

**A COMPREHENSIVE  
INTRODUCTION INTO  
IONIC COLLOIDAL SILVER**

**AgH<sub>2</sub>O**

*Elemental Mineral Water*

**HOW TO MAKE HIGH QUALITY  
ICS AT HOME  
FROM AGES 8 TO 80**



“Give a man a fish, feed him for a day.  
Teach a man to fish,  
feed him for a life time.”

*Lau Tzu, founder of the Taoist philosophy*

“I am neither doctor nor scientist, I am but a humble Truth seeker”.

*Mark Etherton, DreamWeaver Ltd. M.D.*

The information contained in this booklet has been gleaned over the years from a wide variety of sources including the internet. I believe sincerely and with conviction that the information contained here-in is true to the best of my knowledge. The information is passed on in good faith when it has been unable to be confirmed or corroborated independently. The content of this booklet is intended purely for information and educational purposes **only**, for those interested or wishing to start researching home made ionic colloidal silver for themselves. NOTHING here-in should be interpreted as medical advice.

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## A NOTE ON 'TRUTH'...

The famous astronomer Galileo tried to get one of the most respected scholar's of his day, Cesare Cremonini, to look through his telescope and *see for himself* the moon was NOT a perfect sphere as Aristotle had taught, but had craters upon it. Cremonini however

**"knew"** better and replied:

*"If I saw any such thing it would be because the telescope had bewitched me."*

*To see 'Truth' one must keep an open mind and **never** cease questioning. Silver has wonderful and **provable** properties which anyone can discover through simple experiments which are mentioned at the end of this booklet...*

*you are NOT being bewitched!*

# Ionic Colloidal Silver or ICS

## **INTRODUCTION.**

This booklet is intended to cover all the basic information needed to understand, generate and experiment with a totally safe, high quality Ionic Colloidal silver. For those who have never heard of ionic colloidal silver, it is nothing more than distilled water in which tiny charged particles of silver are suspended. However, silver has an absolutely astounding property... it is able to kill ALL the bacteria, viruses and fungi which have been tested with it to date.

The germicidal effects are known to the medical profession, and silver preparations are still in use for severe burns victims where it is vital that no opportunistic infections take hold. Unlike antibiotics, strains resistant to silver have never been known to develop (outside of naturally silver rich environments), and antibiotics are only effective against perhaps a dozen forms of bacteria and NEVER viruses.



## **USES OF COLLOIDAL SILVER (PRE 1938)**

Uses of colloidal silver are usually quoted as "pre 1938" to comply with American laws on making medical or health claims about a substance or product. The following is a partial list of some of the documented uses of silver prior to 1938 (specifically in the colloidal form) for the treatment of various conditions and pathogens:

*Acne, arthritis, athlete's foot, bladder inflammation, burns, B.Tuberculosis, blepharitis, cancer, colitis, cystitis, diphtheria, dermatitis, diabetes, dysentery, ear infections, Eustachian tubes, eczema, fibrositis, furunculosis, gonorrhoeal herpes, gonorrhoea, impetigo, influenza, intestinal conditions, keratitis, leprosy, leukaemia, lupus, lymphagitis, malaria, Menier's symptoms, meningitis, neurasthenia, ophthalmology, canine parvo virus, pneumonia, pleurisy, prostate, Pruritis Ani, quinsy, rheumatism, ring worm, rhinitis, scarlatina, seborrhea, septic ulcers, sepsis, septicemia, skin cancer, shingles, soft sores, spruce, staph infections, strep infections, Subdies inflammation, tuberculosis, tonsillitis, toxemia, typhoid, trench foot, ulcers, warts, whooping cough and yeast infections.*

Today we are threatened by more "severe" viruses such as Ebola and Hanta and other "flesh-eating" bacteria. However, understanding that these are merely viruses and bacteria, silver renders these organisms as ineffective in the disease game as any others. Under a microscope, bacteria which have mutated to the point where they laugh at penicillin are quickly dispatched with a few ions of silver.

## A CONSPIRACY?

The tragic truth is that there is a genuine conspiracy here because so much is known about silver ions and their healing properties which are well documented. The reason no major research will EVER be conducted by major pharmaceutical companies becomes obvious when you realise that absolutely ANYONE can make a very high quality ionic colloidal silver for only a few pounds (despite what some colloidal silver manufacturers claim). The product can't be patented because it's just an element (silver) suspended in pure distilled water, and the process can't be patented because it's nothing more than electrolysis which is taught in all secondary schools. So nobody can make any *serious* money from it. Do you really think the multi-billion pound pharmaceutical companies have got your best interests at heart, or are they just trying to make a profit? To illustrate this, just one drug "Interferon" which is prescribed to many cancer patients, is worth over a billion dollars a year in revenue. Do you think these pharmaceutical companies are going to be happy if people could make their own medicine which was cheaper, safer AND often more effective than the pills and potions peddled by these drug companies?

It is not that the properties of silver are unknown, quite the contrary. On Thursday 14th April 2005 The BBC broadcast a report throughout the day on MRSA, a strain of Staphylococcus bacteria which is resistant to certain antibiotics - a Super Bug. It stated "*7000 people a year contract MRSA and it is believed to cause a 1000 deaths each year. In a bid to prevent its spread, The Heartlands Hospital in Birmingham is investing in a new ward in which everything from the bed to the curtains will be coated in a silver based powder to prevent bacterial build up*"... Undeniable proof that the medical profession know silver kills bacteria. Even earlier on 17th January the BBC published an article on their website in which the first paragraph states: "An Austrian doctor believes a dressing containing silver can virtually eradicate the cross infection of MRSA in hospitals." This article can be downloaded from our website.

The American and European governments have started clamping down hard on companies selling colloidal silver. Currently the American Federal Drugs Administration have no control over the sale of colloidal silver because it is classed as a mineral (this may change in the near future!). However, it is ILLEGAL for anyone to make any medical or health claims for their products and so they must only be sold as "*nutritional supplements*". That might sound perfectly reasonable, after all you wouldn't want a company to start selling an untested, unproven herbal medicine which claimed to be able to cure baldness. That would be wrong, and one would expect governments to prevent charlatans selling snake oil cures to desperate people who are easy to take advantage of. But what about when it's the other way around? When scientific studies and experimentation which are done impartially, under laboratory conditions *prove* a substance's abilities and *can* be repeated time and time again,

and you find out you're being actively prevented from hearing about it AND discouraged from believing it if you do hear, isn't that even *worse*?

The European Parliament are currently trying to ban HUNDREDS of nutritional and herbal supplements of which colloidal silver will be one. The EEC **Food Supplements Directive** came into law in June 2002 and will be enforced in Britain from August 1st 2005 and the *Alliance for Natural Health* are amongst those fighting these draconian measures removing freedom of choice. There are people deliberately spewing out misinformation and trying to generate a fear and reluctance to try, or even to take seriously this strange and wonderful substance. These "distortions" include Rosemary Jacobs who vehemently and irrationally campaigns against ALL silver on her web site after contracting Argyria from prescribed nasal drops containing silver nitrate (a **compound**) decades ago. Also, an organisation called "QuackWatch" has a 'poisoned' web page, and even in the House of Commons "Hansard" dated 15th January 2004 I found a question had been raised in the House which had an unbelievable reply.

*"Mr. Lansley: To ask the Secretary of State for Health what assessment he has made of the effectiveness of colloidal silver as a treatment for MRSA and other hospital-acquired infections. [146718]*

*Miss Melanie Johnson: We are not aware of any peer-reviewed or clinical trial evidence that colloidal silver is an effective treatment for methicillin resistant Staphylococcus aureus (MRSA) or other hospital-acquired infections. Colloidal silver has antibacterial properties, but it is not used as an alternative to antibiotics because of its toxicity when taken internally.*

Whilst it is may be true that there is LITTLE peer-reviewed or clinical trial evidence there is SOME, but to say that Colloidal Silver is toxic when taken internally is either incredibly ill-informed and foolish OR it is a deliberate deceit! **ALL** the evidence I've seen suggests the contrary, it is **NON TOXIC** when made with at least 99.9% pure silver and distilled water using electrolysis. Evidence such as the Robert Altman Study published in 1999 showed the body does NOT treat ionic colloidal silver in the same way as silver compounds and is easily excreted through the normal waste elimination systems of urine , faeces and sweat. Copies of this report can be downloaded from our web site.

