#### Necessary Disclaimer: This product cannot cure, mitigate, treat, or prevent a disease.

There's a small list of remedies that I believe were put on this Earth at this time for current (and future) situations by a loving and caring Heavenly Father. HypoRedox is one of these remedies/solutions.

To purchase the HypoRedox visit **www.HealthyPreparedness.blogspot.com** and go to the "Store" tab at the top of the page – then click on the link for "more info" under the HypoRedox section.

#### INTRO

HypoRedox is a hypochlorous acid solution. Hypochlorous acid is a disinfectant that is lethal to every pathogen harmful to humans including pathogens such as MRSA, E. Coli, Candida, Meningitis, Encephilitis, Salmonella, HIV, Epstein Barr, and much more. (*See lab test results at the bottom of this info. sheet*)

It disinfects 120 times better than bleach – **yet is non-toxic and non-irritating**! Bacteria can't become resistant to it – in fact, it kills every pathogen (virus, bacteria, fungus, mold, etc) that it has been scientifically tested against. (*See the test results at the bottom of this information sheet*.)

Not only is hypochlorous acid an amazing disinfectant but it also has the ability to **speed up the healing process**. Why this is the case isn't exactly known but it more than likely has something to do with the redox molecules contained in this special solution allowing the cells to communicate with one another in a more effective way.

As mentioned above, HypoRedox is a hypochlorous acid solution. Although the word "acid" is in its name – it actually isn't acidic at all. In order for it to be most effective it has to have around a 6 pH balance. This solution is made by taking reverse osmosis water that is put through a specialized piece of equipment that electrically separates the atoms – leaving a "charged", redox-rich, powerful, yet harmless hypochlorous acid solution.

#### The benefits and of HypoRedox include:

- Speeds up healing of wounds. (See Vetericyn link)
- Disinfects wounds, cuts, burns, etc\*
- Kills bacteria and viruses on contact including E.Coli, Listeria, Salmonella, HIV, and MRSA. (See test results at the bottom of this information sheet.)
- Kills fungi and molds on contact. (See test results at the bottom of this information sheet.)
- Isn't harmful to humans or animals.
- The high oxidation-reduction potential (at only 20ppm of free available chlorine) kills most pathogens instantaneously. HypoRedox contains *150ppm* of this free available mineral chlorine

   meaning that it will still be incredibly effective even after being diluted. (See more about the "free available chlorine mineral" down below.)
- Non-irritating, non-stinging

#### The possible uses of HypoRedox include:

- Wound healing and disinfection.\*
- Eye infections.\*
- Ear infections.\*
- Sore throats.\*

- Flu's or other illnesses.\*
- Food poisoning.\*
- Disinfecting tools, surfaces, equipment.
- Disinfecting vegetables / fruits / meats.
- Disinfecting ill / deceased bodies.\*
- Disinfecting areas that have been infected by vomit or diarrhea.
- Disinfecting linens / materials by washing with HypoRedox. (Think of disinfecting linens covered in diarrhea, vomit, or blood in disaster situations.)
- Disinfecting ALL airborne pathogens by placing in a humidifier.
- Disinfecting water of all pathogens.\*
- Disinfecting dishwashers.

\*Note: In order to protect myself, I need to clearly inform you that HypoRedox isn't certified for internal or topical use. It is *EPA certified* meaning that it's certified to be used for tools and equipment. The farmer who makes this solution didn't have interest in getting (or paying) for extra certifications to deem this safe to use in ways other than using it as a "surgical tool disinfectant". Because this solution doesn't have an actual certification saying that it's okay to use topically or internally - I cannot recommend others use it topically or internally I will however explain how I, personally, have used it / would use it for each of the uses listed above. (See "How I, Personally, Use HypoRedox.)

#### How I came to have access to this product

HypoRedox comes from a humble farmer in my neighborhood who, after attending one of my preparedness classes, later came to me telling me about this solution he makes "in his backyard". He explained that 10 years ago he purchased a \$20,000 piece of equipment and began making the HypoRedox to sell to hospitals as a surgical tool disinfectant. The business never really took off so he went back to farming only making the solution every now and then for neighbors and friends who asked for it. The only person he's currently selling this solution to is to me – so I can sell it to others.

I don't believe it was a coincidence that brought the farmer and the HypoRedox to my door.

The cost for one gallon of HypoRedox is \$20 a gallon. There aren't very many companies that make this same type of solution but those who do usually make it on-location, spraying it in hospitals, in animal shelters, on produce / meats, etc. The few companies that make an actual product out of this solution charge about \$30 for 32oz for their hypochlorous acid solution.

