

PREVIOUS VOLUMES CLICK HERE



CASE STUDIES

USING THE SANIZAP® MODELS

Expect a 600X improvement

Introducing the SaniZap®-600-4-240



 Generally, not possible with other methods.

 Difficult Surfaces.
 1 sq. ft / 30 seconds*

 Ordinary Surfaces.
 1 sq. ft /20 second*

 Touch -up (top-off).
 1 sq. ft/10 second*

 10 ft x 10 ft room (100 sq. ft) 15 mins - 50 mins. *

 Average US house is 2500 sq.ft.~ 8 hrs (assuming there is an averaging of easy and hard surfaces).

 * Will vary with individual use and level of antimicrobial cleaning required.
 Testimonials

Productivity Calculator to Sanitation Clean Levels.

Typical time to sanitize spots: 1-5 second to high levels of antibacterial elimination as measured by a steam indicator.

A restauranteur in May 2020 prepared for start-up after *deep cleaning with MightySteam*®

Deep Sanitizing

BAYZI CORPORATION 2020

In This Issue

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- Extremophiles and <u>biofilms</u> (pg. 2,3)
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- How does the <u>energy use compare</u> with chemicals (pg.5)?
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- The <u>history of sanitation</u> (pg.8)

Steam is actually so good that it is known to remove odors and/from biofilms.

How Efficient is the SaniZap-1

Compare Deep Cleaning Methods	Steam&Clean [™] (Steam above the inversion temperature)	Pressurized boiler use. (Safety Issue)	Deep Clean Sanitizing Biofilms?	Time to clean a 1" spot to Sanitizing Levels
SaniZap®	Yes	No	Yes, with high temperature steam. HealthySurface ®	1 -2 Seconds
Ordinary boiler type steam generators	No	Yes	Generally, not feasible	Generally, not applicable to sanitizing levels of cleaning
Chemical cleaning	_	_	Sometimes, but toxic chemicals may accumulate over time.	600-6000 Seconds (1- 10 minutes)

A Comparison of Cleaning Methods

Why Use Steam- Its Clean & Fast

Why use MightySteam®?



Graph of a sensitive ATP test. RLU 450 is Tc 1.

Germiest Places: Where are they? <u>Click Here.</u> Some resources below that explain why chemicals may be causing harm. <u>Some chemicals can be toxic</u> (Click for info) Steam is just water in gaseous form but is the Clean King of Sterilization. High temperature steam is effective against Bacteria, Virus, Fungi, and BioFilms, even the hardy ones. See graph on left. Within just 3 seconds! <u>Testimonials</u>.

The future is above-the-inversion-temperature steam.

Be Careful of some common disinfectants. (click for NIH Document)

Don't spray disinfectants to kill Coronavirus, WHO advises..(Click for WHO document)

Do not contaminate with even commonly used sanitizing chemicals

CAN I SANITIZE SOFT MATERIALS LIKE PPE? YES, BE A BIT CAREFUL OF RESIDENCE TIME - FOLLOW THE DETAILED INSTRUCTIONS SUPPLIED WITH THE SANIZAPS'S.

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KEYWORD

Biofilms

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Biofilms are microbial communities that are tightly attached to surfaces and cannot be easily removed. Amazingly tiny microorganisms may be protected from disinfectants by production of thick masses of cells or biofilms. Once these biofilms form, microbes within them can be resistant to disinfectants by multiple mechanisms, including physical characteristics of older biofilms, genotypic variation of the bacteria, microbial production of neutralizing enzymes, and entropic gradients within the biofilm. Bacteria within biofilms are up to 1,000 times more resistant to anti-microbials than are the same bacteria in suspension. Several biofilms, or colonies of bacteria growing on surfaces and medical devices, can inflict intractable or recurring disease. During colonization, biofilms develop characteristics and behaviors more dangerous and powerful than those of planktonic (singleton) bacteria. Pdf for biofilm elimination with steam.



Biofilm Elimination with MightySteam®

More Resources (with clickable links)

https://www.cdc.gov/infectioncontrol

Antimicrobial and Anti-Corrosive Efficacy of Inorganic Nano

Porous Surfaces, Clean Technologies and Environmental Policies (CTEP), 845-857(2017)

Nanostructured surfaces that show antimicrobial, anticorrosive, and anti-biofilm properties, KEM, Trans. Tech., Switzerland, vol. 521., pp. 1-33 (2012).

