

Clean Birds • Clean Food • Clean Environment

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Safer - Faster - Better or Status Quo?

01

OLD
DISINFECTANTS
LIKE PAA CAN BE
AND ARE
DANGEROUS TO
HANDLE

02

PAA CAN CAUSE WING TIPS TO BROWN 03

HYPOCHLOROUS
ACID KILLS
PATHOGENS, IS
SAFER FOR
EMPLOYEES AND
KEEPS BIRDS
PRETTY



Where to Start ...

- CCS's formula may be used from Layer to the consumer but today we will focus on Processing Line to Grocery Store
- Starting with scalding, an appropriate solution of 200ppm will start the process of killing pathogens on the feathers and skin
- A spray of CCS Solution will ensure that the outside of the bird is not a source of contamination



Evisceration

- The removal of the internal organs
- A critical point in the process and a point where cross contamination is a concern
- Contagion Control Solutions performs best when the solution is fresh and sprayed into the cavity and allowed to drain
- FSIS approval for Electrolytically-generated CCS Solution is specifically called out for use on Whole or Eviscerated Poultry with levels not to exceed 50 ppm
- Chiller Water is also included in FSIS approvals



THE LEATHAL DOSE (LD50)

CCS's LD50-CCS Solution

An Important Consideration

CCS Solution

Acute Dose Effects: Eyes: Mild eye irritant

Inhalation: No data found.

Skin: LD50 > 5000 mg/kg.

Oral: LD50 >5000 mg/kg.



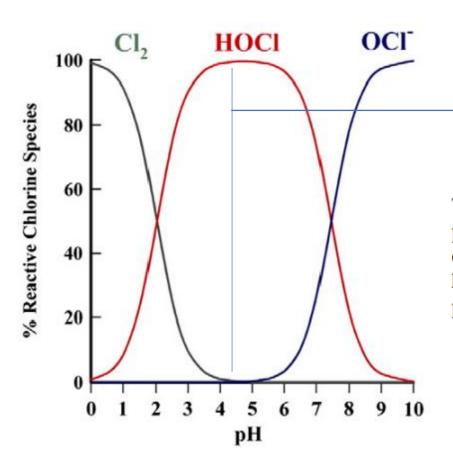
5 Grams Per Kilo of Body Weight

- A quick explanation of CCS's LD50
- CCS's Solution contains 0.020% or 200 milligrams per liter or about 750 milligrams per gallon 1000mg=1 gram
- Using this math, it would require 6.6 gallons of (product) for every 2.2 pounds of body weight to kill half (50%) of the test subjects (employees) 150 pound employee = 68 kilos. 68 x 6.6 gallons of (product)= 448.8 gallons
- 448 gallons to be consumed orally or absorbed through the skin



Contagion Control Solution – pH 5.5 Stable & Consistent Other products are not

pH 5.5



The use of chlorine products that form hypochlorous acid in solution at very low pH has limited potential for long-term applications. At this pH <4.0, dissolved chlorine gas can be rapidly lost due to volatilization, decreasing the biocidal effectiveness of the solution over time, but creating human health and safety issues. The high acidity of the solution may adversely affect food processing equipment and medical instruments surfaces by causing corrosion (Fisher, 2009).

Safety First – CCS Works!

FDA Food Contact Notification 1811

Hypochlorous Acid at up to 60 ppm for Produce, Fish & Seafood, Meat and Poultry Sanitation

Hypochlorous acid may be used in processing facilities at up to 60 ppm for use in process water or ice which comes into contact with food as a spray, wash, rinse, dip, chiller water, and scalding water for whole or cut meat and poultry, including carcasses, parts, trim, and organs; in process water, ice, or brine used for washing, rinsing, or cooling of processed and pre-formed meat and poultry products as defined in 21 CFR 170.3(n)(29) and 21 CFR 170.3(n)(34), respectively; in process water or ice for washing, rinsing or cooling fruits, vegetables, whole or cut fish and seafood; and in process water for washing or rinsing shell eggs. Visit https://www.fda.gov/food.