#### **Scientific tests**

I've taken a sample of the HypoRedox to the chemist at a local company that sells a weak hypochlorous acid solution as an FDA approved supplement. After testing the solution he informed me that:

• The same type of equipment used to make HypoRedox is how they got started to begin with; they knew someone who was trying to make a prescription drug by using hypochlorous acid but it didn't work. The owners came in, purchased the equipment and turned it into a drinkable, completely non-toxic, FDA approved supplement.

- *HypoRedox is 10 times stronger than their drinkable version.*
- HypoRedox is much less expensive than their product. (Their product costs \$30 for 32oz.)

My husband and I have spent much time researching this product. For those who would like to understand this solution some more - here's information my husband compiled after hours of researching what hypochlorous acid is and does:

#### Description

Hypochlorous Acid (HOCI) is the bacteria fighting ingredient in Hyporedox and other similar disinfectants. HypoRedox uses 0.048% HOCI in a Saline Solution. In this concentration it strong enough to destroy pathogens (see the attached lab study sheet) but weak enough to be harmless to human cells and large quantities of gut flora.

#### History

Hypochlorous Acid was discovered by chemists in the early 1800's and has been used sporadically since that time. There are even reports of it having been used to treat wounds in soldiers during WWI. (1)

HOCl is something that is unstable and tends to revert back into the solution that it was created from. The quest to create a stable form of HOCl that is usable has been a worldwide endeavor. Today there are a number of companies in all parts of the world that claim to have stable forms of HOCl that can be used topically and internally by humans and animals. (Vetericyn, Ruthigen, Hypochlor, Natures Panacea, MetaClean A to Z, Aquaox, ASEA, and HypoRedox are just a few. A Google search on HOCl and will list a number of them.)

#### What Is It?

Hypochlorous Acid is a weak, but strongly oxidizing acid and bleach. The reason why it is so destructive is because it has a very high "Redox Potential". This means that it has a strong ability to tear electrons from the atoms of other substances. This removal of electrons changes both substances. The HOCI (receiving the electrons) is neutralized and the other substance (losing the electrons) is changed enough that it is usually destroyed.

In all living things, HOCl oxidizes the cell walls of the living thing it comes in contact with. It then reacts with it and destroys it by breaking down the cell wall and causing necrosis (rupturing of the cell) or apoptosis (programmed cell death). Anything left of the cell contents are then destroyed by remaining HOCl. Even though a virus is not technically a living thing, it too is destroyed by HOCl.

Yet in spite of this destruction potential to living things (and you can see why the FDA might be a little sensitive about it), HOCI is something that our body produces and uses. Our own immune system has this fascinating system to fight infection from invading pathogens. Of all the facets of this system, I find the phagocytic process the most interesting by far.

Whenever the immune system is compromised, the body detects the compromised location and sends white blood cells through the body to fight the invading pathogens. The white blood cells attack, surround (or eat), and destroy (digest) the pathogen using a process that creates solutions that involve Hypochlorous acid as an end product.

Some studies (2) have shown that, even though our own body produces HOCl to fight infection, it does not mean that our own cells are not negatively affected by it. There is evidence to show that tissue inflammation due to injury may be a result of the same HOCl generated by phagocytosis.

This constant exposure to HOCI, may be the reason our body has adapted and developed ways to protect itself from HOCI. Even in weak solutions, HOCI is irreversibly lethal to pathogens, but tolerable to mammalian cells. The reason WHY it is tolerable is not well understood, but studies from private and government sources have shown it to be so.

Ruthigen, a company working toward developing a marketable infection fighting drug, says this on their site: "Mammalian cells contain cellular amino acids and pumps that assist in neutralizing HOCI and keeping mammalian cells safe. Mammalian cells contain amino acids such as Taurine that help protect the cells from the oxidation process caused by HOCI."

In 2008 Graduate students at Yonsei Medical University in Seol Korea successfully proved that a saline nasal rinse containing HOCI killed bacteria and fungus but did not irritate the nose. Vetericyn, which sells HOCI spray for animal infections, shows customer testimonials with photos of remarkably fast healings due to use of this spray.

Outside of use on living things, it is used even more frequently in food processing plants because of its amazing ability to disinfect equipment for meat and dairy products without introducing any hazardous chemicals into the food. Hypochlorous Acid is one of the disinfectants <u>approved by</u> <u>the FDA</u> for use in food processing equipment and utensils (3)

This is a solution that is lethal to every pathogen harmful to humans yet remains non-toxic to mammals!