## **A BRIEF HISTORY**

Silver is a chemical element, considered one of the precious metals. Revered for many millennia by countless civilisations, and known to have been put through a process to separate it from lead 3000 years BC. It is a soft white metal which is not only used in jewellery, but also dentistry, medicine, photography and electronics.

Silver has an absolutely REMARKABLE property, which has been known for thousands of years. **Silver kills bacteria.** The ancient Greek Physician Hippocrates who lived around 400 years BC is often referred to as "*The Father of Modern Medicine*". He is known to have discovered aspirin in Willow bark and he also noted silver for its "*beneficial healing and anti-disease properties*".

The Egyptians, Romans and Greeks amongst others ate off silver plates, used silver cutlery and drank from silver goblets as there were those amongst them who knew it would reduce their chances of catching infections. In one culture it was claimed "*disease could not be passed from one person to another if they drank from a silver cup*". The ancient Greeks also noticed the upper classes who had silver canteens didn't get dysentery whilst the troops often did. In 1926 CG Cumston wrote in the "*History of Medicine*" that in 69 BC silver nitrate was described in "*The Contemporary Pharmacopeia*". Silver Nitrate is still in use to this day as a disinfectant used in podiatry and in some countries to prevent blindness in new born infants.

### **IS SILVER DANGEROUS?**

All metals can behave in different ways within the body, either as "*trace mineral nutrients*" or "*toxic heavy metals*". Iron supplements are an excellent example, available over the counter without prescription and proven safe and useful under certain circumstances. However, Iron is the primary cause of deaths by poisoning in the under sixes in America.

Unlike Iron, Silver has only one known toxic effect, a cosmetic condition called Argyria. Argyria is known to be caused by silver **compounds** (*silver combined with one or more different elements forming larger molecules with different properties*) which the body cannot eliminate through the normal means of immune, lymphatic, and intestinal elimination systems. These then build up in places such as fatty tissues in the body. This gives the skin a slight bluish grey tint, but other than that it appears harmless to humans having no other negative effects on the body. The term "*Blue Blooded*" which is sometimes used to describe royalty is believed to have stemmed from the fact that over these individuals lifetimes, specs of silver would become detached from their culinary utensils which they'd then ingest and develop mild argyria from. One of the most recent cases was a Montana candidate for Senator known as Stan Jones. He was diagnosed with MILD Argyria after taking home made colloidal silver for 5 years. He freely admits he was making it incorrectly by breaking the two most important rules, use DISTILLED water and NEVER add anything to it to increase it's conductivity.

On the following page is a reprint of a posting from the Yahoo Colloidal support web site following a letter written to Stan Jones asking if the media reports were true and of the

safety of colloidal silver. He recommends it and says **his photo was doctored** by the reporter to make him look severely grey/blue and picked up by UPI which was then picked up by the world media. The photo featured below left was taken from the BBC web site and the photo to the right comes from the Official Montana Libertarian web site... form your own conclusions!

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### Stan Jones' FAQ:

Here's my standard response. I think it answers most of your questions.

Don't stop what you're doing. Colloidal silver has been so completely researched that we know it is very safe. Many people don't see any difference in my skin. This news blast started because a reporter who saw me in a debate in Great Falls, Montana interviewed me and published a story with a doctored photo (made my face decidedly blue). The associated press picked the story up and put it all on the Internet.



To answer your questions:

- 1) I use a generator with three nine-volt batteries connected in series (27 volts D.C.);
- 2) I started taking colloidal silver in Seattle where the tap water is generally free from minerals. I added a few drops of salt water to improve the conductivity. When I moved to Montana 1998, I continued to use tap water but here it is full of minerals. I never had it tested.
- 3) I made my solution in an eight ounce paper cup, conducting the current for one hour. I then added one half of this solution to two gallons of drinking water that I kept in my refrigerator. I have no idea what the PPM of this solution was.
- 4) I drank my water over the entire day , but mostly in the evening after work. I have no idea how much I drank during any day.
- 5) I never filtered the solution.
- 6) People began to tell me my complexion was getting "pale" or "green" or "blue." I never noticed the difference in my mirror every day. I did notice that under my finger nails was turning blue - like a lack of oxygen. That's probably the first sign. No other part of my body shows any indications.

I hope this is helpful. I know that I am an unusual case -- only the second or third case to be reported. If you are as careful as you indicate, you have absolutely nothing to worry about. Stay healthy. You are with millions of other Americans that take silver.

Best wishes

Yours for good health and freedom

Stan Jones, Libertarian Candidate for the U.S. Senate

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## WHAT EXACTLY IS IONIC COLLOIDAL SILVER?

Extract from “*Colloidal Silver Facts*” by Truman Berst:

*“Colloidal Silver is a tasteless, odourless, non-toxic, pure, natural substance consisting of sub-microscopic clusters of silver particles, suspended by a tiny electric charge placed on each particle, within a suitable liquid. The molecule’s size usually ranges from 0.01 to about 0.001 micron in diameter (very small). The particles do not settle but remain suspended since the electric charge exerts more force than gravity on each particle. Colloidal is the form of choice since the body must convert a crystalline solution to colloidal before it can be used. Taken daily, it is a powerful adjunct to our immune systems, by killing harmful disease causing organisms, and aids healing.*”

*Silver and all minerals are obtained from food we eat. This comes directly from organic soil containing living organisms. These organisms assist in making the minerals available to the vegetation. However, if we eat fruit and vegetables grown on chemical fertilisers, as most plants are grown today, we do not get the necessary quantity of vitamins, minerals and trace elements which occur in organically grown foods. This results in deficiencies which progress over time resulting in an impaired immune function. The results are diseases of aging. Dr. Robert Becker noticed a correlation between low silver levels and sickness; colds, flu, etc. Some Biochemists suspect that a silver deficiency is possibly one of the main reasons cancer exists and is increasing at such a rapid rate today. Dr. Bjorn Nordstrom of the Karolinska Institute, Sweden, has used silver in his cancer treatment for many years. He says it has brought on rapid remission in many patients whom other doctors had given up on.”*

Lets jump forward to only 500 hundred years ago. Mankind was learning fast, making massive leaps and bounds in the pursuit of enlightenment and **“Truth”**. Galileo realised we were not the centre of the universe, Darwin discovered the concept of evolution and no longer did our collective family tree stop at Adam and Eve. Isaac Newton calculated the basic laws of modern day physics, and by the end of the 1800’s thanks to pioneers such as Faraday, Davy and Maxwell we had started to build up a cohesive theory about electricity and magnetism. By the turn of the 20th Century we were learning so much about the fundamentals of our reality, physics, chemistry, biology - *we were on a roll!*

Now to get down to some details. First of all two definitions, what is a “*colloid*”? Well, a simple definition is “*a suspension of one material in another*”. You see another discovery at the turn of the last century was that most important fluids are colloidal in nature, milk for one, but perhaps far more importantly, blood, which carries oxygen and nutrients to all of the bodies cells. More details on “*ions*” follows shortly, but a simple definition is: *An atom*

or group of atoms that carries a positive or negative electric charge as a result of having lost or gained one or more electrons. **Silver ions are always positive**, so Ionic Colloidal Silver is tiny particles of silver which carry a positive electrical charge which are suspended in distilled water.

It is VITALLY important to understand that there are various means of manufacturing colloidal silver which do NOT give the silver a positive charge (the Ionic part), including binding silver to proteins to create the colloid, but the ONLY **guaranteed safe** method is using the process of electrolysis in **distilled** water. One of the confusing issues is that ions of silver are so small they're considered dissolved by some researchers, and not a colloid at all!

### **SIZE MATTERS!**

To get an idea of the sizes of these particles of silver which we're talking about, **you could fit two billion atoms on the full stop at the end of this sentence.**

The unit of measurement used to measure microscopic particles and atoms is called an Angstrom.



An Angstrom = one 10 billionth of a meter which is 0.0001 microns  
A Micron is a millionth of a meter (*The Greek letter  $\mu$  is sometimes used as shorthand for micron*).  
A Silver Atom is approximately 0.00014 $\mu$  (1.445 angstroms)  
And an Ion is fractionally smaller missing just one electron

If these numbers mean nothing to you, **imagine if an atom was the size of a football stadium, it's nucleus would be the size of a pea!** Electrons are 1000's of times smaller than the nucleus.

