

**CHICAGO  
FAUCETS**  
Geberit Group

Healthcare|Solutions



# Comprehensive Solutions

## For Every Room In the Hospital.



### A Single-Source Solution for Water Flow Wherever It's Needed.

From the stops to the aerator, Chicago Faucets delivers comprehensive solutions, unmatched durability, and the highest performance available. With the broadest selection of plumbing fittings in our industry, we're the one company you can count on for every room in the hospital.



## Why Chicago Faucets Is **The Right Choice** for Your Healthcare Project.

Our primary business is and always will be commercial faucets. This focus, combined with our commitment to quality, has made us experts in healthcare applications and the number one choice of hospitals for over a century. With Chicago Faucets, you can count on the highest quality, innovative features, and unparalleled support.

Look for the symbols below on our products and at [chicagofaucets.com](http://chicagofaucets.com). They ensure you're getting the right faucets and fittings for your hospital.

### **ECAST**® Lead-Free brass construction

**Durable and safe:** one quarter of one percent (0.25%) or less total lead content by weighted average.

### **TempShield® Scald Protection** built-in

**Meet code, reduce installation time** with products featuring integrated ASSE 1070 compliant scald protection.



### **Quick Ship** program

**We're ready when you are** with 3-day shipment on many products plus 24-hour and same day shipment availability.



### **American-Made** products

**Over 98% of our products** are manufactured and assembled in the United States

#### **Built to withstand** use and abuse.

Heavy-duty cast brass design with vandal-proof features and backed by the industry's strongest warranties.



#### **Interchangeable** design.

Interchangeable components allow you to mix and match to create a faucet to meet your exact needs.



# Patient Care

Our touchless HyTronic Patient Care faucets are an effective tool for infection control and improved hygiene. They are designed and tested to limit the growth of waterborne pathogens.

## A Complete Solution For High Risk Patient Care Areas.

With HyTronic Patient Care faucets you can install a complete system that helps reduce the spread of infection, provides protection against scalding, and prevents the cross-flow of dangerous bacteria within the plumbing system.

### Limits microbial contamination

Limits the tested microbial contamination to a level statistically similar to standards set by a conventional manual faucet.



### Durable construction

High-quality brass casting with a refined finish for unrivaled durability.

### Patient-specific operating modes

Easily programmed for scrub, metering, and cleaning modes.

Optional **Commander™** handheld programming unit maintains and monitors your faucets.

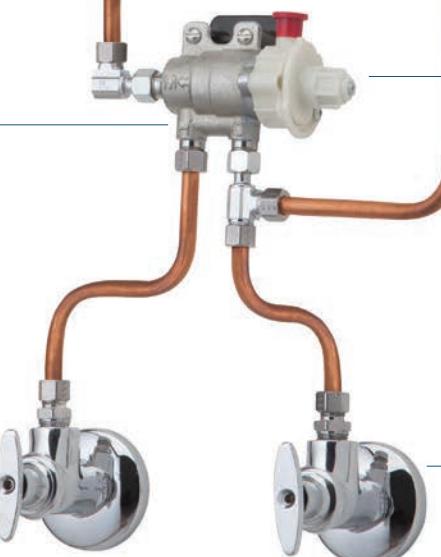
- Five Running Modes
- Hygiene Flush
- Track Usage

Low-volume solenoid valve helps to **minimize stagnant water** in the faucet.



### Scald protection

Heavy-duty thermostatic mixing valve delivers water at a safe, consistent temperature.



### Flush option for thermal disinfection procedures

Allows waterways and valves to be flushed without the need for a separate bypass line to the faucet.

### Prevents cross-flow

Stops with integral checks help prevent bacteria-laden water from flowing back into the plumbing system.