#### **Healing Properties**

HOCl has long been recognized for two important healing characteristics: It has the ability to help wounds heal faster and to do it painlessly. Even though it is not fully understood why it does this, one thing is clear: a wound clean from pathogens heals faster.

HOCl does not sting when applied to a wound. Alcohol, commonly used for sterilizing a wound, destroys pathogens by drying out the cells. Unfortunately, it does the same thing to the living tissue, as well as any white blood cells that are there to fight infection. Not only does it destroy

any natural defenses on the injured site but the process is extremely painful and reduces the chance that the injured person will allow further treatment.

HOCI can only exist in a neutral pH solution which also makes it highly tolerable to the body. It does not damage living tissue nor any of the body's natural defenses (white blood cells) that are on site working to repair damaged tissue. *This makes it one of the best first aid solutions available*.

In 2011 Ruthigen performed a study to compare the success rate of healing a diabetic foot ulcer with HOCl vs antibiotics. The results showed a 93% success with antibiotics with HOCl vs a 56% success rate with antibiotics and saline in a 28 day period (4).

The Veterycin brochure shows amazing results in less than 30 days on the ugliest of wounds treated with the HOCI product.

#### Where it comes from

Hypochlorous Acid can be made in a number of ways. Pure Chlorine  $(Cl_2)$  mixed with water  $(H_20)$  will make both Hypochlorous Acid (HOCl) and Hydrochloric Acid (HCl). This is the basics chemical process that occurs when you add bleach to water. However, it's not the bleach that kills the germs, it the byproduct: HOCl that does the dirty work. Mixing bleach with water essentially creates two main bacteria fighting substances: HOCl and OCl- While both fight bacteria, they are not present in equal proportions. According to a University of Illinois study, **HOCl is 120 times more effective as a sanitizer than the –OCl ion.** 

So, you want more HOCI, and less OCI-. But, the higher the PH, the lower the HOCI (HOCI exists most abundantly in a neutral PH). Even at dilutions as low as 1 ounce of bleach in a gallon of water, the pH of the solution is 10.25 and all of the chlorine is in the hypochlorite form (-OCI ion). (5) That means that even though bleach does generate some HOCI and does make hypochlorite that does kill germs...it is 120 less effective than a solution containing HOCI.

Another way is through electrolysis in a saline solution (running electricity through salt water). This is the most common process as it creates a salt water solution containing a weak and stable solution of HOCI that does not evaporate into chlorine gas or turn back into salt water within a reasonable amount of time. The listed shelf life is 30 days, but it has lasted longer.

HypoRedox is constantly checked for pH to assure that it is at the levels where the most possible HOCl can exist.

#### How I, Personally, Use HypoRedox

Just to clarify - I was told, in prayer, to only use this solution, internally, "during times of illness".

HypoRedox is similar to Asea – an FDA approved oral supplement. Dosage for Asea is 2 ounces twice a day for maintenance. 4 ounces twice a day for illness. 6+ ounces twice a day for chronic illness. **HypoRedox is 10 times stronger than Asea.** (Do the math.)

I, personally, take it internally (only in times of illness) in  $\frac{1}{4} - \frac{1}{2}$  tsp increments mixed in water several times a day. *But, please be aware, this product is not certified for internal use if you choose to take it internally you do so at your own risk.* 

#### For illnesses:

- $\frac{1}{4}$  tsp  $\frac{1}{2}$  tsp mixed in water 3-6 times per day
- Note: HypoRedox contains **150ppm** of the free available (mineral-form) chlorine. (This is not to be mistaken with the toxic chlorine found in bleach.) Nano-silvers contain only **10ppm** of their medicinal compound. You only need about 10ppm in a solution to be effective. This would mean that, compared to nano-silvers, you'd only need 15 less the amount than what they usually recommend taking internally which equals to be about ¼-1/2 tsp of HypoRedox mixed in water.

#### For disinfecting water:

- 1-2 cups in 55 gallon drum of water. (Change every 2 years.)
- ½ tsp in gallon of water.
- (Note: This only kills all pathogens it doesn't pull out heavy metals, radiation, etc. you'd need something like charcoal or bentonite clay to do that.

#### For disinfecting the air:

• 1 part HypoRedox in 5 parts water poured into ultrasonic humidifier that where the filter has been taken out. Humidify one room for an hour or more.