Size is important for this reason, one of the largest molecules which exist is the DNA molecule which is approximately one third of a micron. A virus is just a single strand of DNA surrounded by a protein. If someone foolishly uses tap water to make colloidal silver it will almost certainly contain chlorine amongst many other things, which will bind with the silver in the electrolysis process producing the COMPOUND Silver Chloride. This not only has different properties to silver ions but will contain a minimum of 142 atoms bound together so is vastly larger. There is more surface area of silver available in 5 parts per million .01 $\mu$  than 5ppm .1 $\mu$  because parts per million is a measurement of mass. It is COMPOUNDS which are known to cause argyria AND are less effective than ionic colloidal silver because of their large size and lack of positive charge.

So what EXACTLY is an ion? Well, the Greek philosopher Demokritos proposed the idea of all matter being composed of indivisible building blocks, hence the name “*atom*” which means “*unable to be divided*”. By the time of Michael Faradays experiments into electrolysis, it had been established that atoms WERE in fact divisible and were constructed of a nucleus consisting of varying numbers of protons which have a positive charge and neutrons with no charge.

Like moons orbiting a planet so fast they appear to coat it in a fuzzy haze, the nucleus is orbited by **electrons** and these carry a **negative** charge. **Electricity** is the **flow** of **electrons** through a **conductor**. Now a **Silver Ion** is an atom missing one or more electrons (*which have a negative charge*) therefore an ion has a **positive** electrical charge. This is VERY important, because it is this **positive charge** which means these minute particles of silver are extremely “**bioactive**” - they want to interact with the body’s biochemistry.

Electrolysis (*as far as our purpose is concerned*) is the suspension of two strips of at least 99.9% pure silver (*known as **electrodes***) into distilled water (*known as the **electrolyte***) and an electric current passed between them. The distilled water is pure hydrogen and oxygen molecules (H<sub>2</sub>O) which conducts the electricity but provides no other substances for the silver to react with. This prevents the production of silver compounds which are comparatively **huge** particles relative to the ions and minute particles of silver. Essentially an ion is as small as silver can get before it completely loses it’s identity as an element!

Basically this is Ionic Colloidal Silver, the smallest possible particles silver can be, with a positive electrical charge, suspended in distilled water. **That’s it!**

### **WHAT DOES IONIC COLLOIDAL SILVER DO?**

As already mentioned, it was the late 19th/early 20th Century when so much research was being done with electrolysis and colloids, the quest and yearning for knowledge and understanding were still strong then, prior to the development of the massive pharmaceutical corporations which were heavily invested in by J.D. Rockefeller (who obviously was only concerned with seeing a high return on his investment). In fact he commissioned a report in 1910 from Abraham Flexner which came out against all electronic forms of therapy in favour of manufactured, **patented** medicines. But at that time research was still being done and published. Dr Henry Crooks author of “*Use of Colloids in Health*” found colloidal silver to be highly germicidal. In laboratory testing he found that “*All fungus, virus, bacterium, streptococcus, staphylococcus and other pathogenic organisms are killed in 3 or 4 minutes. No known microbe lasts more than 6 minutes in a dilution of as little as 5 parts per million*”. He found it particularly effective in intestinal problems with no serious side effects from high concentrations.

Even MORE fascinating - In 1919 Alfred Searle, founder of the Pharmaceutical giants now known as “Monsanto” made the following statement in his book *“The Use of Colloids in Health and Disease”*: *“Applying colloidal silver to human subjects has been done in a large enough number of cases with astonishingly effective results... for internal administration orally or hyperdermically, it has the advantage of being rapidly fatal to pathogens without toxic action on the host. It is quite stable. It protects rabbits from 10 times the lethal dose of tetanus or diphtheria toxin. Further information suggests that colloidal silver does not cause harmful interactions with other medications”*. Searle pointed out the main advantage of colloidal silver is that there are no recorded side effects from it and that unlike some pharmaceutical preparations it did not turn the skin blue.

## **THE DISCOVERY OF ANTIBIOTICS**

Antibiotics are natural substances that are released by bacteria and fungi into their environment, as a means of inhibiting other organisms - it is chemical warfare on a microscopic scale. Prior to 1938 colloidal silver was considered “high tech” and was being used as a mainstream antibiotic treatment, although by strict definition it is not. What has to be born in mind, is that 70 years ago colloidal silver was very cost prohibitive. In 1925 it cost in the region of \$100 an ounce, with an average weekly wage being approximately \$66 in Chicago. In 2005 it costs mere pence to make a litre which is over 33 fluid ounces! This is mainly due to the advances in battery technology and their availability. It was in 1928 when Sir Alexander Fleming observed that colonies of the bacterium *Staphylococcus aureus* could be destroyed by the mould *Penicillium notatum*, and 1942 saw their first use in medicine. They caused a sensation which the cynics would say was clever marketing, but they were perceived as a new “*miracle*” cure vastly cheaper than the silver products then available and in certain circumstances more effective. Silver soon fell out of vogue and lay by the wayside for a couple of decades.

## **THE SILVER REVIVAL**

But silver had not gone away. It was somewhere between the 50’s and 60’s that deep concerns were starting to be felt as Penicillin and tetracycline lost their power over *Staphylococcus*. NASA commissioned a study from the University of Wisconsin to determine the biocidal effects of silver. When the results were released in 1970, the lethal effect of the silver ions were established at 250 parts per billion in 2 hours. The Russians used silver ions to purify their water on board the Meir space station because it was so effective and cheap. NASA later followed their lead using silver to purify the water on board the space shuttle. In the 1990’s Robert Beck (who invented the flash bulb found in all modern cameras) started to promote the use of colloidal silver in conjunction with blood electrification and ozonated

water calling it "The Beck Protocol". He freely gave the information to the world and a debt of thanks is owed to him for his sterling work, which has helped colloidal silver reach it's current height of popularity.

I **don't** have to just "believe what I read" regarding (what in my eyes is) ionic colloidal silvers STUNNING ability to purify water. Besides carrying out my own simple experiments (which anyone can do and are described at the end of this booklet) a dear friend who lives in Canada has on her land a well which is contaminated with ecoli bacteria, amongst other nasties. At the back of this booklet are the Ontario Ministry of Health's assessment of the samples of water she sent them which **PROVED** that colloidal silver made at home with a few batteries was able to purify the water and get a clean bill of health, while the conventional treatment of using industrial chlorine to purify could NOT make the water safe.

### **HOW DOES COLLOIDAL SILVER WORK?**

The *exact* process through which silver fights infection is not actually known for certain, however the following is the most accepted theory based upon the evidence.

Primitive life forms like bacteria and other single cell pathogens use enzymes to survive in their anaerobic environment (*existing in the absence of free oxygen*), using the enzyme as a chemical lung necessary for metabolism, growth and regeneration. Silver inhibits the enzyme, disabling it and effectively killing the bacteria and pathogens including fungi and protozoan. What should make people really sit up and take notice though is that unlike antibiotics, silver ions have been proven effective on **viruses** by the UCLA Medical Labs where every single one which was tested was killed.

A virus does not actually constitute a life form in itself. It is a single strand of DNA surrounded by a protein, which hijacks a cell and then uses the cells own mechanisms to reproduce copies of itself. It is believed viruses are destroyed because the electric "**valence**" charge of the silver ion (*positive electrical charge*) causes the protective protein coat surrounding the DNA to collapse which then renders them unable to replicate. The copies of the defective cells infected by viruses are also susceptible to the enzymatic inhibition.

All this has happened in Petri dishes and test tubes in laboratories. Not enough studies have been done to categorically prove an identical process takes place within the human body, however in the past couple of decades plenty of anecdotal evidence has come to light, people who **sincerely** believe that their simple silver home made mineral supplements have changed the course of their life, even SAVED IT, and they **want** other people to

benefit too. I myself fall into this category, and I REALLY don't mind if people don't buy from DreamWeaver Ltd! I just want people to have the information to be able to make an INFORMED DECISION and decide for themselves whether to at least TRY it.