## The Battle Against Bacteria

### Avoiding Healthcare-Associated Infections (HAIs) Is Mission Critical.

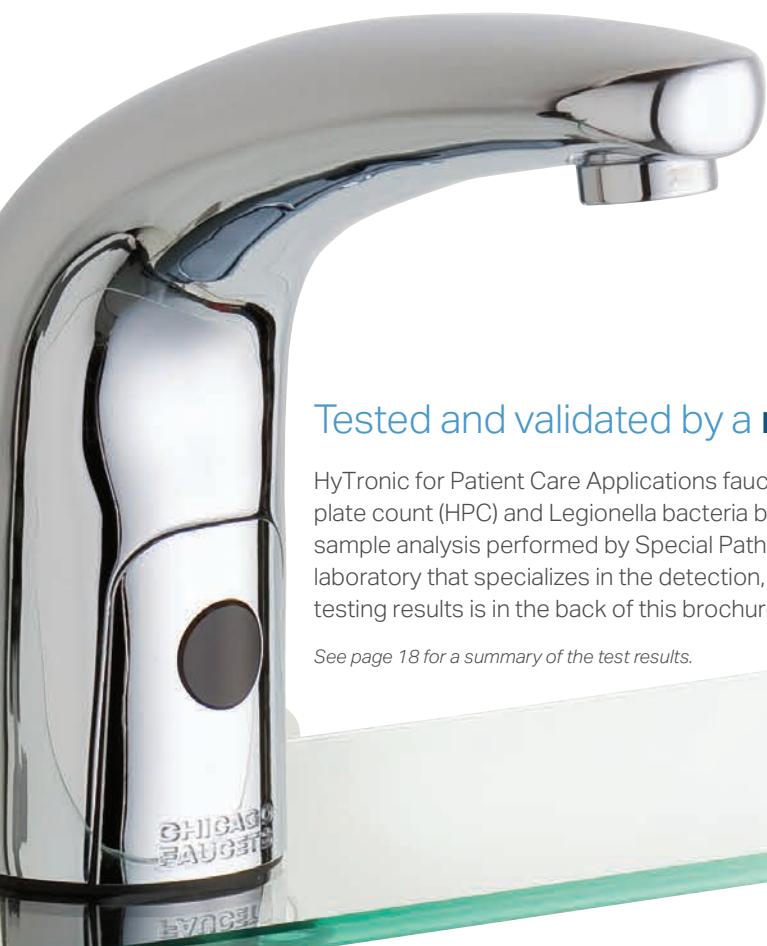
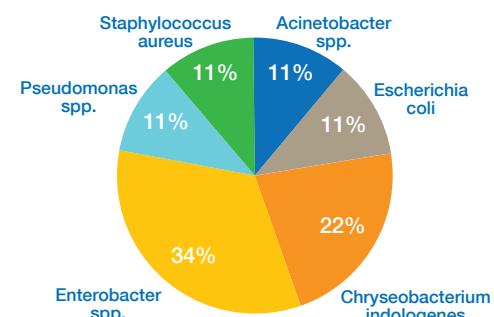
From hand hygiene to water treatment, finding ways to reduce the spread of bacteria has never been more critical. Water is an essential ingredient in the effort. But water also carries bacteria throughout your building, adding to the challenge.

The Centers for Disease Control and Prevention (CDC) ranks handwashing as the number one method to prevent the spread of bacteria. Even with total compliance, however, touching faucet handles can re-contaminate clean hands and contribute to the spread of infections. This seems to point to electronic, touch-free faucets as the obvious answer.

Some studies have shown that electronic faucets may elevate waterborne bacteria to a level higher than is found in conventional manual faucets. While most individuals are not at risk for infection by these bacteria, any increase is reason for concern. Many health institutions are looking for ways to reduce exposure among individuals at risk of contracting an HAI. So what's the best choice: manual or electronic faucets?

Now there's no need to choose between surface-borne and waterborne pathogens.

EXAMPLE OF MICROBIAL DIVERSITY OF POTENTIAL PATHOGENS RECOVERED FROM SINK FAUCET HANDLES (% TOTAL)



## HyTronic® for Patient Care Proven protection, reliable operation.

HyTronic for Patient Care Applications deliver a totally touch-free handwashing experience. These electronic faucets have been shown to limit tested microbial contamination to a level similar to that of a manual faucet. Options like point-of-use scald protection and special operating modes help you keep everyone in your building safe.

### Tested and validated by a nationally-recognized testing laboratory.

HyTronic for Patient Care Applications faucets were extensively tested and monitored for both heterotrophic plate count (HPC) and Legionella bacteria by the test facilities at the University of Pittsburgh, with culture and sample analysis performed by Special Pathogens Laboratory. SPL is a nationally-recognized analytical microbiology laboratory that specializes in the detection, control, and remediation of waterborne pathogens. A summary of the testing results is in the back of this brochure.

