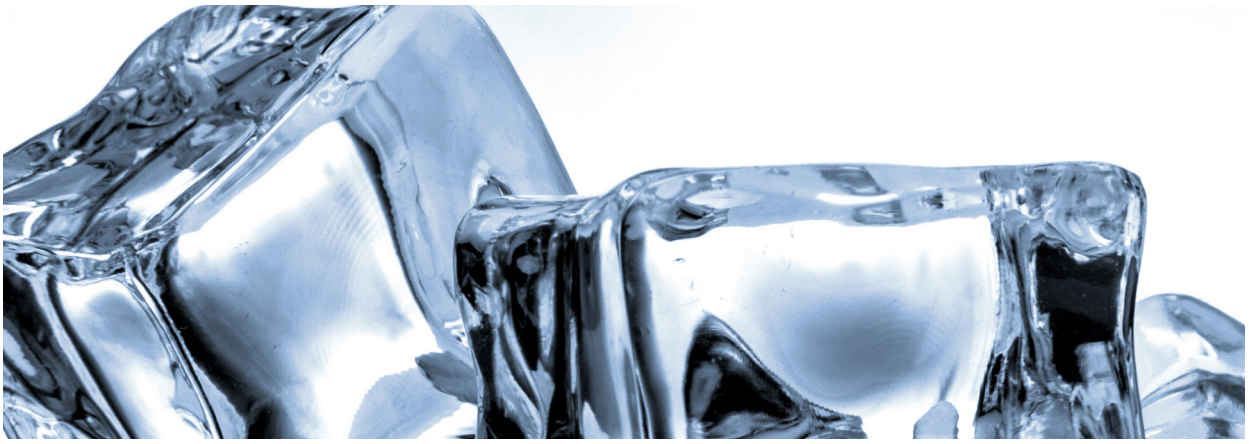
5 COOL STRATEGIES FOR PERFECT ICE

1. GET SMART ON ICE SAFETY.



Ice machine maintenance is often overlooked under the mistaken impression that cold kills harmful pathogens. This is simply not true. Freezing water does not kill bacteria, and research shows certain viruses can survive in ice for long periods of time. As a result, ice machines can be a breeding ground for harmful pathogens, including salmonella, legionella, E. coli, cholera, typhoid fever, hepatitis A and norovirus.

Yeast in the Air Can Lead to Problems

In most cases, outbreaks of ice-borne illnesses are a result of either improper ice machine cleaning, or poor employee ice handling techniques. Most manufacturers recommend cleaning ice machines at least twice a year, but environments heavy in airborne yeast—including kitchens that produce baked goods, sandwich shops, microbreweries and bars or restaurants that serve beer near ice machines—need to clean machines more frequently.

Biofilms Are Tough to Remove

The "slime" found in ice machines actually arises from yeast in the air, and is transferred into the ice machine because they draw in air from the environment around them. Once bacteria gains a foothold in an ice machine, it often creates a biofilm; a disgusting sheath of slime that protects the bacteria against outside invaders—including cleaning agents.

Hands in the Ice is a Major Safety Risk

Poor employee ice-handing that results in the spread of illness usually results from their hands directly touching the ice, either because they are scooping ice from a machine with the cup it will be served in, or they pack or press the ice into the bin with their hands after it has been filled. Employees that fail to wash their hands after using the bathroom have also been known to spread E. coli by contaminating ice.

Don't Put Off Ice Machine Maintenance

Because ice machines aren't cleaned as often as food preparation equipment used daily, foodservice operations tend to forget about them. Because the process can take several hours—including removing all the ice from the bin—it's often put off when the establishment gets busy, or it's saved for the end of shifts and employees simply skip it. In large institutional settings, ice

machines may be purchased, but not added to the facility's maintenance log, which can lead to missed maintenance. (A hospital caused an outbreak of legionnaire's disease in this manner.)