## **RESEARCH SINCE THE 70'S**

But back to the history lesson and the start of silver medicines comeback in the 70's. Dr Carl Moyer, Chairman Washington University's Dept. of Surgery received a grant to develop better treatment for burns patients. This spawned the development of *Silver Sulfadiazine* which is in common use today, helping patients with severe burns recover by preventing complications of infection of the exposed tissues. But truly remarkable research was done by Dr Robert O. Becker from the Upstate Medical Centre, Syracuse University N.Y. He was actually researching the relationship of electromagnetism and electricity to basic life processes, but he also carried out some unusual experiments using silver electrodes placed directly into the body effectively generating silver ions *in* the tissue. Some of the highlights of his research include confirmation that all organisms tested were sensitive to the electrically generated silver ion, including strains which were resistant to ALL known antibiotics.

He also discovered that the silver ions not only killed pathogens, but actually helped stimulate soft tissue healing and regeneration. They stimulated bone forming cells and activated and directed dormant stem cells. He was researching the increased speed of cell growth when introduced to magnetic fields, up to three fold and this included malignant cells (*cancer cells*). However, although a negative silver electrode had no effect on such cells, when the positive electrode was used he found it **suspended mitosis of cancer cells** in the lab...

Lets just slow down for a second. Mitosis is the process which takes place in the nucleus of a dividing cell creating two new identical nuclei. Cancer cells can be thought of as being permanently switched on, thus continually reproducing themselves which causes the malignant tumours. Dr Becker has actually shown in a laboratory that silver ions prevent cancerous cells continuing to duplicate out of control. He went *further* proposing the presence of the silver ion could **eliminate** these old cancerous cells, and any other diseased or abnormal condition.

***Wouldn't you think results like this demanded further research?*** Strangely not, Dr Becker was unable to obtain further funding for his research and in his 1985 book "*The Body Electric*" he gives a gripping account of science at the cutting edge and his quest for knowledge in the face of government resistance. It's quite chilling if you think about it.

In August 2004 I read the following report: *“at 10 particles per million (ppm) silver formulations have demonstrated the ability to unravel and check rogue cancer cells in the test tube. Public reports from seven top universities, such as Medical College of Ohio and Tulane, all confirmed silver’s powerful counter effects against human lymphoma cells, melanoma, breast and prostate carcinoma, and even osteosarcoma cells. Of course this exciting research will require real life studies before its benefits can be completely determined.”*

### **MORE EXAMPLES FROM THE MEDIA**

**Science Digest, March 1978** ran with the story - *And now it’s silver that is finding wholly new uses as a wonder drug in modern medicine... perhaps it will be recognised as “Our Mightiest Germ Fighter”.* It also related the story of a 65 year old diabetic who cut himself on the leg, the cut became a sore, grew, and later was diagnosed as a “stasis ulcer”. Unchecked he would ultimately need his leg amputated, however he was referred to a clinic using a silver compound which stopped the growth of the bacteria and in less than two months was completely healed.

*“Biochemistry Unit, Uphohn Laboratories: Out of metal ions tested, silver, copper and zinc were most effective inhibitors of renin and the HIV protease.”*

**Biochemistry. Sept. 10th 1991.**

**Biotech News 1995.** *Effective against over 650 disease causing organisms. Doctors are reporting it works against syphilis, cholera and Malaria, diabetes and severe burns.*

It should be pointed out here, some sellers of colloidal silver or colloidal silver generators have twisted this statement claiming colloidal silver CURES 650 diseases which is **NOT** the same thing as killing the pathogens which CAUSE the disease.

Other research has been published where colloidal silver has been shown to suppress the immune response to Poison Ivy and Oak. This came as no surprise to me because since deciding to test large doses on myself for extended periods of time, after the first summer I realised I’d had no hay fever which had plagued me annually without fail for more than 20 years. Since 2001 the only signs of my allergy have been the occasional sneezes and on a couple of occasions itchy eyes. But bathing them in an eyebath of colloidal silver has always given immediate relief, within minutes totally removing the symptoms.

There are claims on the internet that people with imuno-deficiency orders such as Aids are benefiting from colloidal silver. Personally I’ve not actually seen any hard evidence which supports this to my satisfaction, just anecdotal claims of success. But that said, if I was diagnosed with **ANY** serious condition I wouldn’t think twice about making my own ionic

colloidal silver and consuming copious quantities just in case it helps. **Personally** I don't believe there's **any** possibility of harm ingesting ICS which I base on my own empirical experience as well as the 100's of documents which confirm my own findings. Because I make my own I'm sure of the quality, and the cost is minimal - it's just a little **effort** that is required.

### **WHAT DO I NEED TO MAKE IT?**

Next we'll deal with the actual generation process itself. Despite what manufacturers of colloidal silver generators claim, following a few simple guidelines I have found virtually no difference in end product quality between using 3 batteries wired together, and a medium priced mains powered constant current generator. Generators designed to make larger quantities of colloidal silver which agitate the water provide a more consistent product, but they really are not critical at all. The introduction of a fish tank areator/bubbler to your set up is perfect for this but is not vital for production of small quantities up to around a litre. Occasional manual stirring can be done instead, or not at all.

As we go through the process step by step you'll see how armed with only a little bit of knowledge you will be able to accurately gauge the particle size of your end product. The little piece of knowledge is simple...

***For true "electro-colloidal" silver, the particle size range that can appear yellow is only .01 to .001 microns (which is 10 to 100 angstroms).***

I found this information in an article by Peter Linderman first published in a book titled Practical Colloid Chemistry, London 1926, in the section on the "Colours of Colloidal Metals", sub-section on the "Polychromism of silver solutions" page 69. The whole article is available from our website in the "Resource Library" section

So if your home made colloidal silver is CRYSTAL CLEAR you **KNOW** the particles are the size you want even if you don't know the concentration (*ppm*) of them. Additionally, a standard '*rule of thumb*' is that the particles start to agglomerate (*lump together*) when the concentration enters the 6-10ppm range.

If you've purchased a generator from somewhere then it is likely they have provided you with all you need, but if you've just got this booklet and will be starting from scratch then the following should be regarded as the **minimum requirements**:



3 or 4 PP3 9 volt batteries. Pure **distilled** water. Two silver wires which must be a minimum of 99.9% pure, any impurities from the .1% will be measured in parts per billion (toxicity is measured in parts per million) therefore the significant extra expense for 99.99% appears pointless. (*Information for those only able to buy deionised water follows later*)

You will also need two crocodile clips, about a meter of wire, a couple of battery snaps to attach to the terminals, either a tall glass which will hold 250ml (about 8oz) of your distilled water or if you wish to generate a larger quantity a glass half litre (pint) measuring jug is often what I myself use. You will also need a small scouring pad to buff the electrodes and finally something to suspend the silver electrodes from (*the first thing I used was a cd cover which I drilled a couple of holes in, then went on to use moulded sponge*). As long as the material doesn't conduct electricity and will hold the electrodes roughly vertical, the substance is not critical. Some people just use the crocodile clips to attach the electrodes directly to the sides of the glass. Ideally an amber glass bottle from a local chemist is the best storage container because silver is affected by all forms of radiation including heat and light (*silver nitrate being used in the first photographs because it darkens when struck by light*).

So these are the only items you actually need. The batteries will probably be the most expensive cost but these will generate many many gallons of colloidal silver, as will a single set of silver electrodes. You may well find that a set of batteries and electrodes last in excess of a year if you're only generating the colloidal silver for yourself.

Over time, although the silver content will not change, the particles will start to lose their electric charge which will cause them to start dropping out of suspension, or "*plating out*" as it's sometimes known. This is another reason why it is better to make your own than to buy it, a batch will easily keep for 14 days, maybe much MUCH longer (*at LEAST 10 months according to one company who sell generators*), but two weeks is the time scale I usually work to. Leaving it in a covered glass in a cool cupboard is adequate to keep your colloidal silver in. In fact for the first half dozen times it is a good idea to leave around 100ml of your CS in a clean glass in a cool cupboard to assess "*agglomeration*".