CCS -Disinfecting & Sanitization – EPA Approved

Organism Table for Disinfection Applications	Contact Time
Bacteria •	
Bordetella bronchiseptica [Kennel Cough] (ATCC 10580)	10 minutes
Clostridium difficile – spore (C. Diff) (ATCC 43598)	10 minutes
Escherichia coli (ATCC 11229)	10 minutes
Klebsiella pneumonia New Delhi Metallo-Beta Lactamase (NDM-1)	
Carbapenem Resistant, CDC 10002	10 minutes
Listeria monocytogenes (ATCC 7644)	10 minutes
Methicillin-Resistant Staphylococcus aureus (MRSA) (ATCC 33591)	10 minutes
Pseudomonas aeruginosa (ATCC 15442)	10 minutes
Salmonella enterica (ATCC 10708)	10 minutes
Staphylococcus aureus (ATCC 6538)	10 minutes
Vancomycin Resistant Enterococcus faecalis (ATCC 51229)	10 minutes
Mycobacterium	
Mycobacterium bovis, BCG (Tuberculosis – or – TB)	10 minutes
Parvoviruses Non Enveloped	
Canine parvovirus (ATCC VR-2016) [(Strain Cornell)]	10 minutes
Viruses Enveloped	
Canine distemper (ATCC VR-1587) [(Strain Snyder Hill)]	10 minutes
Human Immunodeficiency Virus Type 1 (HIV-1), strain IIIB (clade B);	
ZeptoMetrix	10 minutes
Swine Flu Virus (H1N1) A/Swine/1976/31 (ATCC VR-99)	10 minutes
Bloodborne Pathogens	
Human Immunodeficiency Virus Type 1 (HIV-1), strain IIIB (clade B);	
ZeptoMetrix	10 minutes

Organism Table for Sanitizing Applications	•	Contact Time
	•	
Non-Food Contact Surface Bacteria	•	
Enterobacter aerogenes (ATCC 13408)		2 minutes
Staphylococcus aureus (ATCC 6538)	•	2 minutes
	•	
Food-Contact Surface Bacteria		
Salmonella enterica (ATCC6539)		60 seconds
Staphylococcus aureus (ATCC 6538)	-	60 seconds







EW has been reported to have strong bactericidal effects on many pathogenic bacteria, such as Escherichia coli O157:H7, *Listeria monocytogenes*, and Salmonella species (Kim et al., 2000).



Inventory of Effective Food Contact Substance (FCS) Notifications

FDA Home
 Packaging & Food Contact Substances
 Inventory of Effective Food Contact Substance (FCS) Notifications
 FCN No. 1811

Intended Use:

Limitations/Specifications:

Effective Date:

National Environmental Policy Act (NEPA)** Submission: FDA Decision:

For single use as an antimicrobial agent in an aqueous solution in the production and preparation of whole or cut meat and poultry; processed and preformed meat and poultry; fish and seafood; fruits and vegetables; and shell eggs.

The concentration of available free chlorine will not exceed 60 ppm. The aqueous solution containing the FCS may be used in processing facilities as follows:

- 1. in process water or ice which comes into contact with food as a spray, wash, rinse, dip, chiller water, and scalding water for whole or cut meat and poultry, including carcasses, parts, trim, and organs;
- 2. in process water, ice, or brine used for washing, rinsing, or cooling of processed and pre-formed meat and poultry products as defined in 21 CFR 170.3(n)(29) and 21 CFR 170.3(n)(34), respectively:
- 3. in process water or ice for washing, rinsing or cooling fruits, vegetables, whole or cut fish and seafood; and
- 4. in process water for washing or rinsing shell eggs.

When used in water to process fruits, vegetables, ready-to-eat meats, and fish and seafood products intended to be consumed raw, the treatment will be followed by either a 10 minute drain step or a potable water rinse to remove, to the extent possible, residues of the FCS.

Oct 13, 2017

Environmental Assessment (in PDF, 857 kB) Finding of No Significant Impact (FONSI)



USDA Food Safety & Inspection Service Directive

The USDA's Food Safety and Inspection Service Directive 7120.1 "Safe and Suitable Ingredients Used in the Production of Meat and Poultry Products", has approved the use of electrolytically generated hypochlorous acid as a food additive for use on meat and poultry products. It is allowed for use on red meat carcasses down to a quarter of a carcass, whole or eviscerated poultry carcasses, in water used in meat and poultry processing, in poultry chiller water, for reprocessing contaminated poultry carcasses, on giblets and salvaged parts, and on beef primal cuts of beef. Depending on the product sanitized from 5 to 50 ppm free available chlorine can be used.