See page 18 for a summary of the test results.



# Patient Care

Our touchless HyTronic Patient Care faucets are an effective tool for infection control and improved hygiene. They are designed and tested to limit the growth of waterborne pathogens.

## Traditional HyTronic Patient Care

- **Traditional styling** with a higher spout profile for easy of use.
- **Versatile** design with options that include side mixer and emergency back-up power supply.
- **Mixing options** include single supply, internal mixer, and user-adjustable mixer.



## With Temperature Adjustment Side Mixer HyTronic Patient Care

- **Compliant** to OSHPD criteria for a 4" wristblade mixer.
- **Control** the water temperature without the need to grasp the handle.
- **Easy-to-adjust** hot water limit stop to help prevent scalding



## Edge HyTronic Patient Care

- **Heavy-duty** cast brass spout with an angular, contemporary look for the restroom.
- **Easy** installation and maintenance with all components located above deck.
- **Quick** response with dual-beam design, automatically adjusts to environmental changes.



## Gooseneck HyTronic Patient Care

- **Optimal** spout height for handwash applications.
- **Power options** include AC, DC, and Long Term Power System (LTPS).
- **Quick** response with dual-beam design, automatically adjusts to environmental changes.





## Complete Kits HyTronic Patient Care

For a comprehensive upgrade, we offer complete kits to improve safety at patient room sinks. The kits include a HyTronic Patient Care touchless faucet, thermostatic mixer, and two angle stops. Our Long Term Power Supply (LTPS), designed to last 15 years, can be included in your kit for an easy-to-install, maintenance-free solution.



Patient care kits include:

### Touchless Faucet HyTronic Patient Care



- **Limits tested microbial contamination** to a level similar to a conventional manual faucet.
- **Exceptional** detection system means the faucet turns on and off when it should.
- **Easily programmed** for scrub, metering, and cleaning modes.

### Thermostatic Valve with integrated thermal flush option



- **Pipe flush mode** for high temperature system flushing used in thermal disinfection.
- **Easy-to-maintain**, one-piece replaceable cartridge includes an integrated screen filter.
- **Vandal resistant** temperature handle enables precise control and prevents tampering.

### Angle Stop with integral check



- **Integral spring check** helps eliminate cross-flow.
- **Solid** brass body and brass spring check cartridge.
- **High temperature** performance with washer rated to over 180° F.

See page 14 for additional details.

# Patient Room

Infection control and improved hygiene are essential in patient rooms. We meet these requirements with additional safety features, including anti-scald, anti-ligature, and mitigation of waterborne pathogens.

## Thermostatic/Pressure Balance Shower With Automatic Drain

This system is designed to help reduce the growth of pathogens by removing stagnant water in the shower valve, pipes, and hoses. Drains integrated into the valve and hand spray hose automatically flush water out of the system after each use.

### Thermostatic/pressure balancing design

Provides extra protection from scalding and thermal shocks by constantly monitoring both the water temperature and pressure.

### Durable construction

Cast brass valve housing is designed for back-to-back and easy 3- or 4-port installations.

### Extra safety and convenience

Brass limit helps stop excessive handle rotation. Integral check stops for easy maintenance.

### Automatic valve drain

When shower is shut off, water drains automatically from the valve in less than a minute.



## Integrated Drain Hand Shower

Use our hand shower with integrated drain to reduce the growth of pathogens by reducing stagnant water throughout the shower system. The drains integrated into the valve and hand spray hose will automatically flush water out of the system after each use.

Add an ADA slide bar for additional shower safety.





## ELR Series ligature resistant touchless faucet

- **Rounded** and sloped design to minimize ligature points.
- **Heavy-duty**, one-piece cast brass body with recessed vandal resistant outlet
- **Added Safety** of available with integral ASSE 1070 compliant thermostatic mixing valve.



## Ligature Resistant shower trim

- **Sloped**, low profile design minimizes ligature points.
- **Tamper resistant**, concealed screws hold product securely in place.
- **Solid** brass construction to withstand abuse.