For the first few days following colloidal silver generation the particles can "*agglomerate*". This means that the charged particles are bumping into each other so violently, if their size is larger than a certain point they have a tendency to combine into larger clumps which will alter the colour of the colloidal silver from clear to pale yellow as the clusters grow larger, and golden/brown/black if you've left the generator on much longer than you should. If you've made a high quality ionic colloidal silver you might be surprised how long it will stay clear in a normal glass (*providing it is not left in direct sunlight*).

## WHAT'S HAPPENING IN THE GENERATION PROCESS

When the silver wires are suspended in the distilled water and 24-36 volts DC are applied across the terminals the process of electrolysis begins. Electrolysis is the decomposition of the electrodes into the distilled water. Electricity is the flow of electrons, therefore the current sinters off ions of silver into the water, and the water (H<sub>2</sub>O) is broken down into the two gasses Hydrogen and Oxygen which start to form bubbles on the electrodes. It is said that only 4 volts are required to start the electrolysis process in distilled water and I have found a single nine volt battery WILL work but takes significantly longer. 30 volts is claimed to be the optimum voltage as the electrodes produce the least amount of silver oxide and remain cleaner for longer.

## STEP BY STEP INSTRUCTIONS.

Check list:

- 3 or 4 Heavy Duty Batteries
- 2 Silver Wires 99.9%, approx. 2mm x 125mm
- 1 Meter Wire
- 2 Crocodile Clips
- 1 Negative & 1 Positive Battery Clip
- 1 Holder for silver wire
- 1 Scouring Pad
- 1 250ml Glass Beaker or drinking glass
- 1 Amber Bottle to store Ionic Colloidal Silver



A Cheap Starter Kit

## ASSEMBLY OF PARTS:

Attach the crocodile clips to the ends of the wire, then attach the red and black battery terminal snaps onto the opposite end. This can be done by just twisting the wires together, however electrical tape is better, soldering better still.



Assemble the batteries together in the following manner.

Attach one to another by clipping the positive of one battery into the negative of the other. Do the same with the other pair and attach them together. They should look like this:

Simply attach the red snap on clip to the positive terminal and the black snap on to the negative terminal.



## **FINAL PREPARATION:**

Buff the silver wires with a kitchen scourer and wipe with clean cloth. Insert the two silver wires approximately 25mm to 30mm apart through the wire holder. Attach the crocodile clips to the top of the wires. Your set-up should look like this:

It is a good idea to get into a routine for generating ICS, doing it regularly. The following are simple instructions which will ensure you are producing high quality Ionic Colloidal Silver with a particle size of .01 .001 micron at a fraction of the cost it is now being sold for commercially (*which is also potentially of a lower quality*).

You should use DISTILLED water, but if you are not using distilled water from DreamWeaver Limited and are not distilling your own, you will find it virtually impossible to purchase. However, certain brands of “*purified*” or “*deionised*” water **do** have the same properties as distilled and will work. True deionised water will not conduct low voltage electricity well enough for the electrolysis process to begin.

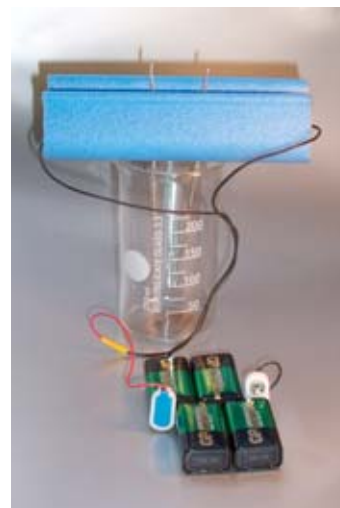
*N.B. I cannot recommend highly enough purchasing a desktop distiller.*



# THE 7 STEP GUIDE TO MAKING COLLOIDAL SILVER

To ensure the silver wires wear down at an even rate, each time you generate ICS you should swap the crocodile clips over. Always clean your glassware and silver electrodes thoroughly when you have finished.

1. Lightly buff the silver wires with the scourer and wipe clean with tissue paper.
2. Fill your glass container with approximately 250ml of distilled water which is at room temperature.
3. Insert the two silver wires through the wire holder attaching the crocodile clips as in the picture (right), preventing the silver wires touching the bottom or sides of the glass. The wires should be fairly parallel and be submerged by about 75% - 80% (roughly 3/4 ).
4. As soon as the silver wires (the electrodes) become submerged, the circuit is made and the generation process begins. For the first 10 or 15 minutes very little appears to happen. If you look carefully the first thing you will start to see are **tiny bubbles** appearing on one of the silver rods. Somewhere between 10 and 20 minutes you should start to see **faint wisps** of greyish brown leaving the electrodes like smoke, and the silver should also be starting to discolour. It should only be a few more minutes before the wisps are more noticeable. At this point, time the process for a further 5 minutes.
5. When the time is up gently lift up the wire holder and remove from the water to prevent any build up of the silver oxide (black crystal-like gunge) which may have formed on an electrode, from falling off into the ICS.
6. Remove the crocodile clips and prevent them touching each other and shorting out. Wipe the silver wires clean. Allow the ICS to settle in the event there are any visible particles in the solution.
7. Gently pour the ICS into the amber glass bottle, leaving any visible particles in the bottom of the beaker. You can use two unbleached coffee filters, one inside the other, to filter your colloidal silver into the amber bottle for added peace of mind.



**By using the above method you will be able to produce high quality ICS, although you won't know the exact silver quantity in parts per million. As long as the process is followed as above, the resulting Ionic Colloidal Silver will be at least 3-5 parts per million. You can easily test to see if the range is between 6-10 ppm by leaving some ICS in the beaker and placing it in a cool cupboard. After 24-72 hours if the liquid has changed to a light or golden yellow then you have entered the 6-10 ppm range. This is still okay although not ideal as the particle size is slightly larger. Simply reduce the length of time by a few minutes before stopping the process.**

**To reassure yourself that you HAVE actually generated some colloidal silver, use a laser pointer to observe the "Tyndall Effect" as described on the next page**

## THE TYNDALL EFFECT

If you are concerned that you haven't actually made colloidal silver at all, there is a well known test you can perform. The 19th century physicist John Tyndall discovered that particles in suspension (*not dissolved*) will diffract light which is known as "*The Tyndall Effect*". By purchasing a cheap laser pointer (*often attached to key rings or pens*) and shining the beam into your colloidal silver, you should be able to see the **path of the beam** through the colloid. The tiny particles shimmer as their positive charge constantly repels them from each other which is known as "*Brownian Motion*" and is how they defy gravity. Shining the laser through a glass of water you see only glints, with a glass of colloidal silver the beam appears as a sparkling line passing through the liquid to the other side of the glass, in the same way smoke shows up the laser beam in the air.

**Please Note:** The generation of your Ionic Colloidal Silver should be regarded as an "*Active Process*". It is not possible to standardise 100% due to known variables such as water purity, temperature, water volume, voltage and air pressure, and *possible* unknown or as yet undiscovered variables such as the gravitational pull from the moon. That is true whether you are making it yourself OR buying it if it has been created using electrolysis. Using the setup described here, pure distilled water and 99.9% or better pure silver wires you are minimising variables, however due to the variables the time length might vary from 20 minutes to 40 minutes. As long as you keep an eye on the process though this rarely causes any problems. If you DO intend to just time each batch then 30 minutes in 250ml should ensure approximately 3-5ppm whilst remaining clear.

## DEIONISED WATER

It is always best to use **pure distilled water** whenever possible and **NEVER** add anything to the water to increase it's conductivity. Under NO CIRCUMSTANCES should you EVER use tap water or rain water. *Purchasing a desktop water distiller will ensure a high quality supply for many years.*

If you find it impossible to buy distilled water you can try deionised water which is commonly available. Firstly you should try the deionised at room temperature following the previous instructions **exactly**. If you DON'T SEE bubbles forming on the electrodes or faint wisps moving into the water within 30 or 40 minutes then it will not conduct enough electricity to start the generation process. The *first solution* is to heat up the water in the glass or beaker in the microwave. You can let the water boil and then leave it for a couple of minutes before immersing the silver electrodes. Hot water conducts electricity better which should be enough to kick the colloidal silver generation process off. The DISADVANTAGE to this is

that hot water ALWAYS produces LARGER particles, so don't be surprised if your colloidal silver turns yellow after a few days as the particles agglomerate. The *second solution* is the "exception to the rule", and you can add a small amount of a previous batch of colloidal silver to the deionised water which has the same effect of increasing the conductivity.