Change Your Ice Machine Water Filters

Finally, one culprit to consider is improperly maintained water filtration systems, which, in some facilities may be installed and then forgotten, when most require a filter change every six months. (In the legionnaire's outbreak in the hospital, the filter had not been changed since installation, and tested positive for the bacteria.)

Safe Handling Best Practices

The bottom line for operators: Properly clean and maintain your ice machine per the manufacturer's instructions, and properly train employees on safe ice handing procedures, including:

1. Washing hands before handling ice
2. Touching only the handle of the ice scoop
3. Never scoop ice directly into the cup or glass it will be served in
4. Store the scoop outside the machine in a clean holder or container
5. Don't return unused ice to the machine
6. Keep the ice machine bin doors closed when ice is not being removed
7. Don't use the ice machine as a refrigerator; i.e. for chilling food or drinks

2. COOL NEW TECHNOLOGIES FOR KEEPING ICE SAFE.

Manufacturers have developed new innovations to address the issue of ice machine safety.

UV Lights

Manufacturer Manitowoc reduces microorganisms with its LuminIce growth inhibitor. The UV light system creates "active air" by recirculating air inside the ice machine food zone over a UV light. The light acts on oxygen, nitrogen and water vapor in the air stream to create photoplasma—a gas that contains ions, free electrons, hydroxyl radicals and ozone deadly to bacteria. This treated air flows over components in the food zone, inhibiting microorganism growth.

Self-Monitoring Machines

Ice machines are entering the digital age with sophisticated self-monitoring features that can, with optional data boards, send key operational data remotely. The Scotsman Prodigy Plus offers an AutoAlert feature that communicates the machine's status with simple, high-visibility lights on the front panel. One-touch head cleaning makes it easy to keep up on maintenance, and an optional Smart-Board indicates key operational data on a screen, or it can be transmitted remotely via an Internet connection.

Ozone-Producing Machines

Ozone rapidly kills virtually all common microorganisms, including bacteria, viruses, fungi, algae, yeast, mold, parasites and other known sources of foodborne illness. It is 3,000 times faster-acting and more effective than chlorine in killing bacteria and viruses and leaves behind no residues, off flavors or tastes, observes the OptiPure water filtration company.

Ice-O-Matic's O_3 Matic antimicrobial ice protection system attaches to the ice machine's incoming water line and produces ozonated water that circulates through the ice-making path, continuously killing microbes and inhibiting their growth.

Antimicrobial Components

Another way ice machine manufacturer's help keep ice free of potential pathogens is with antimicrobial-treated components built right into the machine. Silver- and copper-treated materials, including those infused with Sciessent's Agion antimicrobial, continuously fight bacterial production, producing safer ice and extending machine life.

3. FILTRATION IS KEY FOR GREAT ICE.

The Hard and Soft Side of Filtration

Generally, water breaks down into two main categories: hard and soft. Hard water contains minerals like magnesium, calcium and sulfur acquired from passing through underground rock formations. It is generally thought of as better tasting water, and is often bottled in leading brands like Poland Springs and Evian.

But, ice made from harder water tends to impart more of a flavor on beverages, and the suspended minerals, sediment and other impurities bond with oxygen during the freezing process, forming the cloudy ice effect many higher-end bars, catering services and restaurants are trying to avoid. Soft water usually comes from lakes and rivers and generally has very low mineral content. This kind of water creates ice that is silkier than hard water and forms clearer, denser cubes.

Get Your Water Tested

Water quality can vary greatly by municipality, and even by time of year, significantly impacting the quality of ice produced. Operators are smart to get a comprehensive water quality test conducted by a local water quality specialist to determine exactly what kind of filtration system is required. Common issues that impact ice quality from local water systems include added chlorine and fluorine and contaminants like sand, dirt and dissolved minerals.