## Bed Pan cleaner

- **Hands-free** operation with fold-away foot pedal valves.
- **Back-flow prevention** with atmospheric vacuum breaker.
- **Heavy-duty** brass construction to endure years of use.



## ADA shower slide bars

- **Extra safety** in the shower with easy to grip ADA grab bar dimensions.
- **Versatile** design includes hand spray holder and a choice of 24" or 36" lengths.
- **Durable**, polished chrome finish.



## Lab/Surgical & Exam

Durability, convenience, and reliable operation are essential for labs and scrub sinks. From our classic gooseneck faucets to combination gas and water lab fittings, we offer versatile, space-saving solutions.

### HyTronic® Series touchless gooseneck faucet

HyTronic touchless gooseneck faucets provide a reliable, totally touchless solution for hand hygiene. Available in deck or wall mount configurations and multiple power options to meet any scrub or handwash station application.



### Complete Control, Completely Hands-Free.

Our pedal and knee valves provide accurate and convenient hands-free faucet operation. When combined with a gooseneck spout, this system allows scrubbing from hand to elbow while eliminating the risk of contamination from the faucet surface.

- **Added safety** eliminates contact with the faucet during hand washing.
- **Reliable** performance – NAIAD self-closing cartridge provides immediate shut-off, opens with push.
- **Lead-Free** solid brass construction for durability and safe performance.





## 786 Series sink faucet

- **Classic** design with large gooseneck spout and choice of wrist- or elbow-blade handles.
- **Interchangeable design** allows for easy updates, modifications, and repairs.
- **Dependable**, time-tested cartridge design for years of trouble-free operation.



## 8450 Series combination emergency eyewash and gooseneck faucet

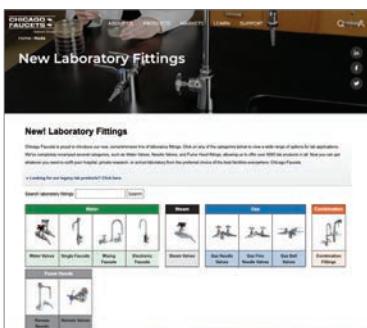
- **Durable** cast brass construction and time-tested, heavy-duty ceramic cartridge operation.
- **Dual spray heads** release soft and wide streams for both eyes.
- **Independent** supply for eyewash allows connection to a thermostatic mixing valve.



## A wide selection of lab faucets and fittings for your testing labs

We've made it easy for you to choose lab products that meet your specific needs. See our comprehensive product catalog or visit our online Lab Products Selector for more information.

### Website



Build the exact products you need online, anytime.

### Catalog



Comprehensive overview of product offering and guidance on selecting the right fittings.



## Restroom

Durability and improved hygiene are essential for any healthcare setting. Chicago Faucets combines unsurpassed commercial performance with a choice of touchless or one-touch operation to help reduce the spread of germs.

### EVR Series touchless

The EVR Series combines the added safety and convenience of touchless operation with the durability of a one-piece cast brass body. Power options and mixing – including integrated scald protection – are concealed in a secure, compact control box.

#### Durable Construction

Heavy-duty, one-piece cast brass body with vandal resistant outlet designed to withstand abuse and tampering.



#### Improved User Experience

Higher and longer spout reach combined with dependable electronics, improving the user experience.

#### Easy to adjust

Optional Commander™ handheld unit delivers a new level of control from the palm of your hand.

#### Secure, Compact Control Box For Any Application

Conceals and secures power, solenoid, mixing valve, and supply in a compact box.

#### Added Safety

Available with integral ASSE 1070 compliant thermostatic protection to help prevent scalding.

Options Designed To Make Your Hospital **Safer** and Your Life **Easier**.

#### TempShield®

Integrated ASSE 1070 thermostatic protection.

#### LTPS

Lithium ion cell – maintenance-free power for 15 years or more.

#### EBPS

Battery backup on AC models keeps water flowing during power outages.



### HyTronic® touchless

- **Easy** installation and maintenance with all components located above deck.
- **Quick** response with dual-beam design, automatically adjusts to environmental changes.
- **Heavy-duty** cast brass construction with a refined polished chrome finish.