MightySteam's patented heating system allows for an industrial strength > $+1122^{\circ}F$ ($+600^{\circ}C$) steam output. In



Nice clean fresh knobs! Clean Filters with the high velocity jet.





With steam you can clean dust, dust-mites, remove grime all the way down to submicron viruses. The heat makes it work faster. So many places need deep cleaning with steam.



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KEEPING IT CLEAN

HEALTHYSURFACE®

BAYZI CORPORATION

The levels of clean

In a restaurant, there are at least three levels of cleaning: cleaning, sanitizing, and disinfecting and deep cleaning. At the lowest level, cleaning means clearing dirt, trash, and debris from surfaces with a cloth. This makes the room and serving area look tidy and inviting, but it may not be enough to protect your guests. When done correctly, sanitizing kills 99% of bacteria, fungi, and some microbes. Sanitizing solutions must be mixed at the proper concentration and must be left on a surface for at least 60 seconds preferably more (but be aware of toxic chemicals). If you wipe down a table, menu, or serving counter with sanitizer and immediately dry it, you won't get the full effect- you have to leave it there for minutes depending on the solution and dilution. Make sure your sanitizer does not cause corrosion. The highest level is sterility or close to ii is a good target. Some types of steam from rapid steam generators at high temperatures can get you there. But be careful not to burn anything. It is highly recommended that you work with a microbiologist if you wish these levels of cleaning. Be aware that sanitizers can cause damage. People use cloth or towels made of organic materials such as cotton or paper pulp. These materials break down sanitizer and will, over time, cause the solution to be ineffective. Rental Cars should be properly steamed with MightySteam® for adequate residence time. ...High temperature steam like those obtained from SaniZap® act within a second to few seconds. Use the cleanest possible methods for good hygiene. Routine cleaning and disinfecting are an important part of reducing the risk of exposure to COVID-19. Normal routine cleaning with soap and water alone can reduce risk of exposure and is a necessary step before you disinfect dirty surfaces. Surfaces frequently touched by multiple people, such as door handles, desks, phones, light switches, and faucets, should be cleaned and disinfected at least daily. More frequent cleaning and disinfection may be required based level on of use. Source https://www.cdc.gov/coronavirus/2019-

ncov/community/reopen-guidance.html#. For more Restaurants information on https://www.nrn.com/operations/how-should-restaurantsclean-coronavirus-cases. One problem of using some type

of sugar-based chemicals are that it attracts not only microbes but also small creatures (bed bugs and ants). High temperature steam like the MightySteam® works on both.

Steam as a Sensitive-Environment Cleaning Agent

controlled experiments, the higher temperature steam requires lower residency times to achieve effectiveness (This result follows the common law of chemical kinetics exponentially where speed increases with temperature). Other published patents have shown superheated steam can clean up to sterilization levels of 6. The Resistance to antibiotics is increasing. This article suggests that the dangerous antibiotic-resistant infections are on the rise for children in the US.

Are chemical disinfectants toxic at high **concentrations?** There is no one simple answer. Please see published reports like the one here

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5685540/ What are the germiest spots on an airplane?

FROM THE WEB

Steam is also an antimicrobial agent. Steam studies are posted on the PowerPoints made by the Ohio State University, Food Department. Steam appears to act very rapidly. 3 Seconds of Exposure to Superheated Steam Reduces Biofilm Accumulation by 99.95% (The Ohio State University study).

What is in a biocide. Are they toxic?

A biocide is intended to destroy, deter, render harmless, or exert a controlling effect on any harmful organism. The US Environmental Protection Agency (EPA) uses a definition for biocides as "a diverse group of poisonous substances including preservatives, insecticides, disinfectants, and pesticides used for the control of organisms that are harmful to human or animal health or that cause damage to natural or manufactured products" (source https://en.wikipedia.org/wiki/Biocide)

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Hazards of Bleach and Simple Cleaners.

<u>News</u>

This issue comes up often when comparing cleaning techniques. For example, when comparing chemical use and duration to rapid clean steam. Bleach often contains Sodium Hypochlorite — Sodium hypochlorite can cause severe eye irritation and if ingested can cause severe stomach irritation and sores. Sodium Hydroxide is also often used to stabilize household bleach. It is extremely caustic and can cause significant skin irritation if touched.