#### For disinfecting surfaces, tools, etc:

• Either use straight or dilute to a 1:5 ratio – (so it's down to a 30ppm ratio). 1 part HypoRedox to 5 parts water.

#### For disinfecting wounds, cuts, burns, etc:

• Either use straight or dilute to a 1:5 ration. 1 part HypoRedox, 5 parts pure water. Spray onto wound.

#### Eye / Ear Infections:

• Either use straight (doesn't harm / hurt) or dilute to 1:5 ratio. 1 part HypoRedox, 1 part pure water. Drop into ear with dropper, 10-15 drops, let sit for 1 minute, allow to drain out onto tissue. 1-2 x per day.

#### For Sore Throats:

• Gargle straight or dilute to 1:3 ratio

#### For Burns:

• Spray on either straight or dilute to 1:3 / 1:5 ratio. 1 part HypoRedox and the other parts HypoRedox.

#### **Cold Sores:**

• Apply directly onto cold sore – no dilution is necessary. Rub in a bit. Apply a few times a day.

Visit this link (<u>http://vetericyn.com/downloads/marketing/vets/VetericynVF\_catalog.pdf</u>) to view the information sheet of a product called Vetericyn. It lists how they safely and effectively use it for treating all manner of issues for dogs. This pdf file says a lot.

#### **Personal Stories Thus Far**

- My mom gets stomach ulcers (known to be caused by the H. Pylori bacteria) about once a year. She had been fighting with a episode of it for a few months. She began using the HypoRedox orally 4-6 times a day and the issue went away completely after a few days.
- A little girl had bitten her cheek which became infected. It bothered her for days. Her mother applied the non-diluted HypoRedox onto the infection twice before the little girl went to bed. She woke up the next day with it almost completely healed. Aside from a small pink area it was completely gone the day after that.
- A teenage boy broke his leg and the pins that kept the bones in place became infected. His doctor gave him every antibiotic they could to get rid of this infection but nothing worked. He then applied HypoRedox to the site of the infection and it was completely better after two days.
- One woman used this solution to successfully get rid of the flu.
- A man used this solution to get rid of his sore throat.
- One woman used HypoRedox in her humidifier which dramatically helped all of her family members, children included, that were getting sick over and over again.
- My husband occasionally wears and runs in "five-fingered" shoes. They are shoes you wear without socks. Needless to say, the shoes get super stinky. To help combat this issue he used to wash them once a week by first pouring hydrogen peroxide in the shoes to "kill the pathogen that's causing the stinky problem" and then let them soak in a bleach water solution to complete the job ... all of this without much success. He decided to give the HypoRedox a try by pouring HypoRedox into the shoes. The next morning he allowed the shoes to dry and the smell was completely gone!
- One woman took small amounts of the HypoRedox internally when feeling ill illness went away after drinking it 3 times within a 5 hour period of time.

Note: Please remember that HypoRedox is not certified for internal or topical use.

#### Extra Info that was on the Original HypoRedox Information Sheet:

Hyporedox is basically electrolyzed water that kills bacteria, germs, viruses, mold, fungi, and spores. It is a stable electrolyzed water solution. It is a non-hazardous, cost-effective alternative to bleach and other traditional hazardous chemicals used for disinfection.

Studies done on Hyporedox have shown that it is as much as 100 times more effective against bacteria than bleach. Hyporedox is produced from a simple salt water solution making it completely safe and environmentally green.

Hyporedox is a strong oxidizing solution that kills microorganisms including but not limited to viruses, fungi, spores, mold, mildew, mycobacterium and bacteria.

The US Environmental Protection agency has conducted thorough investigations of the scientific data relative to HypoRedox. After a battery of independent lab testing performed by the fully-certified EPA-approved labs, HypoRedox is the only anolyte solution EPA registered as a broad spectrum hospital disinfectant. (EPA Reg.#82341-1)

HypoRedox is up to 100 times more effective than bleach at  $1/10^{th}$  the concentration.

HypoRedox is produced at 6.3 to 6.5 pH which is considered the most effective range for a solution like this.

Due to its oxidizing potential the hypochlorous acid transfers atomic oxygen in the form of a "radical" to the microorganism, which destroys the organism.

The smaller the disinfectant droplets are, the higher the airborne "killing" ability is. In this sense, high frequency ultrasonic humidifiers are the most suitable technique to generate uniformly micrometer-sized droplets, which can be evaporated immediately.