### E-Tronic® 40 touchless

- **Reliable** and proven electronics are housed and hermetically sealed above deck.
- **Sturdy** all-metal body for performance that's built to last.
- **Affordable** solution for dependable, commercial-grade touchless operation.



### E-Tronic® 80 touchless

- **Saves water**, adjustable run time with vandal resistant outlet options from .35 to 1.5 GPM.
- **Easy to install** and maintain with above-deck electronics.
- **Added safety** with available integral ASSE 1070 compliant thermostatic protection.



### EQ Series touchless

- **Smart** outlet integrates electronics module, sensing eye, and aerator for a clean look.
- **Compact** control box houses power, solenoid, mixing valve, and supply.
- **Durable** one-piece solid brass spout and waterproof electronics.



## Cafeteria

Commercial kitchens require durable products that can be easily updated without extensive downtime. Our food service products are designed for interchangeability, with replacement components that are always readily available.

### 923 Series combination pre-rinse/faucet

The 923 Series combines a high performance pre-rinse spray valve with a solid, durable faucet for a workhorse kitchen assistant.

#### Safe and reliable

Features quarter-turn ceramic cartridges with integrated check valves to prevent cross-flow.



#### Water conserving

1.0 GPM nozzle provides water savings while maintaining work efficiency

#### Flexible

Easy installation with supply arms that can adjust from 3" to 8-3/8" centers.

#### Durable construction

Heavy-duty brass body with metal, vandal-proof lever handles.

### An **Integrated Solution** Designed to **Prevent Cross-Flow**

XKC cartridges, included in most of our pre-rinse faucets, prevent cross-flow by incorporating a check valve directly inside the cartridge.

- **Integrated** valve prevents back-flow if water in the line reverses direction.
- **Easy** maintenance with quick, single part replacement.
- **Commercial-grade** ceramic cartridge design with solid brass sleeve for durability and long life.





## W Series workboard faucets

- **Fast** and easy installation on stainless steel sinks and basins 1/4" thick or less.
- **Sturdy** all-metal faucet construction with a chrome plated finish.
- **Interchangeable** spouts, outlets, cartridges, and handles for quick and easy updates.



## 312 and 712 Series glass fillers

- **Durable** solid brass body and heavy-duty metal lever with rubberized coating.
- **Reliable** all-brass piston valve with easy access for simple maintenance.
- **Flexible** for deck-mount or wall-mount installation.



## 332 and 515 Series pot and kettle fillers

- **Convenient** double-jointed spout design for large area coverage.
- **Heat-resistant** black nylon handle for added safety over cooking area.
- **Stable** and durable performance with solid brass construction.



## 1366 and 1367 Series twist and rotary drains

- **Built to last** with solid brass body and stopper or rotor mechanism.
- **Versatile** with a choice of twist or rotary designs for 3-1/2" sink openings.



## Facility Maintenance

Facility maintenance sinks require durable faucets with safety features that protect the water supply. Our products include safeguards that help prevent siphoning and cross-flow contamination of the drinking water system.

### 445 Series with spill resistant vacuum breaker spout

Designed for use on continuous pressure lines, the 445-PVBCP is recommended for systems connections or shut-offs downstream.



### A Reliable and Serviceable Way to Stop Cross-Flow.

The 1017-CSTABCP features an integral spring check valve to help eliminate cross-flow. Cross-flow can allow dangerous bacteria to migrate from the hot supply into the cold supply and back into the plumbing system.

- **Added Safety** with a check valve before the mixing valve and its potential cross-flow problems.
- **Reliable** performance – heavy-duty brass spring check cartridge with high temperature washer.
- **Easy** to service affordably and quickly.





### 897 Series with atmospheric vacuum breaker spout

- **Dependable** ceramic cartridge with color-coded seats that indicate hot or cold operation.
- **Durable** heavy duty, one-piece spout with forged pail hook.
- **Easy** maintenance with integral service stops.



### 305 Series with short atmospheric vacuum breaker spout

- **Versatile** with options that include supply arms with integral service stops.
- **Reliable** and smooth ceramic cartridge operation.
- **Flexible** installation with supply arms that can adjust from 3" to 8-3/8" centers.



### 952 Series with atmospheric vacuum breaker spout

- **Excellent** protection against backflow for non-pressurized systems.
- **Improved** water volume adjustments from slow compression cartridge.
- **Heavy-Duty** one-piece brass body to withstand years of use and abuse.