Other simple cleaners contain trace doses of 2-butoxyethanol — sustained inhalation of high concentrations (100-500 ppm) of this compound has been found to cause adrenal tumors in tested animals. Please consult toxicologists for a definitive analysis.

How do bacteria become extremophiles in space?

A Ball of Bacteria Survived for 3 Years ... in Space!

New research from the Tanpopo mission adds to scientists' understanding of how living organisms can endure the hostile environment. Read: <u>https://apple.news/AxZnbdZKdRZOZJIF94O0qdA</u>

Why is it important to clean the environment?

Microorganisms (bacteria, fungi, viruses) are present throughout our environment and can cause infection. The environment can serve as a breeding ground for these organisms. Cleaning and disinfecting housekeeping surfaces and medical equipment, especially those that are frequently touched, is important to decrease and/ or prevent the spread of these organisms to people particularly if they are rapid acting pathogens.

What should I worry about when doing such cleaning? Cleaning is important. Having a regiment is important. Preventing the spread of toxic chemicals is important. If you are a restaurant, rental car agency or any other commercial business it is also important to know the speed. High temperature <u>steam</u> is one of the fastest methods.

How long does the virus remain on surfaces?

Typical Objects and Surfaces (source).

The virus could spread by touching an object or surface with virus present from an infected person, and then touching the mouth, nose, or

eyes. Much is still unknown here are examples with their sources listed. Bayzi Corporation has not independently verified the authenticity of the sources.

Surface contamination as observed in the study cited above [source]:

Computer mouse (ICU 6/8, 75%; GW 1/5, 20%)

Trash cans (ICU 3/5, 60%; GW 0/8)

Sickbed handrails (ICU 6/14, 42.9%; GW 0/12)

Doorknobs (GW 1/12, 8.3%)

76.5% of all personal items sampled at the University of Nebraska Medical Center (UNMC) were determined to be positive for SARS-CoV-2 [source] Of these samples, 81.3% of the miscellaneous personal items were positive by PCR, which included:

Exercise equipment

Medical equipment (spirometer, pulse oximeter, nasal cannula)

PC and iPads

Reading glasses



Other findings:

Cellular phones (83.3% positive for viral RNA)

Remote controls for in-room TVs (64.7% percent positive)

Toilets (81.0% positive)

Room surfaces (80.4% of all sampled)

Bedside tables and bed rails (75.0%)

Window ledges (81.8%) Duration of contamination on objects and surfaces

Although the virus titer was greatly reduced, viable SARS-CoV-2 was measured for this length of time:

Plastic: up to 2-3 days

Stainless Steel: up to 2-3 days

Cardboard: up to 1 day

Copper: up to 4 hours

[source]

Viruses can hide in crevices

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TECHNICAL STUFF

MightySteam® at the Ohio Food Industry Expo.

Food Processing Industry

Trade Show

Salmonella, E. coli and other foodborne pathogens are major threats to the safety and profits of any company handling food. MightySteam® and SaniZap® can produce 1122°F steam within a minute, allowing for treatment during or between production runs.

The MightySteam® team was displayed at the Ohio Food Industry Expo by CIFT (Center for Innovative Food Technology). The significant booth-traffic focused on non-toxic antimicrobial cleaning for the food industry. Please contact <u>CIFT</u> for more information.





Mold Removal A University of St. Louis study concluded that even mildly superheated steam 219°F (104°C) steam eliminated common forms of a mold with 99% effectiveness (3 Seconds of Exposure to Superheated **Steam Reduces Biofilm Accumulations** by 99.95%). The MightySteam® generates industrial strength 572°F (300°C) steam, capable of achieving similar results in less time.

What is the Difference between a Pandemic and an Epidemic? What is a Pathogen?

We have taken definitions from this excellent article and reproduced some below https://www.yalemedicine.org/stories/covid-19-glossary/

What is a pathogen? How is it different from a parasite?

Pathogen is term used to describe an infectious (disease causing) microorganism or agent, such as a virus, bacterium, protozoan, prion, viroid, or fungus. Certain kinds of worms and insect larvae can also produce disease. However, these tiny insects/animals are usually referred to as parasites rather than pathogens.

Spread of disease

When a disease—and the microorganism such as a virus that causes it, begins to spread, epidemiologists (who are considered the key scientists of public health) take notice, looking for the frequency, patterns, and causes associated with it. Below are definitions of a few of those epidemiological terms that you may hear or see reported in the news, especially as they relate to COVID-19.

