With a concept never before seen in healthcare, Franke integrates cutting edge technology with clever, functional design to help stop the spread of hospital acquired infections. Medi-flo and Ozo-flo both inhibit the formation of bio-films on the sink and waste trap, and improve the results of hand washing. Ozonated water has been proven as a safe and extremely effective way to help sanitize the sink and the waste. Time-kill studies have shown that Medi-flo and Ozo-flo can eliminate > 99.9% of MRSA and Pseudomonas in under 15 minutes.

**Medi-flo™ WASH BASIN SOLUTION (HWSS2321W-00)**
- Left rear 1 1/2” waste location prevents water from splashing directly into the waste.
- Anti splash feature runs through the center of the sink to greatly reduce splashing.
- IR controls trigger an illuminated laminar flow water stream delivering water with dissolved ozone and other mixed oxidants on demand.
- A user defined ozonation cycle helps keep the drain and trap free of CPOs & other pathogens
- Optional thermostatic mixing valve (MIX-LF) and in wall carrier (IWC2104) available.

**Ozo-flo™ RETROFIT SOLUTION**
Ozo-flo can be installed on any generic sink or basin which takes a deck mounted faucet. This retrofit solution serves as an alternative to a Medi-flo™ installation where only a faucet is required. The hardware requires less than one square foot of wall space.
- Dispenses electro-chemically activated water inhibiting the growth of biofilm
- Laminar water flow
- Programmable trap cleaning cycles
- Blue band on faucet indicates ozone function
- Wall mounted housing contains ozone generator, electronics and power supply

§ cUPC Certified and in compliance with CSA B45.5-11/IAPMO Z124-2011 and IGC156-2012el.

**OUR STANDARD MEDICAL BASIN RANGE INCLUDES...**

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSU1-2016-00</td>
<td>16 × 19 3/4 × 28</td>
</tr>
<tr>
<td>SSU2-2040-00</td>
<td>40 × 19 3/4 × 40</td>
</tr>
<tr>
<td>SSU1-00</td>
<td>30 × 23 × 26</td>
</tr>
<tr>
<td>SSU2-00</td>
<td>30 × 23 × 26</td>
</tr>
<tr>
<td>SSU3-00</td>
<td>30 × 23 × 26</td>
</tr>
</tbody>
</table>

All about Medi-flo
FEATURES & BENEFITS

DESIGN AESTHETIC

1 Gently contoured features invoke that residential feel and yet at the practical level directs water into the seamless waste. This Canadian design is not only beautiful, but adheres to strict infectious control standards. Robust, non-porous surface, for easier cleaning.

2 Z8000 & Z317.1-16 COMPLIANT

All curved surfaces prevent pooling of water as well as placement of objects on the rim.

3 Sink bottom sloped positively to be free draining.

4 Integral centre rib helps divert water to prevent splashing.

5 A 9" deep, rounded inner bowl is shaped to contain splashing within the unit, providing staff and patients with a safe contact surface.

6 Infra-red controls strategically placed inside the sink bowl ensures hands are in the optimum place for washing and splash containment.

ACCESSIBLE

7 This sink is wheelchair accessible and the removable shroud conceals plumbing connections, adding to the design aesthetic.

REVOLUTIONARY LAMINAR WATER FLOW

8 Ozonated water flow safely kills biofilms in the sink and the waste with every use while improving the effectiveness of hand washing.

9 Timed cycle washing: An infra-red sensor will automatically trigger water flow after pre-defined lathering time, which signals the user that they have lathered long enough.

A soft blue LED operates in tandem with the ozone generator which is hidden behind the bowl of the sink. The result is a stunning illuminated water stream that provides the world’s most hygienic hand washing experience.

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1 Refer to "Scientific assessment of antimicrobial activity study..." next page.
The results are in. Ozonated water kills bacteria.

Both the Medi-flo hand hygiene station and the Ozo-flo retrofit faucet employ electrochemically activated ozonated water to deliver unsurpassed hygiene in a healthcare environment.

Transformed in this way, water becomes a powerful ally in the fight against hospital acquired infections (HAI’s), specifically those transmitted by the growth of bacteria in healthcare sinks or by poor hand hygiene. Franke innovatively changes the sink’s environment preventing bacteria from surviving. Medi-flo and Ozo-flo accomplish this without the addition of chemicals or the use of consumables.

**Don’t take our word for it.**
This process has been tested in both field studies as well as laboratory time-kill studies, noted below.