Filtration Protects Your Ice Machine

Sediments and chemicals suspended in the water supply can wreak havoc on an ice machine's performance, energy efficiency and lifespan. During the freezing process, dissolved minerals in the water supply are forced out of the solution and accumulate as scale on ice machine components. As a result, ice machine manufacturers recommend a water filtration system to maximize ice production efficiency, energy savings and equipment longevity.

One study by ice machine manufacturers indicated that 70% of ice machine performance issues are directly attributable to the operator's water supply. These result from overall poor water quality in the area or an insufficient water supply that causes slow filling of the machine. So, turn to your local water filtration expert for advice on which filtration system is best for your area's particular water supply.

4. THE QUEST FOR THE PERFECTLY CLEAR CUBE.

In drinks like premium scotches, Manhattans and Negronis that are sipped, preserving the flavor integrity of the drink requires a large, hard cube with reduced surface area and a slow melt. In an environment where perfection is creating a nearly transparent cube "you can read through," nothing gives away the inferior quality of a less-than-premium ice cube like a cloudy center.

Premium Cube Solutions

Short of buying a Clinebell machine like ice sculptors use to create massive, clear blocks of ice, craft cocktail makers can turn to leading manufacturer's for premium ice cube choices.

Ice-O-Matic offers a premium cube they call the Grande, with dimensions twice that of their traditional full cube. With a range of output volumes, establishments should find a size that meets their production needs.

Scotsman offers an undercounter gourmet ice maker—the CU50—with a unique-shaped cube that's clear, slow-melting and odorless. It's 65-pound-per-day output serves many facilities that produce a fair number of premium drink orders.

Kold-Draft is the choice of many craft cocktail makers, because its legendary full cube is 1.25" square on all sides. The company insists it is the only true square cube in the business, and is harder that other cubes due to its "upside-down" horizontal evaporator removing impurities during the freezing process.

Hoshizaki offers many choices for consideration, including their "top hat" ice cube series—models beginning with the letters "AM." Cubes are one-inch high by seventh-eighths wide, and are hard and clear for premium cocktail applications. For shaking and stirring cocktails, some mixologists prefer Hoshizaki's crescent cube found in their KM Edge series, which offers a faster chill with little dilution.

5. FIND YOURSELF A SMART ICE PARTNER.

With all the ice-making options available to food and beverage operators today—and the substantial expense of ice machine purchasing and operation— the smart choice is to bring in an experienced consultant who can help you make the right business decisions.

It's essential to get a water quality test upfront, from local experts like WaterTek, which serves the Twin Cities area and has experience in the water conditions found in the local topographies. Your local water expert can alert you to changes in water table conditions that can impact your ice-making process.

Once your water is accessed professionally and you know what you're dealing with, your equipment outfitter like Horizon can help you sort through the myriad technologies in the marketplace to make the right choice. With experience in every aspect of food and beverage operations, Horizon can help you avoid the costly mistakes that have plagued operators over the years who decided to wing it with their ice systems.

In any case, the way to avoid many problems is simply to get your ice machine fitted with the proper filtration up front, and maintain and clean your ice machine according to manufacturer's recommendations. Be sure to use the types of cleaners recommended in your operation manual, as sensitive metals used on the freezing element can be damaged by certain caustic cleaning agents.

If you decide to forgo the cleaning process yourself, professional field service technicians like those at Horizon can work with you to develop a planned maintenance program based on your water quality, ice production volume and operational needs. Scheduling maintenance during non-peak hours will help maintain your workflow, and hiring a skilled technician shifts the burden from your overworked staff to a professional who will do the kind of thorough job that will ensure safety, efficiency and longevity in your ice-making system. ■

About Us

Horizon outfits food pros with the gear they need to create the world's most incredible food. Our experts provide personal consultation on every aspect of the food and beverage equipment in your operation. From the purchase of a single fry pan, to the creation of an entire cooking suite, we will design, equip, install, service and provide the parts to make your operation a success. In the Minnesota area, our fleet of factory-trained service professionals are on call for you 24/7/365, and will custom-design a planned maintenance program to optimize your equipment investment.

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