#### References

1) <u>http://www.natures-panacea.com/hocl-a-brief-history</u>

"Natures Panacea" is a company that sells a similar product. It provides an interesting history of HOCI, but it lists no sources. I have searched on Wikipedia and Google Books to back this up, but I have only been able to find general references suggesting that this is true. Even so, there is no reason to believe that this was not the case as it is a reasonable claim.

<u>http://www.ncbi.nlm.nih.gov/pubmed/11327319</u>
 "However, the generation of a potent oxidant is not without risk to the host, and there is evidence that HOCl contributes to the tissue injury associated with inflammation."

- 3) <u>http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?fr=178.1010</u>
- 4) http://ruthigen.com/product/

"Hypochlorous acid has also been studied for purposes of evaluating, and has been shown to demonstrate, pro-healing capabilities. Improvement with statistical significance in clinical success has been demonstrated, as determined by the complete resolution of signs and symptoms of disease, in diabetic foot ulcer patients. According to Landsman et al., JAPMA, 2011, the hypochlorous acid group with levofloxacin outperformed a control group of patients that used saline with levofloxacin, an antibiotic commonly used with these patients. The hypochlorous acid group with levofloxacin showed a 93% success rate at 28 days vs. a 56% success rate in the control group using saline plus levofloxacin."

http://www.klormansystems.com/hypochlor.pdf

### *\$10,000 Lab Tests Done to Test/Prove Disinfectant Potential*

## Laboratory Testing of HypoRedox<sup>™</sup> Hypochlorous Acid (HOCL) Against Various Microorganisms

		Clarcon Biological Chemistry Laboratories: Roy, Ut	ah	
			to 6 Sec.	7 to 10 Sec
			ontact	Residual
Clostridium		Psuedomembranous colitis(C.diff)-Botulism-Tetanus-Gas Ganrene	97%	83%
Bacilli (class)		Strep-: Alpha (pneumoniae, mutans, viridans) – Beta	9770	0370
Dacim (class)		A pyogenes (Scarlet fever, Erysipelas, Rheumatic fever,		
		Streptococcal pharyngitis), B Agalactiae- D Entero-	92%	88%
Coccus		Staphylo—Toxic Shock Syndrome, Mastitis	96%	84%
Coccus		Bacillus (shape) Bacillus (Anthrax – Listeria (listeriosis)	91%	89%
Actinomycetales		Actinomysetoma (Whipples's disease) – Corynebacterium (Diphtheria,	2170	0770
<u>netholity</u> cetures		Erythrasma) – Nocardia (Norcardiosis, Masuromycosis)	90%	80%
Mycobacterium		M. tuberculosis (Tuberculosis): Ghon focus/Ghon's complex – Pott	9070	0070
Wiycobacterium		Disease – brain (Meningititis, Rich focus) – cutaneous (Scrofula,		
		Bazin disease, Lupus vulgaris, Prosector's wart) – Miliary	050/	0.50/
		M. leprae (leprosy)	<u>95%</u> 100%	85%
		Nontuberculous: Mycobacterium avium (Lady Windermere syndrome)	100%	95%
		Mycobacterium ulcerans (Buruliulcer)	92%	90%
Spirochetal				
spirochetar		<u>Treponema: Syphilis (Bejel) – Yaws – Pinta</u> Borella: Relapsing fever – Lyme disease (Erythema chronicum migrans,	90%	80%
		Neuroborreliosis)	1000/	0.50/
		multiple/unknown: Noma – Trench Mouth – Rat-bite fever – Leptospirosis	<u>100%</u> 93%	<u> </u>
Musenleametales				
Mycoplasmatales		Mycoplasma pneumonia – Ureaplasma infection	97%	85%
Chlamydiae		Chlamydophila (Psittacosis) – Chlamydia (chlamydia, Lymphogranuloma		
		venereum, Trachoma)	99%	89%
Proteobacteria	<u>a/</u>	Rickettsiales/ Typhus, spotted fever(Rocky Mountain ) Boutonneuse fever	100%	99%
<b>Anaplasmataceae</b>		Ehrilchiosis Human granulocytic ehrlichiosis, Human monacytic ehrilichiosis		89%
		Other: Coxielia (Q fever)-Bartonella (Trench fever)-Orientia (Scrub typhus)	99%	81%
<b>Rhizobiales</b>		Brucellosis - Cat scratch fever - Bartonellosis (Bacillary angiomatosis)	100%	90%
	B	Neisseriaceae: Meningococcus – Gonorrhea	100 %	90%
		Burkholeriales: Glanders – Meliodosis – Pertussis	97%	83%
		Enterobacteriaceae: Salmonella (Typhoid fever, Paratyphoid fever, Salmon-		
		Ellosis) - Yersinia pestis (plague/Bubonic plague) - Kiebsiella (Rhinoscleron	na,	
		Donovanosis) - Shigelia (Shigellosis - Escherichia coli/o157:h7 - Proteus	99.9%	89.7%
		Pasteurellaceae: Pasteurella (Pasteurellosis) – Haemophilus (Brazillian		
		Purpuric fever, Chancroid) – Actinobacillus (Actinobacillosis)	96%	84%
		Other: Francisella (Tularemia) – Vibrio (Cholera)		
	V	Legionella (legionellosis) – Pseudomonas – Serratia	98%	89%
	E	Campylobacteriosis – Helicobacter	99.5%	89.9%
<b>Bacteroidetes</b>		Bacteroides	100%	97.9%
Other		Gardnerella	98.9%	89.9%
VIDUC				
VIRUS		A departiridade adapartirus	070/	1000
		Adenoviridae: adenovirus	97%	100\$

