19 (Coronavirus Disease 2019) virus.’

Michael S. Block, Brian G. Rowan,  
Hypochlorous Acid: A Review,  
J Oral Maxillofac Surg,  
[10.1016/j.joms.2020.06.029](https://doi.org/10.1016/j.joms.2020.06.029)

**atm plus** 80 – 100 times more effective than bleach



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# atm plus

*the effervescent tablet*



HOCl concentrated into a 6 gram dissolvable tablet

1 tablet = 12.5l of disinfectant

consistent solution at 100PPM every time

active for 7 – 10 DAYS after dissolving  
then returns to pure water

easy STORAGE

low TRANSPORT COSTS

1 year SHELF LIFE in tablet form

# atm plus

effective at 25PPM to 200PPM depending on use



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# USES of atm plus

*to name a few...*

- DISINFECTING any and all surfaces
  - fresh fruit / veg preparation
  - hydroponics / irrigation
- AGRICULTURAL
  - pesticidal treatment
- LIVESTOCK
  - control / reduction of disease
  - improves digestion / feed conversion ratios
  - increase livestock yields
- MEDICINAL / DENTISTRY
  - mouthwash / wound care
  - waterline disinfection
  - scrubbing in

**atm plus** 100% organic, bio-degradable, MRL FREE



# USES of atm plus

*to name a few...*

- HORTICULTURE
  - increase shelf life
  - reduces rotting / infection
- WATER TREATMENT
- FACILITIES
  - shopping centres
  - accommodation
  - office buildings
- TRANSPORT
  - airlines / airports
  - public transport
  - shipping / cruiseliners

**atm plus** safer exposure to humans than regular disinfectant





# atm plus:

## GENERAL USE

atm plus CAN BE USED TO CLEAN AND SANITIZE:



- Floors and walls
- Preparation areas
- Workers' hands, clothes and shoes
- Food contact surfaces



*'As a Disinfectant/Sterilant, HOCl has greater killing power than Chlorine, Chlorinated Water, Chlorine Dioxide, Sodium Hypochlorite, Hydrogen Peroxide and Ozone'*

# atm plus

gentle, effective, safe – NO PPE NECESSARY



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# atm plus:

## CATTLE AND DAIRY



- Elimination of the requirement to purchase and store toxic, man-made sanitizing and disinfecting chemicals
- Control skin pests and diseases by fog-misting –
- IT DESTROYS AEROBIC AND ANAEROBIC BACTERIA
- Disinfection of feed – TO KILL MICROBIAL PATHOGENS
- Better digestion and feed conversion ratio
- Disinfection of drinking water

*'As a Disinfectant/Sterilant, HOCl has greater killing power than Chlorine, Chlorinated Water, Chlorine Dioxide, Sodium Hypochlorite, Hydrogen Peroxide and Ozone'*

**atm plus** reduces overall mortality rates



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# atm plus:

## CATTLE AND DAIRY

### GENERAL SANITIZING

Fogging and spraying the building interior will:

- Encapsulate and kill bacteria and other microbial pathogens
- Remove odours
- Bind dust and encompassed bacteria
- Improve quality of breathing air



*'The use of HOCl {neutral anolyte} provides the cattle farm with an absolute perfect hygiene status'*

**atm plus** litter and manure can be sprayed daily for microbial and odour control



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# atm plus:

## CATTLE AND DAIRY

### DRINKING WATER

- Purification of drinking water systems – DESTRUCTION OF BIOFILM BUILDUP AND ALGAE IN PIPES
- Pathogens do not develop a resistance to HOCl – BIOFILM AND ALGAE DO NOT REOCCUR
- Prevention of algae and biofilm in crips
- Removes LIME SCALE and MINERAL DEPOSITS
- Coliform bacteria is prevented from being conveyed by the birds

*'Anolyte {atm plus} is safe and non-toxic, even at full strenght'*

**atm plus** eliminates contamination from water sources and the environment



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# atm plus:

## CATTLE AND DAIRY

### DESTRUCTION OF BIOFILM AND SCALE IN WATERING SYSTEMS



# atm plus

recommended use at 100 - 200PPM



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# atm plus:

## CATTLE AND DAIRY

### DESTRUCTION OF BIOFILM AND SCALE IN WATERING SYSTEMS



# atm plus

recommended use at 100 - 200PPM



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# atm plus:

