



May 8, 2014

LIQUITECH INCORPORATED  
TORY SCHIRA  
421 EISENHOWER LANE SOUTH  
LOMBARD IL 60148

Re: Description: HEALTH CARE PLUMBING APPLIANCE - COPPER/SILVER ION GENERATOR  
Manufacturer: LIQUITECH INCORPORATED  
Product Name: LIQUITECH IONIZATION SYSTEMS (POE)  
Model Number(s): LC05XLTF, LC05QLTF, LC1XLTF, LC1QLTF, LC2XLTF, LC2QLTF, LC3XLTF, LC3QLTF, LC5XLTF, LC5QLTF, LC7XLTF, LC7QLTF, LC10XLTF, LC10QLTF, XLTC05XLTF, XLTC05QLTF, XLTC1XLTF, XLTC1QLTF, XLTC2XLTF, XLTC2QLTF, XLTC3XLTF, XLTC3QLTF, XLTC5XLTF, XLTC5QLTF, XLTC7XLTF, XLTC7QLTF, XLTC10XLTF AND XLTC10QLTF (POE)  
Product File No: 20140110

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of May 2019.

This approval supersedes the approval issued on August 20, 2009 under product file number 20090214.

This approval is contingent upon compliance with the following stipulation(s):

- This product has undergone sufficient testing to document the product's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturer's published instructions.
- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 267-9787.
- If these approved devices are modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.
- These devices shall not be used as a primary and/or sole means of disinfection.

There are two reasons for this:

- a. The devices have not shown the capability to provide a consistent six log (i.e. 99.9999%) reduction of bacteria; and
- b. The devices have not demonstrated the ability to control protozoans and/or viruses.

These devices must be used in conjunction with accepted disinfection methods as described in NR 809.

- These devices shall not be used as a primary and/or sole means of disinfection.

These devices are approved for the control of the following nine specific bacteria only:

1. Escherichia coli 0157:H7 [99.9999% (6 log reduction)]
  2. Listeria monocytogenes [99.999% (5 log reduction)]
  3. Salmonella typhimuriam [99.999% (5 log reduction)]
  4. Pseudomonas aeruginosa [99.99% (4 log reduction)]
  5. Bacillus anthracis [99.9% (3 log reduction)]
  6. Legionella pneumophila [99.9999% (6 log reduction)]
  7. Acinetobacter baumannii [99.999% (5 log reduction)]
  8. Mycobacterium avium [99.99% (4 log reduction)]
  9. Stenotrophomonas maltophilia [99.9999% (6 log reduction)]
- The residual copper concentration must be  $\geq 0.88$  mg/l and  $< 1.3$  mg/l.

The residual silver concentration must be  $\geq 0.50$   $\mu$ g/l and  $< 100$   $\mu$ g/l.

The residual concentrations of copper and silver must be maintained within the ranges stated above for a minimum of 24 hours, and on a continuous basis, to achieve the bacterial reduction performance specified in this letter.

- These devices must be served by electrical circuits protected by ground fault circuit interrupting (GFCI) outlets.
- If these devices are installed on a water supply system constructed of metallic pipe, then a properly sized electrical bonding jumper must be installed such that the electrical continuity of the path to ground is reestablished.

Based on testing data submitted to and reviewed by the department, this approval recognizes that this plumbing product will reduce the concentration of contaminants as specified on pages 1 through 2 of this letter.

This device was tested under controlled laboratory, or field, conditions. The actual performance of this device for a specific end use installation will vary from the tested conditions based on local factors such as water pressure, water temperature and water chemistry.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter  
Environmental Engineer - Plumbing Product Reviewer  
Department of Safety and Professional Services  
Division of Industry Services  
Bureau of Technical Services  
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