**Scientific assessment of antimicrobial activity study using a time-kill procedure**
(As performed by a certified 3rd party test laboratory. Full report posted online.)

**I. EXPERIMENTAL SUMMARY**
To represent both gram positive and gram negative bacteria we had selected certain bacteria known to cause HAI’s; these being Staphlococcus aereus MRSA (ATCC 43300), Pseudomonas aeruginosa (ATCC 33988), Legionella pneumophilia, and Clostridium difficile (ATCC 9689).
11. PROCEDURE
Test procedure was based on ASTM E2315 method guidelines and conducted on various concentrations of activated water. The output parts per million (ppm) of ozonated water will vary depending on local water chemistry or on use (either hand washing or trap disinfection).

III. DISCLAIMER
Medi-flo and Ozo-flo are not intended for facilities operating reverse osmosis disinfection systems or if the TDS\(^2\) (conductivity) is abnormally low (i.e. under 100 TDS) because there would be limited output from the ozone generator.

**Medi-flo and Ozo-flo technology**

The following table summarizes the results.

<table>
<thead>
<tr>
<th>Test Microorganisms</th>
<th>Test Substance</th>
<th>Contact Time</th>
<th>CFUs(^3)/mL</th>
<th>Percent Reduction Compared to Control at Time Zero</th>
<th>Log 10 Reduction Compared to Control at Time Zero</th>
</tr>
</thead>
<tbody>
<tr>
<td>P. aeruginosa</td>
<td>0.5 PPM Conc.</td>
<td>30 seconds</td>
<td>1.2E+05</td>
<td>99.42%</td>
<td>2.24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mins</td>
<td>7.3E+04</td>
<td>99.65%</td>
<td>2.45</td>
</tr>
<tr>
<td>P. aeruginosa</td>
<td>5.0 PPM Conc.</td>
<td>30 seconds</td>
<td>&lt;1.00E+01</td>
<td>&gt;99.98%</td>
<td>&gt;4.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mins</td>
<td>&lt;1.00E+01</td>
<td>&gt;99.98%</td>
<td>&gt;4.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mins</td>
<td>&lt;1.00E+1</td>
<td>&gt;99.98%</td>
<td>&gt;4.90</td>
</tr>
<tr>
<td>S. aureus (MRSA)</td>
<td>0.5 PPM Conc.</td>
<td>30 seconds</td>
<td>7.7E+04</td>
<td>98.67%</td>
<td>1.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mins</td>
<td>6.6E+04</td>
<td>98.86%</td>
<td>1.94</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mins</td>
<td>5.1E+04</td>
<td>99.12%</td>
<td>2.05</td>
</tr>
<tr>
<td>S. aureus (MRSA)</td>
<td>5.0 PPM Conc.</td>
<td>30 seconds</td>
<td>&lt;1.00E+01</td>
<td>&gt;99.98%</td>
<td>&gt;5.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mins</td>
<td>&lt;1.00E+01</td>
<td>&gt;99.98%</td>
<td>&gt;5.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mins</td>
<td>&lt;1.00E+01</td>
<td>&gt;99.98%</td>
<td>&gt;5.10</td>
</tr>
<tr>
<td>Legionella pneumophila</td>
<td>2.0 PPM Conc.</td>
<td>5 minutes</td>
<td>&lt;1.00E+01</td>
<td>99.99%</td>
<td>5.3</td>
</tr>
<tr>
<td>C. difficile vegetative</td>
<td>2.0 PPM Conc.</td>
<td>30 seconds</td>
<td>2.8E+03</td>
<td>92.22%</td>
<td>1.11</td>
</tr>
<tr>
<td>C. difficile spores</td>
<td>2.0 PPM Conc.</td>
<td>20 seconds</td>
<td>1.4E+03</td>
<td>64.10%</td>
<td>0.44</td>
</tr>
</tbody>
</table>

**In summary**

Franke’s Medi-flo and Ozo-flo solutions prevent the formation of biofilms in the sink and drain. Choose Franke as your partner in the fight against infectious outbreaks.