If you use the heating method to produce your first batch of Ionic Colloidal Silver (*which will probably turn pale yellow*) then experiment by adding 5% - 20% of this to room temperature deionised water to produce a clearer colloid with smaller particles.

## HOW MUCH COLLOIDAL SILVER SHOULD I TAKE?

There are varying schools of thought on this. The computed amount of elemental silver we used to get from eating fresh fruits and vegetables when they were part of our diet in the early 1900's is 100 micrograms, which equates to about 4 *teaspoons* a day which some people consider a "maintenance" dosage. Since then soil depletion caused by over farming has seriously reduced all trace minerals, including silver, by 85%. The U.S. Environmental Protection Agency has calculated that 4 **tablespoons** a day of 5ppm colloidal silver for 70 years is acceptable (*bear in mind their research is done on silver compounds known to cause Argyria*).

For those people with more severe symptoms or a specific condition, up to three 8oz glasses a day have been advocated by some researchers such as Robert Beck. Remember two things, 'EVERYONE is DIFFERENT' and 'START CAUTIOUSLY'. If you start with a tablespoon every couple of hours you will be able to notice if you have any adverse reaction. It is best to hold the colloidal silver in the mouth for a minute or two to aid the absorption of the silver ions under the tongue (known as sublingual absorption).

## BUT I THOUGHT COLLOIDAL SILVER WAS HARMLESS?

Home made Ionic Colloidal Silver in pure distilled water has **NEVER** to date, been shown to cause the toxic reaction Argyria. HOWEVER, if you have large amounts of bacteria or infection in your body and you suddenly KILL large quantities of these by using a high dose of ICS then the body can struggle to expel these using the normal lymph, immune and intestinal elimination systems. The body struggling can produce mild flu like symptoms due to the toxins such as headaches, sweating, tiredness etc but this is very rare. By starting off with small quantities of colloidal silver and drinking plenty of water throughout the day these "cleansing effects" (*sometimes mistakenly called a Herxheimer Reaction which only concerns spirochetal diseases*) can be virtually avoided completely by most people. If you experience extremely unpleasant reactions then reduce or completely stop your colloidal silver intake - *you are the best gauge of how you feel*.

Because of the way ionic colloidal silver behaves it is claimed that it does not react with any medications, making it safe for anyone to try. It has been said that large doses kill off the “friendly bacteria” (coliforms) which can be replaced with the new yoghurt drinks. Personally I think these drinks are a marketing scam and noticed no difference taking them daily when drinking a pint of ICS throughout the day. I tested two brands in this manner which formed my opinion, although it may well be that some people do find benefit from these cultures.

## **NEBULISING COLLOIDAL SILVER**

Although not cheap, a nebuliser could be the best investment a family makes after a desktop water distiller. Doctors can prescribe the use of a nebuliser for certain medications which are absorbed into the blood stream far quicker when inhaled. Nebulisers are also sometimes used with a “saline solution” (salt water) by people suffering breathing difficulties. By nebulising your ICS (inhaling a mist of ionic colloidal silver) you are delivering it to the blood stream MUCH quicker than drinking it or holding it under the tongue to absorb sublingually. But perhaps more importantly, because there is NO DOUBT that silver DOES kill upon CONTACT, it logically follows that if someone is suffering from a disease in the lung itself, breathing in the ICS will start to kill it when it comes into contact.



And although nebulising should also be approached with caution, the potential benefits to me appear to outweigh any risk from the ‘cleansing reactions’. Again speaking personally, as a smoker I nebulise for at least ten minutes each night, which after only a couple of days provides relief from the tight chest of heavy smoking.

## **THREE EXPERIMENTS YOU CAN DO WITH YOUR COLLOIDAL SILVER**

1. The first thing I wanted to do when I’d made and tasted my first batch of ICS was to find out if it DID kill bacteria. Inspired by Flemings accidental discovery of antibiotics I thought I could mimic his experiment. I mixed two small bowls of muesli with milk and left them a couple of feet apart by an open window. One bowl I let nature take it’s course whilst the other I sprayed with colloidal silver each morning and night. The result was that after a few days mould started appearing on the “nature’s course” bowl and after a couple of weeks was heaving with hideous bacteria, whilst the bowl I sprayed twice a day stayed TOTALLY free from bacteria and finally only a powder remained as the excess moisture had evaporated.

2. The next experiment I performed as suggested somewhere on the internet was to place a bunch of flowers in water and a bunch in colloidal silver. Leaving them next to each other, the ones in the ICS lasted almost twice as long as the ones in tap water.
  
3. A quite fascinating experiment you can try came to me after a customer who was giving it to her rabbits claimed they wouldn't drink plain water after having the colloidal silver she made. My mother has a King Charles Spaniel and I simply placed a bowl of colloidal silver next to the dogs water bowl (giving it total freedom of choice so to speak) and was genuinely surprised when the dog sniffed the plain water then wandered to the ICS and started lapping it up. I repeated the test after her tea and the same thing happened. It is said that animals "*know what's good for them*" and I've now had a number of reports back from various pet owners whose cats, dogs, rabbits and guinea pigs all appear to have a preference for colloidal silver.



## A Report on my good friend Ruth's Husband Gae, who was diagnosed with Cancer of the Bladder...

Gae was diagnosed with a very aggressive type of bladder cancer two years ago (June 2000). The doctor gave him a 50/50 chance of surviving only IF they removed the bladder.

He started taking a teaspoon of Ionic Colloidal Silver a day along with a multitude of homeopathic and herbal remedies. Tumours were removed from the bladder monthly, and at that point there was no question of chemo or any other kind of treatment - the Doctor said it wouldn't do any good. Gae asked for a second opinion and had another exploratory done in November 2000. At that time, the second specialist informed him that the tumours hadn't pierced the bladder wall, and he thought that "chemo" (BCG...tuberculine bacteria to activate his immune system) might help. So, he had 6 weekly treatments starting in January 2001 which themselves made him severely ill, so much so that the treatment had to be halted after the fifth time due to toxic reaction.

The bacteria that they had injected into his bladder, infected other areas (such as glands under chin) and he developed strange symptoms which could be neither diagnosed nor treated. The next 2 checkups did not reveal the presence of tumours, he seemed to be in remission. However, in January 2002 when he went for his 6 month checkup, more tumours were found and he was scheduled for another "exploratory" within a 2 month period.

This is when he UPPED the dosage of ICS to around a pint (half a litre) a day, stopped taking all the other homeopathic and herbal remedies, purchased a nebuliser and started an elimination diet to determine what allergens seemed to trigger the worst reactions. Purchasing a nebuliser, not only to help ease his bronchitis, but also to aid absorption of the ICS directly into the blood stream soon paid off, and the symptoms soon declined. Gae saw a marked improvement in his bronchitis even after the first night - the first good night's sleep he and his wife had enjoyed in a long time!

But what was even more REMARKABLE, is that when he went for exploratory surgery 2 months later, neither the X-rays nor visible inspection detected ANY sign of tumours AT ALL, and this was without medical intervention!

However, the results of the biopsy did reveal the presence of "abnormal cells", and because Gae was now a lot healthier than the previous year, they opted for another bout of BCG "chemo". This second time around he was able to tolerate the treatment far easier, experiencing very few side-effects, and on Wednesday 9th October 2002 the results of the final biopsy following finishing the treatment gave him the "all clear".

# *Bacterial Analysis of Drinking Water*

*Carried out by the  
Ontario Ministry of Health and Long-Term Care*



My good friend Ruth was kind enough to run a few tests on my behalf, and submit samples of contaminated water taken from their well to the local health authority. The results were personal proof, provided by a government agency with no vested interests. The data speaks for itself, HOMEMADE colloidal silver was more effective at killing bacteria than either the domestic bleach or industrial chlorine!!! An explanation of what "coliforms" are is included below.