USDA's "Regulations Governing the Voluntary Grading of Shell Eggs" explains the minimum facility and operating requirements for shell egg grading and packing plants regarding shell egg cleaning operations. This includes specific temperature requirements for washing and rinsing eggs as well as the chlorine sanitizer that will be used (USDA, 2008).









Formal Recommendation

From: National Organic Standards Board (NOSB)

To: the National Organic Program (NOP)

Date: April 27, 2016

Subject: Addition of hypochlorous acid generated from electrolyzed water, as petitioned, at

§205.605(b) of the National List

NOSB Chair: Tracy Favre

The NOSB hereby recommends to the NOP the following:

The USDA's Food Safety and Inspection Service Directive 7120.1 "Safe and Suitable Ingredients Used in the Production of Meat and Poultry Products", has approved the use of electrolytically generated hypochlorous acid as a food additive for use on meat and poultry products. It is allowed for use on red meat carcasses down to a quarter of a carcass, whole or eviscerated poultry carcasses, in water used in meat and poultry processing, in poultry chiller water, for reprocessing contaminated poultry carcasses, on giblets and salvaged parts, and on beef primal cuts of beef. Depending on the product sanitized from 5 to 60 ppm free available chlorine can be used.

Peracetic Acid

- Is a good disinfectant
- It is very affordable, however,
- There is an explosion hazard
- Possible severe eye damage, and,
- Requires training to handle and use



Washington Post – Death from toxic Poultry Chemicals

- At chicken plants, chemicals blamed for health ailments are poised to proliferate
- https://www.washingtonpost.com/politics/at-chicken-plantschemicals-blamed-for-health-ailments-are-poised-toproliferate/2013/04/25/d2a65ec8-97b1-11e2-97cd-3d8c1afe4f0f story.html

Chill Water

- FSIS decrees that the Poultry Chiller Water shall not exceed 60ppm, measured in the incoming potable water
- It is important to note that the organic load within the Chiller Water will react with our CCS Solution as well as the targeted pathogens fresh solution is required for best results
- Best results are greatly reduced pathogen counts, better storage characteristics, increased employee safety and shelf appeal



CCS SOLUTION (HOCl) New Results from Proven SOP's

- Processed poultry moves from areas of *Highest* potential contamination to the *Lowest* potential contamination
- CCS's Solution has been cleared for use in hospitals by the EPA, Cleared by the FDA for Rx Human wound care and approved for use in food processing by the USDA and FSIS
- By using CCS's Solution formula in your existing microbial mitigation protocols, you will find acceptable results with less environmental concerns our formulal has been shown to degrade genetic material of pathogens, Virus, gram-negative and gram-positive bacteria and fungi



Additional Information

Click on the links below for more information:

- Poultry workers suffer while industry uses chemicals to disinfect your chicken
- Chickens and Cleanrooms What Do They Have In Common?



Safety Should Be #1 - READ YOUR CURRENT LABELS!

- If medical advice is needed, have product container or label at hand
- Wear protective gloves/protective clothing/eye protection/face protection
- Wash thoroughly after handling
- IF IN EYES: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do continue rinsing
- Get Medical Attention









What is a Premises Liability Lawsuit?

A premises liability lawsuit is a legal action taken against a property owner for failing to meet their duty of care in providing a reasonably safe premises for individuals who are given consent to enter the owner's premises.

Many people do not realize that these do not define the full spectrum of your "properties."

Other examples of premises include:

- Business owners can be held accountable for their business properties
- Contractors are accountable for their worksites
- Landlords can be held accountable for their tenant's living space







Chemical Burn







What Companies are NOT Sharing

Chronic Use of Hazardous Products Put You, Your Family and Your Business at Risk









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CCS is a full-service company with analysis of facility, recommendations and on-site training to ensure product is being used per recommendations. We also provide year-round assistance with employees, training staff etc. at no charge if a CCS client.

CCS has a full staff of chemists, physicians and trainers.