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\(^2\) Total dissolved solids
\(^3\) Colony forming units
FINAL REPORT

Assessment of Antimicrobial Activity
Using a Time-Kill Procedure

Order Number: 551801924

PREPARED FOR
Franke Kindred Canada | 1000 Franke Kindred Road
Midland, Ontario L4R 4K9

Sneha Panchal, M.Sc., RMCCM
Laboratory Director
2/28/2018

EMSL Canada Inc.
2756 Slough Street, Mississauga, ON L4T 1G3
Phone: (289) 997-4602  Fax: (289) 997-4607Web: www.emsl.com
CERTIFICATE OF ANALYSIS

CLIENT: FRANKE KINDRED CANADA

CONTACT: CORY MACEY

PROJECT: ASSESSMENT OF ANTIMICROBIAL ACTIVITY USING ASTM METHOD E2315

PRODUCT: OZONATED TAP WATER

SAMPLE RECEIVED: 02/01/2018

REPORT DATE: 02/28/2018

CHALLENGE BACTERIA:

- Clostridium difficile spores
- Legionella pneumophila

I. EXPERIMENTAL SUMMARY

The testing procedure was designed after discussions between EMSL Canada Inc. and Franke Kindred Canada. The procedure is based on ASTM E2315 method guidelines and conducted on ozonated water samples of concentrations 2.0 ppm to demonstrate its effectiveness at killing Clostridium difficile (ATCC 9689) spores and Legionella pneumophila. The testing was conducted in the Mississauga Microbiology Laboratory.

II. PROCEDURE

The testing was done to determine the effectiveness of ozonated water sample of concentration 2.0 ppm (provided by Cory Macey) at killing Clostridium difficile (ATCC 9689) spores for 20 seconds exposure time and Legionella pneumophila for 5 minutes exposure time.

Culture preparation:

Clostridium difficile spores: A pure culture of Clostridium difficile (ATCC 9689) was streaked on to Healthlink Anaerobic Blood Agar plates and incubated at 35°C for up to 10 days under anaerobic conditions. Following incubation, the surface of agar plate was scraped and spores were harvested. The control spore suspension was adjusted to a concentration of >90%.

Legionella pneumophila: A pure culture of Legionella pneumophila was streaked onto Buffered Charcoal Yeast Extract agar for 48 hours at 35°C. The control suspension of the test microorganism was standardized to a minimum concentration of 1.0 x 10⁶ CFU/mL.
Test and control substances were dispensed in identical volumes to sterile test tubes. Independently, Test and Control substances were inoculated with the test microorganism, mixed and incubated. Control suspensions were immediately plated to represent the concentration present at the start of the test, or time zero.

At the conclusion of each contact time, a volume of the liquid test solution was neutralized. Dilutions of the neutralized test solution were plated on to appropriate agar plates and incubation temperatures to determine the surviving microorganisms at the respective contact times. Reductions of microorganisms were calculated by comparing initial microbial concentrations to surviving microbial concentrations. All tests were performed in duplicates and counts averaged.

Calculations:

Calculations were based on the following:

Percentage reduction = (B-A/B) x 100

Log 10 Reduction = Log (B/A)

Where:

B = Number of viable test microorganisms in the control substance immediately after inoculation

A = Number of viable test microorganisms in the test substance after the contact time

III. EXPERIMENTAL RESULTS

<table>
<thead>
<tr>
<th>Test Microorganism</th>
<th>Test Substance</th>
<th>Contact Time</th>
<th>CFUs/mL</th>
<th>Percent Reduction Compared to Control at Time Zero</th>
<th>Log10 Reduction compared to Control at Time Zero</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Legionella pneumophila</em></td>
<td>CONTROL</td>
<td>Time Zero</td>
<td>2.0E+06</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td><strong>SAMPLE A:</strong> 2.0 PPM</td>
<td>SAMPLE A: 2.0 PPM</td>
<td>5 minutes</td>
<td>&lt;1.00E+01</td>
<td>99.99%</td>
<td>5.3</td>
</tr>
<tr>
<td>Test Microorganism</td>
<td>Test Substance</td>
<td>Contact Time</td>
<td>CFUs/mL</td>
<td>Percent Reduction Compared to Control at Time Zero</td>
<td>Log10 Reduction compared to Control at Time Zero</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------</td>
<td>--------------</td>
<td>---------</td>
<td>--------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>C. difficile spores</td>
<td>CONTROL</td>
<td>Time Zero</td>
<td>3.9E+03</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAMPLE A:</td>
<td>20 seconds</td>
<td>1.4E+03</td>
<td>64.10%</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>2.0 PPM CONC.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### IV. CONCLUSIONS/OBSERVATIONS

Sample A (concentration 2.0 ppm) caused a 99.99% reduction on L.pneumophila upon 5 minutes exposure.