Endemic

The baseline, or expected, level of the disease in the community—meaning it always exists, like the common cold and flu, which are usually at low, predictable rates.

Epidemic

This refers to a sudden increase in the number of cases of a disease, above what is typically expected in a area. COVID-19 is thought to have reached epidemic proportions in China in mid-January 2020.

Outbreak

Like epidemic, with one exception—an outbreak usually refers to a more limited geographic area. COVID-19 started as an outbreak in Wuhan, the capital city of the Hubei province in China at the end of December 2019.

Pandemic

An epidemic that has spread over several countries or continents, impacting many people. Pandemics typically happen when a new virus spreads easily among people who-mostly because the virus is new to them—have little or no preexisting immunity to it. COVID-19, which was declared a pandemic by the WHO in early March 2020, is the first pandemic known to be caused by the emergence of a new coronavirus.

Can steaming removes pathogens and parasites? Yes. If the steam is of a high enough temperature it can inactivate pathogens as well as parasites quickly.



is a bacteria called Staphylococcus hominis.

Contrary to popular belief, sweat itself does not have a smell.



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What is Bacteria? Bacteria are a type of biological cell. They constitute а large domain of prokaryot ic microorganisms. They are typically a few micrometers in length, bacteria have a number of ranging shapes, from spheres to rods and spirals.

What is Fungus? Fungus is any member of the group of eukaryotic organisms that includes microorganisms such as yeasts and molds, as well as the more familiar mushrooms. Mold is a fungus that grows in the form of multicellular filaments. Fungi that can adopt a single-celled growth habit are called yeasts. Most fungi grow as hyphae, which are cylindrical, threadlike structures 2-10 µm in diameter and could be up to several centimeters in length.

What is a Virus: Viruses are microscopic parasites, generally much smaller than bacterium They lack the capacity to thrive and reproduce outside of a host body. Viruses have a reputation for being the cause of contagion. Their size is typically 50-120 nanometers.

What is a biofilm? Biofilms are microbial communities that are tightly attached to surfaces – these cannot be easily removed. Microorganisms may be protected from disinfectants by production of thick masses of cells or biofilms. Once these masses form, microbes within them can be resistant to disinfectants by multiple mechanisms, including physical characteristics of older biofilms, genotypic(al) variation of the bacteria, microbial production of neutralizing enzymes, and physiologic gradients of pH or other concentrations within the biofilm. Biofilms can range from a few microns to even millimeter sizes.

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What is Dry High Temperature Vapor Steam Used For?

High-temperature steam of good quality, when used for the proper contact duration, is a known antimicrobial agent. Dry vapor steam has several specific uses: HVAC coil cleaning Deodorizing Upholstery (Cars, Mattresses, Furniture) **Decontaminating Surfaces** (Handles, Toilets, Fixtures, Railings) General Cleaning (Elevators, Counter-tops, Sinks, Appliances) Food Processing Sanitation (Vats, Slicers, Grinders, Tanks) Housekeeping (Clean Restrooms Fast, Deodorize/Clean Mattresses, Sheets, Pillows) Steam Drying (The low moisture content of dry steam is less than the ambient humidity) Nuisance Cleaning (Mold, Mildew, Dander) Trailers including flatbeds and Dump Cargo Vans and Sprinters Trucks and SUV's Commercial vehicles including industry and utility vehicles.



Kitchen. SaniZap® is great at cleaning floors, sinks, countertops, and cabinets. The SaniZap® can clean most surfaces and even the toughest of stains.

Appliances. Baked on stains are no match for SaniZap's steam. Ovens, microwaves, refrigerators, and microwaves can all benefit from a SaniZap® clean.

Bathroom. Sinks, faucets, toilets, showers, bathtubs, shower heads, and flooring are all surfaces SaniZap® can clean and sanitize, with less effort and environmental impact than harsh chemical cleaners.

Tile & Grout. SaniZap® is great for refreshing grungy black grout and water stained tiles.

Furniture. SaniZap® can save hours of scrubbing with chemicals that may not work. SaniZap® can remove most stains and odors from furniture upholstery.
Clothes. SaniZap® can de-wrinkle and deodorize many types of clothes, saving on expensive dry-cleaning bills.
Patio equipment. SaniZap® works great for cleaning metal, plastic, or fiberglass patio furniture. SaniZap® can also be used to clean concrete, wood and laminate patios.
Garage. Oil and grease are no match for SaniZap®. 572°F (300°C) of thermal energy will remove contaminants and have your garage looking like new.