**These are the results of the tests on samples sent in to the Sudbury Public Health Laboratory on contaminated well water, along with results following conventional treatment (which failed to make the water safe to drink).**

**Copies of the actual sheets are included on the next page.**

**1st test: Aug 14, 2001**

**Untreated water tested**

E Coli.....80+

Coliforms.....80+

**2nd test: Aug 21, 2001**

**after treatment with domestic bleach**

E Coli.....49

Coliforms.....80+

**3rd test: Sept 5, 2001**

**after treatment with industrial chlorine**

E Coli.....62

Coliforms.....80+

**6th test: Feb 26, 2002**

**10% Colloidal Silver added to sample**

E Coli.....0

Coliforms.....0

UNTREATED



Ministry of Health and Long-Term Care  
Ministère de la Santé et des Soins de longue durée

Laboratory No./N° du laboratoire  
011492 AUG 13 '01

### Bacteriological Analysis of Drinking Water Analyse bactériologique d'eau potable

Instructions - Please read instructions page carefully before sampling. Water will not be tested if this form is not completely and accurately filled in.  
Directives - Veuillez lire attentivement les directives fournies avant de prélever votre échantillon. Si ce rapport n'est pas rempli en entier et avec précision, l'échantillon ne sera pas analysé.

(see instruction # 10 voir directive n° 10)  
 Private supply single residence  
Approvisionnement privé - une seule résidence  
 Private supply 2-5 residences  
Approvisionnement privé - 2 à 5 résidences  
 Private supply 6 or more residences  
Approvisionnement privé - 6 résidences ou plus

Your name and return address  
Nom/Nom

Street, R.R., Box No./Rue, R.R., Case postale

City, Town/Ville

Province

Postal Code/Code postal

Location of Water Source/Emplacement de la source d'eau

Street address/Adresse municipale

or Lot, Concession/ou lot, concession

Township/Municipality/Canton, municipalité

Date collected/Date du prélèvement  
2001/08/13

Health Unit #/N° du bureau de santé  
2121611

I will pick up report at the laboratory.  
Je viendrai chercher le rapport au laboratoire.  
 Please mail to my mailing address above.  
Veuillez le faire parvenir à mon adresse postale indiquée ci-dessus.

For Laboratory Use Only / Réservé à l'usage du laboratoire  
Interpretation for this water sample/Interprétation de cet échantillon d'eau potable  
The water sample was tested for the presence of both Total Coliform and E. coli bacterial indicators of contamination. L'analyse de l'échantillon d'eau visait à détecter la présence de coliformes totaux et de colibacilles (E. coli), indicateurs de contamination.

NO SIGNIFICANT EVIDENCE OF BACTERIAL CONTAMINATION  
(3 consecutive samples, taken 1 to 3 weeks apart, with this designation are needed to determine the stability of the water supply).  
AUCUNE PREUVE DE CONTAMINATION BACTÉRIENNE SIGNIFICATIVE  
(Cette désignation doit être affectée à 3 échantillons consécutifs, dont le prélèvement aura été espacé de 1 à 3 semaines, pour que la source d'approvisionnement en eau soit jugée stable.)

SIGNIFICANT EVIDENCE OF BACTERIAL CONTAMINATION May be unsafe to drink (Consult local health unit for information on how to proceed).  
PREUVE DE CONTAMINATION BACTÉRIENNE SIGNIFICATIVE  
Peut être non potable. (Consultez le bureau de santé local le plus tôt possible pour plus de détails.)

UNSAFE TO DRINK Evidence of sewage contamination. Consult local health unit for appropriate action as soon as possible.  
EAU NON POTABLE Preuve de contamination des égouts. Consultez le bureau de santé local le plus tôt possible pour de plus amples renseignements sur les mesures à prendre.

F.E. GILHOON, BS, MS  
Sudbury Public Health Laboratory  
1300 Paris Street, Suite 2  
Sudbury, Ontario P3E 6H2



Total Coliform per 100ml/Coliformes totaux par 100 ml

E. coli per/par 100 ml

Date Rec AUG 14 2001

Checked by/Vérifié par

DOMESTIC BLEACH



Ministry of Health and Long-Term Care  
Ministère de la Santé et des Soins de longue durée

Laboratory No./N° du laboratoire

### Bacteriological Analysis of Drinking Water Analyse bactériologique d'eau potable

Instructions - Please read instructions page carefully before sampling. Water will not be tested if this form is not completely and accurately filled in.  
Directives - Veuillez lire attentivement les directives fournies avant de prélever votre échantillon. Si ce rapport n'est pas rempli en entier et avec précision, l'échantillon ne sera pas analysé.

(see instruction # 10 voir directive n° 10)  
 Private supply single residence  
Approvisionnement privé - une seule résidence  
 Private supply 2-5 residences  
Approvisionnement privé - 2 à 5 résidences  
 Private supply 6 or more residences  
Approvisionnement privé - 6 résidences ou plus

Your name and return address  
Nom/Nom

Street, R.R., Box No./Rue, R.R., Case postale

City, Town/Ville

Province

Postal Code/Code postal

Location of Water Source/Emplacement de la source d'eau

Street address/Adresse municipale

or Lot, Concession/ou lot, concession

Township/Municipality/Canton, municipalité

Date collected/Date du prélèvement  
2001/08/08

Health Unit #/N° du bureau de santé  
2121611

I will pick up report at the laboratory.  
Je viendrai chercher le rapport au laboratoire.  
 Please mail to my mailing address above.  
Veuillez le faire parvenir à mon adresse postale indiquée ci-dessus.

For Laboratory Use Only / Réservé à l'usage du laboratoire  
Interpretation for this water sample/Interprétation de cet échantillon d'eau potable  
The water sample was tested for the presence of both Total Coliform and E. coli bacterial indicators of contamination. L'analyse de l'échantillon d'eau visait à détecter la présence de coliformes totaux et de colibacilles (E. coli), indicateurs de contamination.

NO SIGNIFICANT EVIDENCE OF BACTERIAL CONTAMINATION  
(3 consecutive samples, taken 1 to 3 weeks apart, with this designation are needed to determine the stability of the water supply).  
AUCUNE PREUVE DE CONTAMINATION BACTÉRIENNE SIGNIFICATIVE  
(Cette désignation doit être affectée à 3 échantillons consécutifs, dont le prélèvement aura été espacé de 1 à 3 semaines, pour que la source d'approvisionnement en eau soit jugée stable.)

SIGNIFICANT EVIDENCE OF BACTERIAL CONTAMINATION May be unsafe to drink (Consult local health unit for information on how to proceed).  
PREUVE DE CONTAMINATION BACTÉRIENNE SIGNIFICATIVE  
Peut être non potable. (Consultez le bureau de santé local le plus tôt possible pour plus de détails.)

UNSAFE TO DRINK Evidence of sewage contamination. Consult local health unit for appropriate action as soon as possible.  
EAU NON POTABLE Preuve de contamination des égouts. Consultez le bureau de santé local le plus tôt possible pour de plus amples renseignements sur les mesures à prendre.

F.E. GILHOON, BS, MS  
Sudbury Public Health Laboratory  
1300 Paris Street, Suite 2  
Sudbury, Ontario P3E 6H2



Total Coliform per 100ml/Coliformes totaux par 100 ml

E. coli per/par 100 ml

Date Rec AUG 21 2001

Checked by/Vérifié par

**CHLORINE**



Ministry of Health and Long-Term Care  
Ministère de la Santé et des Soins de longue durée

Laboratory No./N° du laboratoire

**Bacteriological Analysis of Drinking Water  
Analyse bactériologique d'eau potable**

Instructions - Please read instructions page carefully before sampling. Water will not be tested if this form is not completely and accurately filled in.  
Directives - Veuillez lire attentivement les directives fournies avant de prélever votre échantillon. Si ce rapport n'est pas rempli en entier et avec précision, l'échantillon ne sera pas analysé.

(see instruction # 10 voir directive n° 10)  
 Private supply single residence  
Approvisionnement privé - une seule résidence  
 Private supply 2-5 residences  
Approvisionnement privé - 2 à 5 résidences  
 Private supply 6 or more residences  
Approvisionnement privé - 6 résidences ou plus

Your name and return address  
Nom/Nom  
Street, R.R., Box No./Rue, R.R., Case postale  
City, Town/Ville  
Province  
Postal Code/Code postal

Location of Water Source/Emplacement de la source d'eau  
Street address/Adresse municipale  
or Lot, Concession/ou lot, concession  
Township/Municipality/Canton, municipale  
Date collected/Date du prélèvement  
Health Unit #/N° du bureau de santé  
20090904  
2261

For Laboratory Use Only / Réservé à l'usage du laboratoire  
Interpretation for this water sample/Interprétation de cet échantillon d'eau potable  
The water sample was tested for the presence of both Total Coliform and E. coli bacterial indicators of contamination. L'analyse de l'échantillon d'eau visait à détecter la présence de coliformes totaux et de colibacilles (E. coli), indicateurs de contamination.