Adenoviridae: adenovirus	97%	100\$				
Picornaviridae: coxsackievirus, hepatitis a virus, poliovirus	98%	98%				
Herpesviridae: Epstein-barr virus, herpes simplex virus, type 1 and 2, hu	ıman					
Cytomegalovirus, human herpesvirus, type 8, varecella zoster virus	91%	89%				
Hepadnaviridae: Hepatitis B virus	100%	98.9%				
Flaviviridae: Hepatitis C virus	98.9%	99%				
Retroviridae: Human immunodeficiency virus (HIV)	50%	49%				
Orthomyxoviridae: (TYPE A) influenza virus	79%	73%				
Paramyxoviridae: measles virus, mumps virus, parainfluenza virus,						
Respiratory syncytial virus	83%	80%				
Papovaviridae: papillomavirus	100%	98.9%				
Rhabdoviridae: rabies virus	100%	99.8%				
Reoviridae: Rotavirus	99.2%	99.1%				
Togavirid: Rubella virus	94.6%	93.4%				

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#### Vetericyn Lab Results

Vetericyn, a product used for dogs and other animals, also did some lab studies regarding the efficacy of their hypochlorous acid product. Here are their results:

## Works Naturally

Vetericyn<sup>®</sup> works naturally with the animal's own immune system. Vetericyn does not contain steroids, antibiotics or alcohols, making it safe for a wide range of animals with even the most sensitive systems.

## Great for:

- Acute and chronic wounds
- Burns
- Skin infections and irritations including dermatitis
- Fungal infections such as ringworm
- Post-surgical sites
- Skin ulcers, abscesses and hot spots
- Skin rashes and allergies
- Eye infections\*
- Ear infections\*\*

\*For superficial use with intact comea

# In Solution Vetericyn kills the following:

Name of Organism	Time to Kill	Percent Reduction 99.9999%	
MRSA - Staphylococcus aureus	30 seconds		
VRE - Enterococcus faecalis	30 seconds	99.9999 %	
Staphylococcus aureus	30 seconds	99.9999%	
Pseudomonas aeruginosa	30 seconds	99.9998%	
Escherichia coli	30 seconds	99.9997%	
Moraxella bovis	30 seconds	99.9999%	
Moraxella catarmalis	30 seconds	99.9999%	
Acinetobacter baumannii	30 seconds	99.9999%	
Bacteroides fragilis	30 seconds	99.9999%	
Candida albicans	30 seconds	99.9999%	
Enterobacter aerogenes	30 seconds	99.9999%	
Enterococcus faecium	30 seconds	99.9999%	
Haemophilus influenzae	30 seconds	99.9993%	
Klebsiella oxytoca	30 seconds	99.9999%	
Klebsiella pneumoniae	30 seconds	99.9999%	
Micrococcus luteus	30 seconds	99.9999%	
Proteus mirabilis	30 seconds	99.9999%	
Serratia marcescens	30 seconds	99.9999%	
Staphylococcus epidermidis	30 seconds	99.9998%	
Staphylococcus haemolyticus	30 seconds	99.9999%	
Staphylococcus homins	30 seconds	99.9996%	

Staphylococcus saprophyticus 30 seconds 99.9999% Streptococcus pyogenes 30 seconds 99.9999%