Trash cans. Not only do they stink, but they also harbor all types of bacteria. SaniZap® can clean your trash cans with ease.

Vinyl Siding. Use SaniZap® to remove any mold growth or stains on vinyl siding, improving the appearance of your home.

Brick & Masonry. SaniZap's high thermal energy allows for tough to clean brick surfaces to be cleaned without erosion or surface degradation.

Driveways. Stubborn oil and rust stains are no match for the SaniZap[®]. Have your driveway looking like new with a simple superheated steam treatment.

Roofs. Get rid of unsightly black shingle stains using the SaniZap®. With a high thermal energy and low-pressure output, SaniZap® is safe to use on even older roofs.
Boats. Nothing ruins a shiny new boat more than mold and algae stains on the hull. Use SaniZap® to remove even the toughest of aquatic stains.

Cars. Dried bird poop is possibly one of the most difficult stains to remove from most surfaces. When bird poop dries on a car, it becomes exponentially more difficult to remove without damaging the finish of the vehicle. Presoaking is often necessary, along with a chemical application to loosen the bond, followed by vigorous scrubbing to remove all the debris. The average elapsed time for full removal of one bird dropping from an automobile is over 60 seconds.

CASE STUDIES

So many clean uses SaniZap® models are offered with several nozzles.



Suggested Uses: All uses require different distance from steam nozzle to object. Please start with a large distance. Please wipe with a towel or mop attached to a handle. Keep clothing and skin far away from the steam. Always wear gloves, safety eyeglasses and all other safety wear required for your application. The following uses are only suggested uses, and the user should determine if they are applicable.

The **SaniZap®** is capable of blasting away bird poop stains in around 10 seconds, without harsh chemicals or damaging the finish of the vehicle. With careful use, the **SaniZap®** is also able to degrease and clean automotive engine bays. When the exterior is cleaned, use **SaniZap®** on interior stains and to remove odors.





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COMPARING ENERGY USE AGAINST CHEMICAL **CLEANERS**

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SaniZap® produced MightySteam® is highly effective and efficient when it comes to cleaning bird droppings from nearly all surfaces. MightySteam® cleans without having to blast with sCo2 or other ice particles thus causing little or no damage to the surface. Hardy Biofilms are eliminated by high temperature steam.

Better than 10 X energy savings. When compared to traditional methods of bird droppings cleaning such as bleach or commercially available solvents, the power of MightySteam® is much more evident*. Traditional cleaning methods average 60-180 seconds for effective cleaning, while MightySteam® requires from 2-10 seconds to remove the same stains*. This leads to an estimated average of 238 droppings per hour capacity for the SaniZap-1TM, compared to just 20-60 droppings per hour for traditional methods. The energy saved is also a consideration, with MightySteam® the usage is estimated at about just 127 Joules of energy to clean 30 droppings, compared to nearly 1800 Joules needed with chemicals and scrubbing*.

127 Joules vs 1800 Joules. That makes it Green Energy **Sustainability**

Use at dog kennels, horse stables, chicken farms, rental Cars, detailing upholstery, restaurants... and so much more

* Internal Bayzi Tests - not necessarily verified with highly controlled and structured experiments. Dried bird droppings are possibly one of the most difficult stains to remove from most

CAN I SANITIZE SOFT MATERIALS LIKE PPE? YES, BE A BIT CAREFUL OF RESIDENCE TIME - FOLLOW THE DETAILED INSTRUCTIONS SUPPLIED WITH THE SANIZAPS's.

surfaces. When bird poop dries on a car, it becomes exponentially more difficult to remove without damaging the finish of the vehicle. Presoaking is often necessary, along with a chemical application to loosen the bond, followed by vigorous scrubbing to



Preventive Risk Mitigation

Keep a SaniZap® handy for quick action and daily







Bayzi Products (www.Bayzi.com)

We live in a world where the perception of a cleaning has changed. Viruses and bacteria have evolved. Our old standards of disinfection are dangerous because they are toxic. We have come up with a product that is easy to use, non-invasive, clean, and free of chemicals.

remove all of the debris. The average elapsed time for full removal of one bird dropping from an automobile is over 60 seconds. The MightySteam® when used carefully is capable of blasting away bird poop stains in around 10 seconds, without harsh chemicals or damaging the finish of the vehicle.