NO SIGNIFICANT EVIDENCE OF BACTERIAL CONTAMINATION  
(3 consecutive samples, taken 1 to 3 weeks apart, with this designation are needed to determine the stability of the water supply)  
AUCUNE PREUVE DE CONTAMINATION BACTÉRIENNE SIGNIFICATIVE  
(Cette désignation doit être affectée à 3 échantillons consécutifs, dont le prélèvement aura été espacé de 1 à 3 semaines, pour que la source d'approvisionnement en eau soit jugée stable.)  
 SIGNIFICANT EVIDENCE OF BACTERIAL CONTAMINATION May be used to drink (General level health and information on source provided)  
PREUVE DE CONTAMINATION BACTÉRIENNE SIGNIFICATIVE  
Peut être non potable. (Consulter le Bureau de santé local à propos de la source pour plus de détails)

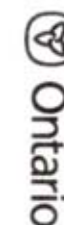
UNSAFE TO DRINK Evidence of sewage contamination. Contact local health unit for appropriate action to occur on premises.  
EAU NON POTABLE Preuve de contamination des égouts. Consulter le Bureau de Santé publique local à propos de la source pour plus de détails.  
Sudbury Public Health Laboratory  
1300 Paris Street, Suite 2  
Sudbury, Ontario P3B 6H3

Total Coliform per 100ml/Coliformes totaux par 100 ml  
> 80  
E. coli per/par 100 ml  
622  
Date Rec'd/Analyse effectuée le  
SEP 05 2001  
Checked by/Vérifié par  
Sudbury



78591721

**10% HOME MADE COLLOIDAL SILVER**



Ministry of Health and Long-Term Care  
Ministère de la Santé et des Soins de longue durée

021520 FEB 26 2002

**Bacteriological Analysis of Drinking Water  
Analyse bactériologique d'eau potable**

Instructions - Please read instructions page carefully before sampling. Water will not be tested if this form is not completely and accurately filled in.  
Directives - Veuillez lire attentivement les directives fournies avant de prélever votre échantillon. Si ce rapport n'est pas rempli en entier et avec précision, l'échantillon ne sera pas analysé.

(see instruction # 10 voir directive n° 10)  
 Private supply single residence  
Approvisionnement privé - une seule résidence  
 Private supply 2-5 residences  
Approvisionnement privé - 2 à 5 résidences  
 Private supply 6 or more residences  
Approvisionnement privé - 6 résidences ou plus

Your name and return address  
Nom/Nom  
Street, R.R., Box No./Rue, R.R., Case postale  
City, Town/Ville  
Province  
Postal Code/Code postal

Location of Water Source/Emplacement de la source d'eau  
Street address/Adresse municipale  
or Lot, Concession/ou lot, concession  
Township/Municipality/Canton, municipale  
Date collected/Date du prélèvement  
Health Unit #/N° du bureau de santé  
2009102126  
2261

For Laboratory Use Only / Réservé à l'usage du laboratoire  
Interpretation for this water sample/Interprétation de cet échantillon d'eau potable  
The water sample was tested for the presence of both Total Coliform and E. coli bacterial indicators of contamination. L'analyse de l'échantillon d'eau visait à détecter la présence de coliformes totaux et de colibacilles (E. coli), indicateurs de contamination.

NO SIGNIFICANT EVIDENCE OF BACTERIAL CONTAMINATION  
(3 consecutive samples, taken 1 to 3 weeks apart, with this designation are needed to determine the stability of the water supply)  
AUCUNE PREUVE DE CONTAMINATION BACTÉRIENNE SIGNIFICATIVE  
(Cette désignation doit être affectée à 3 échantillons consécutifs, dont le prélèvement aura été espacé de 1 à 3 semaines, pour que la source d'approvisionnement en eau soit jugée stable.)  
 SIGNIFICANT EVIDENCE OF BACTERIAL CONTAMINATION May be used to drink (General level health and information on source provided)  
PREUVE DE CONTAMINATION BACTÉRIENNE SIGNIFICATIVE  
Peut être non potable. (Consulter le Bureau de santé local à propos de la source pour plus de détails)

UNSAFE TO DRINK Evidence of sewage contamination. Contact local health unit for appropriate action to occur on premises.  
EAU NON POTABLE Preuve de contamination des égouts. Consulter le Bureau de Santé publique local à propos de la source pour plus de détails.  
Sudbury Public Health Laboratory  
1300 Paris Street, Suite 2  
Sudbury, Ontario P3B 6H3

Total Coliform per 100ml/Coliformes totaux par 100 ml  
0  
E. coli per/par 100 ml  
0  
Date Rec'd/Analyse effectuée le  
FEB 27 2002  
Checked by/Vérifié par  
Sudbury



78598731

# Information on Coliform Bacteria

*(supplied with test results)*

## **DEFINITION:**

- Coliform bacteria are a collection of relatively harmless microorganisms that live in large numbers in the intestines of man and warm- and cold-blooded animals. They aid in the digestion of food. A specific subgroup of this collection is the fecal coliform bacteria, the most common member being *Escherichia coli*. These organisms may be separated from the total coliform group by their ability to grow at elevated temperatures and are associated only with the fecal material of warm-blooded animals.
- Coliform bacteria are a natural part of the microbiology of the intestinal tract of warm blooded mammals, including man. Coliform bacteria can also be found in soil, other animals, insects, etc. The total coliform group is relatively easy to culture in the lab, and therefore, has been selected as the primary indicator bacteria for the presence of disease causing organisms.
- Coliform bacteria are naturally occurring, rod-shaped organisms which are widely distributed in nature. They exist in soil, on skin, in rivers, lakes and streams One type of coliform— **FECAL COLIFORM** — lives in the intestinal tract of man and animals. Coliforms are easily detected and their presence or absence has been used extensively in determining water quality

**Total Coliform (Monthly):** The presence of coliform bacteria in drinking water is generally a result of a problem with water treatment or the pipes which distribute the water, and possible contamination by disease-causing microorganisms (although the coliform themselves are not harmful) Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and any associated headaches and fatigue.

Coliform bacteria are not pathogenic (disease causing) organisms, and are only mildly infectious. For this reason these bacteria are relatively safe to work with in the laboratory. If large numbers of coliforms are found in water, there is a high probability that other pathogenic bacteria or organisms, such as *E. coli*, may be present

**Total Coliform (Acute):** Fecal coliforms or *E. coli*, are a particular type of coliform bacteria. Their presence in drinking water is more serious than other coliform bacteria because they are disease-causing, and also indicate that drinking water has been contaminated by sewage or animal wastes that contain other disease causing microorganisms. This type of contamination can cause severe diarrhea, cramps, and nausea. Because fecal coliform contamination is more severe than contamination by other types of coliform bacteria, EPA sets an acute standard indicating that for water to be considered safe it must be free of all fecal coliform.

## **TREATMENT:**

Bacteria are removed by disinfection and/or filtration. Filtration alone may not be completely effective, but can improve the performance of disinfectants by removing sediment that can shelter the bacteria. Methods of adding chlorine to water include solution feeders for dry chlorine or liquid chlorine or by feeding gas chlorine directly from 100,150, or 2000 lb. cylinders. Gas chlorination is recommended only for larger systems that can support the services of a trained water treatment plant operator. Chlorine is normally dosed to a concentration sufficient to maintain a free residual of at least 0.2 parts per million (PPM).

Other disinfectants include iodine, ozone, ultraviolet light, and physical methods such as boiling or steam sterilization. Chlorination is still the most common disinfection method in the United States, although recent concerns have been raised about the reaction of chlorine with organic matter in water. Such a reaction can result in the formation of trihalomethanes, which are suspect carcinogenic compounds. For most individual water supply systems, the most common form of treatment is ultraviolet disinfection.



# DreamWeaver

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RESEARCH PROJECT

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