### 537 Series hose reels

- **Durable** 2.5 GPM spray with brass stem valve, brass handle, and stainless steel activation spring.
- **Complete** systems with fitting, vacuum breaker, and exposed stops available.



# HyTronic Patient Care Testing Summary

## Overview

Bacterial contamination of hot water systems is a common problem in large commercial facilities. Buildings such as hospitals, long-term health care centers, and hotels have large, complicated hot water distribution systems, and the growth of bacteria within these systems can cause both structural damage due to microbially-induced corrosion and human infection.

Legionella pneumophila are gram-negative bacteria which cause Legionnaires' disease, a potentially fatal form of pneumonia. Average, healthy individuals are not at high risk for infection by these bacteria, but individuals possessing a number of predisposing risk factors (elderly, immunocompromised, smoker, etc.) are at greater risk of contracting Legionnaires' disease should they be exposed to a contaminated source. Building hot water systems are sources of exposure to Legionella that have been linked to the cases of Legionnaires' disease in several instances [Colville et al. 1993, Goetz et al. 1998, Shands et al. 1985].

Heterotrophic plate count (HPC) measurements provide a generalized indicator of microbial water quality. They are used to determine water treatment process effectiveness (HPC before treatment vs. HPC after treatment), as well as to indicate if conditions which increase rates of microbial re-growth (i.e. high temperatures, lack of residual disinfectant, availability of nutrients, etc.) are present in a given environment. Although most HPC are not pathogenic, the relative presence/absence of microbial growth may be used as an indicator of the potential presence of pathogens (i.e., water with a large quantity of bacteria is more likely to have pathogens than water with very little bacteria).

## Previous Research

In 2011, a study conducted by a leading healthcare institution indicated that sensor faucets are more susceptible to bacterial contamination and colonization than standard manual supply faucets.

## Scope Of and Reason For Additional Research

The study was based on evidence gathered from faucets installed in a real life situation and the comparison was limited to only one specific electronic faucet product and one reference manual faucet. A second study, conducted by the University of Pittsburgh under guidance of Special Pathogens Laboratory and financed by Chicago Faucets, was performed to determine whether these field observations could be reproduced under well-controlled laboratory conditions.

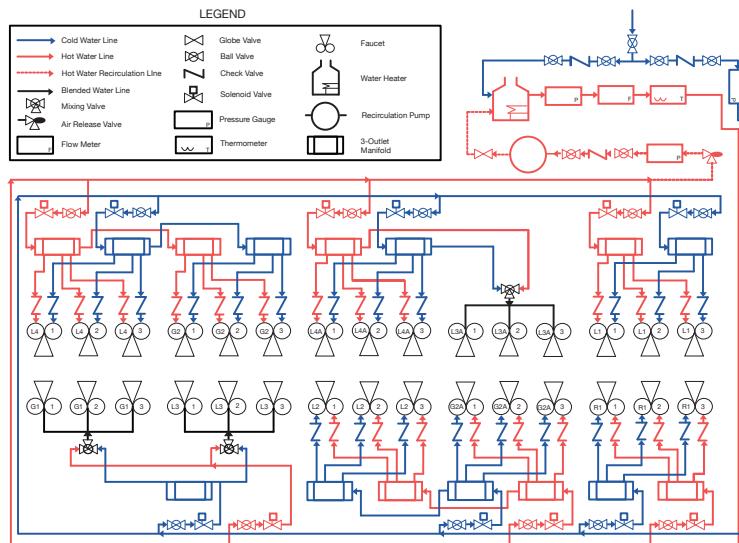
## Research Objectives

The key objectives of this laboratory study were:

- determine if electronic faucets are any different from standard mechanical faucets in promoting Legionella growth, and
- determine if there is any difference between these two faucet types in terms of the efficacy of standard disinfection practice (free chlorine addition) for Legionella eradication.

## Test setup and process

A model system was constructed to test nine electronic faucet varieties, which were compared with a "control" faucet (manual faucet).