"While you dream of a clean world, we try hard make it happen".

"Scared of storing harsh chemicals at home? Our steam system does not require any chemicals. Just water, and you are good to go"

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CASE STUDIES

USE A TECHNIQUES THAT IS GOOD FOR MICROBES AND BUGS.

Pest control. Pests and Bedbugs carry diseases. Use a regiment that eliminates pests.

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Pest control has evolved past spraying dangerous chemicals on pests. Green, sustainable, and organic pest control is the future of the industry. Chemicals leave harsh residues that can be toxic to humans and their pets. Not only are some pesticides toxic, but many chemicals in the pest control industry are also suspected of being carcinogenic. New technologies such as superheated steam, dry heat, and CO2 snow show that pest control is possible without the use of harsh chemicals. As the efficacy of each treatment varies, an appropriate strategy must be used for effective pest control. In many cases, a combination of a MightySteam®, CO2 snow, or dry heat treatment followed by a treatment of all natural, food grade diatomaceous earth and follow up visits may effectively control a bed bug outbreak. Each situation is unique and should be evaluated by a trained pest management professional.



Pest Control Technologies Compared

	MightySteam™	Heat Treatment	Pesticides
Initial Capital Cost	Medium	High. Licensing fees, heater kits start at \$15,000	Very Low
Costs per Application	Low. Labor for 1 tech, Customer's electric, <1 gallon of distilled water	High. Labor for 2-3 techs, propane/generator fuel	Moderate. Labor for 1 tech, chemical costs
Efficacy	Possibility for multiple treatments, depending on technician	Typically needs 1 treatment	Varies. Typically 3 treatments
Treatment Process Duration	Varies on home size, from 1-5+ hours	Varies on home size, from 6-10+ hours	Varies, typically <90 minutes
Intrusiveness	Non-intrusive. Requires just an outlet.	Visible from street Ducts throughout home Moderate risk to electronics	Moderate. Possible tenting, noxious odors
Toxicity	Non-toxic	Non-toxic	Highly toxic
Mobility	Very High	Large heaters, enclosed trailer is optimal, multi- person crew needed	Varies by application.
Safety	Possible steam burns resulting from improper operations	Combustible gases,risk of fire in property if not inspected thoroughly	Likely carcinogenic, flammable, risk to pets
Setup Time	Plug and play. Instant steam.	~3 hours for setup and teardown	Long setup/teardown if tenting, minimal if just spraying
Training Required	Minimal. Safety, usage, identifying pests	Moderate. Safety, setup, sensor placement, thermal imaging training	Moderate: MSDS, safety, usage, identifying pests, etc.
Energy Use	Low. Uses standard wall outlet	High. Requires either fossil fuels or high quantites of electricity	Low. Fogging system may use electricity
Device Reliability	High. Uses reliable, patented technology	Moderate. Simple devices, routine maintenance	N/A
Residue	Small volume of water	None	High. Chemicals left on every surface. Noxious odors.
Environmental Impact	Minimal. Uses just electricity and water	High. Consumes large amounts of energy, high CO2 emissions	High. Carcinogenic, pollutes air and ground water

Bedbugs

Bed Bugs die when exposed to 122°F (50°C) heat for around an hour. MightySteam's 572°F (300°C) low-velocity steam can kill bed bugs without blowing them, or their eggs, from their present harborages. Bayzi's suggested treatment regiment for bed bugs is relatively easy. Vacuuming followed by a MightySteam® walkthrough, treating floors, along baseboards, mattresses, and any other known bed bug harborages. While MightySteam's temperature can easily kill bed bugs near the surface of a mattress, it is suggested to use a mattress encasement after treatment to ensure the entirety of bed bugs and their eggs are eliminated. After the initial treatment, a proper application of diatomaceous earth is suggested. Diatomaceous earth is an inexpensive, 100% organic and safe powder that kills bed bugs and most crawling pests shortly after they crawl through it. After the initial visit, schedule a follow-up visit to re-inspect the property, ensuring that there are no surviving bed bugs.