## CATTLE AND DAIRY

ORP Level	Coliform count in 100 ml of water
200	300
300	36
400	3
600	0

- Continuous injection of 2 – 3% of HOCl solution is sufficient to kill all pathogens
- Anolyte has a residual biocidal effect that stays active in the system for CONTINUAL SANITATION
- High ORP (Oxidation-Reduction Potential) of HOCl in the water has more ability to DESTROY foreign contaminants
- There is a direct relationship between the ORP level and the Coliform count in water.
- HOCl has an ORP of **+600 to +1200mV**
- Kills **100%** of choliform bacteria in **30 seconds**

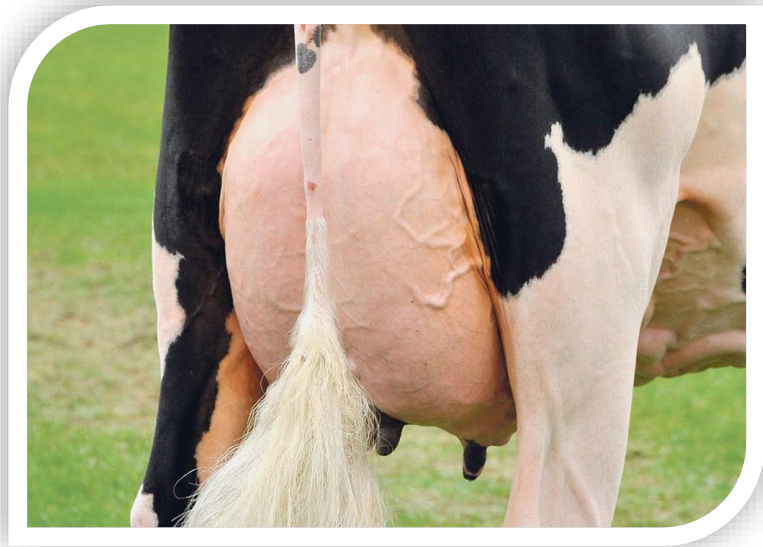
*'Adding HOCl to the drinking water improves animal health and increases weight gain'*

**atm plus** does not change the characteristics of drinking water



# atm plus:

## CATTLE AND DAIRY



### EFFECTIVE AGAINST DISEASES

#### Diseases

- Salmonella
- Diarrhea
- PED
- E.Coli
- Legionella
- **MASTITIS**

Studies have shown, simple teat washing with anolyte {atm plus} pre-milking and after helps prevent mastitis infection from occurring. Use at 200PPM

*'Mortality rate reduction of 50% - 80%*

# atm plus

sans 51276 (BACTERIA) sans 51650 (FUNGUS) sans 51650 (SPORES) en 1276 (VIRUS)



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# atm plus:

## CATTLE AND DAIRY



### EFFECTIVELY REDUCES VET AND MEDICINE COSTS

- Bacteria is unable to become resistant to {atm plus}  
– **LESS ANTIBIOTICS** NECESSARY
- Hoof baths (copper sulfate, zink sulfate and Formalinc) **REPLACED** with {atm plus} at 200PPM
- Skin and wound treatment – Use at 200PPM on wounds 2 – 3 times a day for 7 days

*'Medicine cost reduction of 50% - 90%*

# atm plus

sans 51276 (BACTERIA) sans 51650 (FUNGUS) sans 51650 (SPORES) en 1276 (VIRUS)



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# atm plus:

## CATTLE AND DAIRY



### FOOD PRESERVATION:

- HOCl is used for food preservation without affecting the quality of the fodder
- Prevents heating of feed
- Reduces protein and sugar loss

Use 18 – 22 liters per ton of silage evenly every 20cm for better coverage  
Studies show a 42% weight gain in animals

*'Common performance indicators show a reduction in number of days 'on feed' to achieve the SAME animal mass.'*

**atm plus** 18 liters sprayed over 1 ton of feed for optimal disinfection



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# atm plus:

## CATTLE AND DAIRY



### MILK PRODUCTION

Cows that: consume DRINKING water disinfected with HOCl {atm plus} and are fed with treated FODDER has:

- Increase in milk production – UP TO 19% INCREASE
- Better overall health

atm plus Recommended use 100 - 200PPM



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# atm plus:

## CATTLE AND DAIRY

### BENEFITS FOR CATTLE AND DAIRY FARMING



- Better overall animal **HEALTH**
- Lower **MORTALITY** rate
- Less **BRONCHITIS** outbreaks
- Lower average **MEDICINAL** costs
- Better health of staff – No exposure to unnecessary chemicals

Increased **WEIGHT GAIN**

Increased **MILK PRODUCTION**

**atm plus** creating better conditions for all



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