Legionella bacteria was prepared using a model cooling tower system supplied with municipal water. The tower was allowed to operate continuously for approximately one week, and subsequent testing indicated Legionella concentrations in excess of 10,000 CFU/mL. A measured volume of this solution was fed into the system to achieve an initial Legionella concentration of approximately 500 CFU/mL. The test was monitored for four weeks prior to a chlorination effort and two weeks post-chlorination. To disinfect the system, a volume of 45.4 mL of 6% bleach was added to the faucet system's holding tank, mixed, and circulated through the system for 2 hours and 20 minutes. Following disinfection, system flushing was re-enabled and system operation resumed.

## Results

In order to evaluate the significance of the observed differences between bacteria concentrations among different faucet groups, statistical analyses were performed using the collected data.

### Legionella

It was found that each of the nine electronic faucets had an average concentration of Legionella bacteria that was comparable to the control faucet prior to chlorination. The mean difference of the faucet with the highest Legionella concentration prior to chlorination and the reference faucet was only 0.16 log CFU/mL.

Post-chlorination analyses also compared each sensor faucet to the control faucet, and the results indicate that five faucets demonstrated Legionella concentrations that were statistically equivalent to that of the control faucet. Two faucets, among them the one electronic faucet that was tested in the healthcare study, had Legionella concentrations that were more than 1.0 log higher than the control faucet.

### HPC (Heterotrophic plate count)

Prior to chlorination, each of the electronic faucets harbored a population of total HPC which was equal to or greater than that of the control faucet. Five of the faucets were statistically indistinguishable from the control faucet. Four faucets demonstrated average pre-chlorination concentrations which were higher than those demonstrated by the reference faucet. The difference between the average concentration of the electronic faucet and the control faucet ranged from 0.03 log CFU/mL to 0.71 log CFU.

Post-chlorination comparisons of each of the sensor faucets with the control faucet indicate that one faucet maintained a population of HPC which was statistically equivalent to that of the control faucet. Two faucets demonstrated microbial counts greater than 1.0 log higher than the control, while all remaining faucets demonstrated microbial concentrations that ranged from 0.22-0.37 log above that of the control.

## Summary

This study was performed in a well-controlled lab environment by the University of Pittsburgh under guidance of Special Pathogens Laboratory, The Legionella Experts, and financed by Chicago Faucets. The objective was to determine if electronic faucets are any different from standard mechanical faucets in promoting Legionella growth and if there is any difference between these two faucet types in terms of the efficacy of standard disinfection practice.

Statistical analysis of experimental results obtained during the pre-chlorination phase revealed that there is no significant difference in the ability of sensor faucets to promote Legionella colonization when compared to a standard mechanical faucet.

Sensor faucets did harbor higher concentrations of HPC compared to mechanical faucets. The findings demonstrated that some faucets fostered higher microbial concentrations during regular usage. Conversely, other faucet types demonstrated the lowest microbial concentrations among sensor faucets.

Disinfection of the faucet system was performed five weeks into the trial.

Statistical analysis revealed that five electronic faucets did not demonstrate a statistically significant difference in Legionella concentration from the control faucet after chlorination. These results were confirmed using disinfection log reduction of HPC bacteria from pre- to post-chlorination.

Following disinfection, three electronic faucets continued to foster the highest microbial concentrations (HPC), while five other faucets were not statistically different when compared to the levels observed in a standard mechanical faucet.

Overall, it can be said that selected and modified electronic faucets perform as well as the mechanical reference faucet when it comes to promoting Legionella colonization and HPC. Based on the results of this study, Chicago Faucets offers a selection of four modified electronic faucet products with both AC and DC power options. For more information on these products consult a Chicago Faucets representative.

*Credentials: Special Pathogens Laboratory provides the healthcare and water treatment industries, hotels, and commercial and industrial sectors a comprehensive solution for the prevention and control of Legionella. Founded by Dr. Janet Stout and Dr. Victor Yu, internationally recognized experts in Legionnaires' disease.*

## The Smart Choice For Healthcare Product Solutions.

We can help take the hassle out of selecting the right products for your hospital project. With a variety of fittings for every need, we enable engineers, designers, and contractors to improve water delivery throughout the entire facility.

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Chicago Faucets, a member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports, and sports facilities. Whatever your requirements may be, Chicago Faucets offers standard and made-to-order products that are designed to meet any commercial application.

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