Dust-Mites

Dust mites can only withstand 122°F (50°C) of dry heat for 20 minutes, or 140°F (60°C) of moist heat for the same 20 minutes. With optimal operating conditions, MightySteam® can kill nearly all common allergen causing mites with a residence time of approximately .1 second. Dust mites cause allergies but are often overlooked because they don't feed on humans, but rather their dead skin cells. For this reason, many people tolerate their presence. Mites cannot withstand high temperatures, so the treatment strategy for mites using the MightySteam is relatively simple. Using the MightySteam® on the mattress, box-spring, furniture, and carpets will eliminate most dust mites, with an immediately noticeable effect. Preventing their return is more of an issue because warm, humid environments with plenty of dander, dust and dead skin are their favorite places. In addition to treating a property with MightySteam®, proper strategy to minimize a mite population may also entail suggesting a dehumidifier for use during the winter and also frequent washing of bedding materials in or water warmer than 130°F (54°C.)







Finance Calculator

No public health claims are implied by Bayzi regarding the MightySteam[®]. All claims made regarding the MightySteam[®] are not verified by any government organization. Each application is unique, so results and/or efficacy will vary from user to user. Always read all applicable manuals and obey safety procedures including wearing appropriate eye protection, thermally insulated gloves, closed toe shoes, and long sleeves/pants while operating the MightySteam[®]. Remember, SaniZap[®] unit generates very hot temperatures. If used incorrectly, it will inflict serious burns on any living object placed in front of the steam nozzle, so use utmost care during operations. Results and efficacy vary by application. Always test the MightySteam[®] with established chemical, steam and bioindicators.

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- Sanitizing should be green and safe, with no chemicals
- Keep children, pets, homes, clinics, and the environment, free from toxic cleaning agents
- Use just water to sanitize and clean with high-temperature steam
- Attack Bacteria, <u>Viruses</u>, Fungi, <u>Biofilms</u>, and even <u>Bedbugs</u> within seconds with clean steam when used properly compare speed with sanitizing cleaners. Explore <u>published resources</u>.
- Did you know for the same cleaning levels, the SaniZap® can save a lot of energy?

Click for Product Details

www.Bayzi.com



The History of Sanitation

The human right to water and sanitation was recognized by the United Nations (UN) General Assembly in 2010. Sanitation is a global development priority. The estimate in 2017, 4.5 billion people currently do not have safely managed sanitation. History of Sanitation <u>WHO document</u>

- In 2017, 45% of the global population (3.4 billion people) used a safely managed sanitation service. 2020 has highlighted new challenges.
- 31% of the global population (2.4 billion people) used private sanitation facilities connected to sewers from which wastewater was treated.
- 14% of the global population (1.0 billion people) used toilets or latrines where excreta were disposed of in situ.
- 74% of the world's population (5.5 billion people) use d at least a basic sanitation service.
- 2.0 billion people still do not have basic sanitation facilities such as toilets or latrines.
- Of these, 673 million still defecate in the open, for example in street gutters, behind bushes or into open bodies of water.
- At least 10% of the world's population is thought to consume food irrigated by wastewater.
- Cropland in peri-urban areas irrigated by mostly untreated urban wastewater is estimated to be approximately 36 million hectares (equivalent to the size of Germany)
- Poor sanitation is linked to transmission of diseases such as cholera, diarrhea, dysentery, hepatitis A, typhoid and polio and exacerbates stunting.
- Poor sanitation reduces human well-being, social and economic development due to impacts such as anxiety, risk of sexual assault, and lost educational opportunities.
- Inadequate sanitation is estimated to cause 432000 diarrhea deaths annually and is a major factor in several neglected tropical diseases, including intestinal worms, schistosomiasis, and trachoma. Poor sanitation also contributes to malnutrition.
- SANIZAP 2020

No public health claims are implied by Bayzi regarding the MightySteam[®]. All claims made regarding the MightySteam[®] are not verified by any government organization. Each application is unique, so results and/or efficacy will vary from user to user. Always read all applicable manuals and obey safety procedures including wearing appropriate eye protection, thermally insulated gloves, closed toe shoes, and long sleeves/pants while operating the MightySteam[®]. Remember, SaniZap[®] unit generates very hot temperatures. If used incorrectly, it will inflict serious burns on any living object placed in front of the steam nozzle, so use utmost care during operations. Results and efficacy vary by application. Always test the MightySteam[®] with established chemical, steam and bioindicators.