Sneha Panchal, MSc., RMCCM

Laboratory Director

EMSL Canada Inc., Mississauga Laboratory
FINAL REPORT

Assessment of Antimicrobial Activity
Using a Time-Kill Procedure

Order Number: 551713520

PREPARED FOR
Franke Kindred Canada | 1000 Franke Kindred Road
Midland, Ontario L4R 4K9

Sneha Panchal, M.Sc., RMCCM
Microbiology Laboratory Manager
12/6/2017

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2756 Slough Street, Mississauga, ON L4T 1G3
Phone: (289) 997-4602   Fax: (289) 997-4607   Web: www.emsl.com
CERTIFICATE OF ANALYSIS

CLIENT: FRANKE KINDRED CANADA

CONTACT: CORY MACEY

PRODUCT: OZONATED TAP WATER

PROJECT: ASSESSMENT OF ANTIMICROBIAL ACTIVITY USING ASTM METHOD E2315

SAMPLE RECEIVED: 11/16/2017

REPORT DATE: 12/06/2017

CHALLENGE BACTERIA: Clostridium difficile

I. EXPERIMENTAL SUMMARY

The testing procedure was designed after discussions between EMSL Canada Inc. and Franke Kindred Canada. The procedure is based on ASTM E2315 method guidelines and conducted on two ozonated water samples of concentrations 2.0 ppm and 5.0 ppm, to demonstrate its effectiveness at killing Clostridium difficile (ATCC 9689). The testing was conducted in the Mississauga Microbiology Laboratory.

II. PROCEDURE

The testing was done to determine the effectiveness of ozonated water samples of concentrations 2.0 ppm and 5.0 ppm (provided by Cory Macey) at killing Clostridium difficile (ATCC 9689) for 30 seconds and 15 minutes exposure times.

Culture preparation:

A pure culture of Clostridium difficile (ATCC 9689) was streaked on to Healthlink Anaerobic Blood Agar plates and incubated at 35°C for up to 72 hours under anaerobic conditions.

The control suspension of the test microorganism was standardized to a minimum concentration of 1.0 x 10^6 CFU/mL, by dilution in a buffered saline solution.

Test and control substances were dispensed in identical volumes to sterile test tubes. Independently, Test and Control substances were inoculated with the test microorganism, mixed and incubated.

Control suspensions were immediately plated to represent the concentration present at the start of the test, or time zero.

At the conclusion of each contact time, a volume of the liquid test solution was neutralized.
Dilutions of the neutralized test solution were plated on Healthlink Anaerobic Blood Agar plates and incubated at 35°C for up to 72 hours under anaerobic conditions to determine the surviving microorganisms at the respective contact times. Reductions of microorganisms were calculated by comparing initial microbial concentrations to surviving microbial concentrations. All tests were performed in duplicates and counts averaged.

Calculations:

Calculations were based on the following:

Percentage reduction = \( \frac{B-A}{B} \times 100 \)

Log 10 Reduction = \( \log_{10} \left( \frac{B}{A} \right) \)

Where:

\( B = \) Number of viable test microorganisms in the control substance immediately after inoculation

\( A = \) Number of viable test microorganisms in the test substance after the contact time

### III. EXPERIMENTAL RESULTS

<table>
<thead>
<tr>
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<th>Percent Reduction Compared to Control at Time Zero</th>
<th>Log10 Reduction compared to Control at Time Zero</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C. difficile</strong></td>
<td>CONTROL</td>
<td>Time Zero</td>
<td>3.6E+04</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>SAMPLE A: 2.0 PPM CONC.</td>
<td>30 seconds</td>
<td>2.8E+03</td>
<td>92.22%</td>
<td>1.11</td>
<td></td>
</tr>
<tr>
<td>SAMPLE B 5.0 PPM CONC.</td>
<td>30 seconds</td>
<td>1.1E+03</td>
<td>96.94%</td>
<td>1.51</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mins</td>
<td>&lt;1.00E+01</td>
<td>&gt;99.98%</td>
<td>&gt;4.90</td>
</tr>
</tbody>
</table>

EMSL Canada, Inc. 2756 Slough Street Mississauga Phone: (289) 997-4602  Fax: (289) 997-4607
IV. CONCLUSIONS/OBSERVATIONS

Sample B (concentration 5.0 ppm) caused a 99.98% reduction on C.difficile with 15 minutes exposure. Sample B also proved to be more effective for the 30 seconds exposure time compared to Sample A for the same time point.

Sneha Panchal, MSc., RMCCM
Microbiology Lab Manager
EMSL Canada Inc., Mississauga Laboratory