

FAQ: ECO₃ICE

ANTIMICROBIAL ICE PROTECTION



Q: How does EcO3Ice work?

A: EcO3Ice easily connects to the incoming ice machine water line, generating dissolved ozone. The treated water kills microbes and prevents build-up in the ice machine, while ice made from the ozone-treated water effectively keeps clean surfaces in the ice machine, bin, and related objects.

Q: How is the ozone created in the water?

A: With EcO3Ice, a small amount of ozone is created by electrolysis directly in the water as it flows through a cell equipped with electrodes made of patented, long-lasting, boron-doped solid synthetic diamond.

Q: When it's frozen, is the ozone inside or outside of the cube?

A: The ozone is present throughout the ice cube, with a higher concentration in the outermost layer. The actual amount of ozone contained in the ice cube is very small.

Q Does the ozone end up in the customer's beverage? Is it safe?

A: Ozone is FDA-approved as a food and water additive. However, the amount of residual ozone in cubes from EcO3Ice-treated machines is well below levels of detection by the average person and does not have any effect on the taste.

Q: Will the ozone in the ice impart any adverse effect on beverage taste?

A: To the contrary: It's important to note that ozone is recognized to be an effective oxidant used to reduce unpleasant taste and odors in drinking water. The EPA Guidance Manual, *Alternative Disinfectants and Oxidants*, specifies ozone for unpleasant taste and odor removal.

Q: How long does the ozone created remain effective?

A: In the water form, the ozone is active for about 15 minutes. In the ice, ozone is well preserved and dissipates gradually and safely in the ice bin as the ice melts. In practical terms, trace levels of ozone remain effective for the entire period between freezing, storage and transportation, until it is dispensed and served, at which time it dissipates harmlessly.

Q: What happens to ice sitting at the bottom of the ice bin for an extended period of time?

A: The ice gradually melts and the resulting water drains from the bin. The "ice melt" contributes to the ozone's ability to kill microbes and prevent regrowth on bin surfaces, as well as the drain fixture and line.

Q: Does the device work with any size machine or ice bin?

A: EcO3Ice works with any ice cube machine with water flow rates up to 4 liters per minute. Franke has a comprehensive list of compatible ice machines covering the majority of ice cube machines on the market. For those machines with which EcO3Ice is not compatible, Franke is developing new versions that will be available in the near future.

Q: How does operator know when to replace the cartridge?

A: Franke's user-friendly design includes easy-to-understand indicator lights to tell the operator when it's almost time to change and when it's time to change the cartridge. There are also indicators to show that the unit is producing ozone correctly, or that it requires service.

Q: How often will I have to replace the cartridge?

A: The cartridge needs to be renewed, on average, every 6 to 24 months, depending upon several factors including ice machine model, ice-making volume, water quality, water temperature and several other factors. Franke has a cartridge-life projection tool to help estimate cartridge life based on these factors.

Q: Is ozone gas released in an ice machine a possible inhalation hazard?

A: Our NRA award-winning electrolytic method of producing ozone from-water in-water has been optimized for compact spaces. It kills bacteria and other microorganisms within the ice bin, while keeping ozone gas levels safely below OSHA PEL (permissible exposure limits) standards for safety. Alternative ozone technologies, namely "corona discharge," have not been suited to confined spaces and may have presented concerns about workplace safety.

Q: Does the ozone degrade materials like polymers and metals in the machine?

A: Our method of producing ozone from-water in-water gradually releases ozone in a dissolved liquid form within the ice storage bin, thus avoiding high concentrations of ozone gas that can have adverse effects on the ice machine materials.

Q: Does Franke have independent laboratory validation of its efficacy claims?

A: Efficacy of the Franke EcO3Ice device on biofilm has been verified by an independent lab. Results for one type of bacteria—*e. coli*—confirmed that the device achieved a total kill (5-log). Meanwhile, field testing clearly demonstrates dramatic reduction in reappearance and growth of biofilm, yeast and mold colonies