



MAGAZINE OF THE YEAR

# FOODSERVICE CONSULTANT



*The Lady  
goes green*

HOW LIBERTY ISLAND HAS  
EMBRACED SUSTAINABILITY

● **SAN FRANCISCO 49ERS** New game-day offering at the Levi's Stadium ● **SOFT SELL** The fine art of suggestive selling ● **FEEDING LAS VEGAS** Dining out in Sin City ● **FLAME ON** Fire suppression evolves



90



"I recall my mother shaking me by the shoulders and saying, 'You will never work for anyone else.' That had a big effect on me."

Selim Bassoul,  
The Middleby  
Corporation

48

NEWS & VIEWS  
3 WELCOME

**8 AROUND THE WORLD**  
The latest global construction projects

**10 THE INTELLIGENCE: THE AMERICAS**  
News, insight, opinion, reviews and innovation from the industry, including the container concept for setting up a foodservice operation. Kristin Sedej FCSI reveals what being a member means to her. Our anonymous chef takes us backstage in a professional kitchen and we look at the future of restaurant technology and data.

FEATURES

**29 COLUMNS**  
Ruby Parker Puckett FFCSI and John Reed

**32 SHARED OUT**  
Bill Main FCSI on why shareholder activists are setting their sights on restaurant chains

**36 THE BIG PICTURE**

**38 DUCKS AWAY**  
Heston Blumenthal on his latest venture - taking the Fat Duck experience across the world to Australia

**44 ABOUT ALBERT**  
Culinary legend Albert Roux OBE discusses his 60-year career, in the course of which he has won three Michelin stars

**48 TITANS OF INDUSTRY**  
Selim Bassoul, chairman and chief executive of The Middleby Corporation

**56 FCSI INTERVIEW**  
Char Norton FFCSI

**60 LADY LIBERTY GOES GREEN**  
Reducing waste at America's iconic landmark

**66 SKY-HIGH STANDARDS**  
Airlines are making efforts to revive their in-flight food offering

**71 AFTERNOON TEA ANYONE?**  
Liz Campbell examines its appeal worldwide

**75 STEAK HOLDER**  
Charlie Palmer talks about future plans

**81 LAS VEGAS**  
The changing food scene

**86 ROYAL RETIREMENT**  
Catering to senior tastes

**90 HIGH SCORE**  
Putting the San Francisco 49ers stadium on top

**98 UNIVERSITY OF CHICAGO**  
Foodservice update

**101 IDEATION**  
Creativity with clients

**107 RIVER VIEW**  
Major refurbishment at Sheraton Station Square, Pittsburgh

**111 HOTEL PALOMAR BAR**  
Transformed with a little consultant magic

INNOVATION

**117 UNDER FIRE**  
Fire prevention equipment

**122 SWEATING THE SMALL STUFF**  
Put smaller kitchen appliances in their place

**127 ICE HYGIENE**  
Is UV light the answer?

**131 SQUARE ROOT**  
The payment method of the future? >

COMMENTS



162





# SHINE A LITTLE LIGHT

UV lighting is becoming the preferred solution for operators looking to prevent ice machine contamination, says industry veteran Mike Walrath

Commercial foodservice ice machines are magnets for mould and bacteria. Mould leaves black flakes in or on the ice, affecting its appearance, taste and smell. And, along with bacteria, it is a potential health risk to consumers. Health code inspectors have become increasingly concerned, during equipment inspections, with ice machine cleanliness, and particularly mould accumulations.

The main cause of mould and bacteria in commercial ice machines is frequent opening of the unit's doors. Microbe-laden ambient air that's humid from kitchen cooking steam or wash downs enters through the opened doors, eventually accumulating into mould growth and thriving in the perfect environment of wet and dark ice machines interiors. On a more basic level, employees with dirty hands can also introduce >

bacteria to the ice machine.

So foodservice consultants should find a solution before the ice machine operates and develops a mould problem. But solutions are either costly periodic maintenance cleanings by refrigeration service contractors or preventative measures such as ultraviolet lamps that disinfect surfaces inside ice machines. Conventional ice machines can need cleaning as frequently as every month depending on the source water minerals and the environment.

For years, it was commonly believed that ice machine microbial contamination was mainly due to the source water. Source water contains minerals that can foul the taste and smell of ice, and so sump tabs, regular flushing and filters can control scale accumulation. However, mould is produced from the ambient environment and airborne microorganisms.

Ice machines located in kitchens where yeast-based baked bread or micro-brewing processes distribute airborne baking and brewing yeast into the air present a particularly tough environment for ice machines to operate in.

Mould is almost a certainty in these environments when airborne yeast is present and near ice machines.

One market-leading US sandwich chain that bakes bread daily is now offering franchisees UV light kit options on new and existing ice machine equipment. And a US-based Top 10 quick serve restaurant (QSR) chain is recommending UV light kits for ice machines to franchisees.

These foodservice franchisors are proactive with mould, because ice machine biological contamination is now recognised as a pervasive problem in the industry. Evaporator coils are the most common contamination point, but other ice machine components also provide suitable mould growth environments, such as the service door rubber gasket, the collection bin, the interior walls, the drip curtain, and pump and drain hose interiors.

Ice chutes, which are open to airborne contaminants, acquire a unique slimy biological accumulation that's different from what grows inside the ice machine's enclosed parts.

Therefore the foodservice industry is now borrowing the heating and ventilation industry's preferred mould remedy of UV light disinfection, which has grown exponentially in the past 10 years. When installed on air conditioning coils, UV light systems kill surface mould that can lead to corrosion and coil heat transfer inefficiencies. UV lamps also kill mould before it appears on HVAC system interior surfaces. For example, hospitals have been installing UV lights to kill airborne microbes during the HVAC airstream re-circulation process in a quest to prevent hospital-acquired infections (HAI).

**W**ith proven results in HVAC systems, manufacturers have recently designed UV light kits that specifically target ice machines and their unique microbial challenges. For example, ice machine UV light systems offer "tight-fit" designs and strategies such as dual lamps energised from the same power source to provide UV disinfection to the ice bin as well as the ice production area.

The lamp and its quick-connect cable receptacle are less than eight inches long and designed to fit nearly every ice machine model over 500-lbs/hr. and most configurations under that capacity.

## Ice machine UV light systems offer "tight fit" designs and strategies such as dual lamps

Larger ice machines can accommodate longer UV light systems with 32-inch-long, polytetrafluoroethylene (PTFE)-coated lamps originally designed for large HVAC air handling units.

UV technology has yet to be designed for ice chippers and flaker applications, but solutions are expected in the future.

UV light systems are typically positioned inside the ice machine's evaporator coil area to provide a continuous, chemical-free disinfection source of UV-C wavelengths.

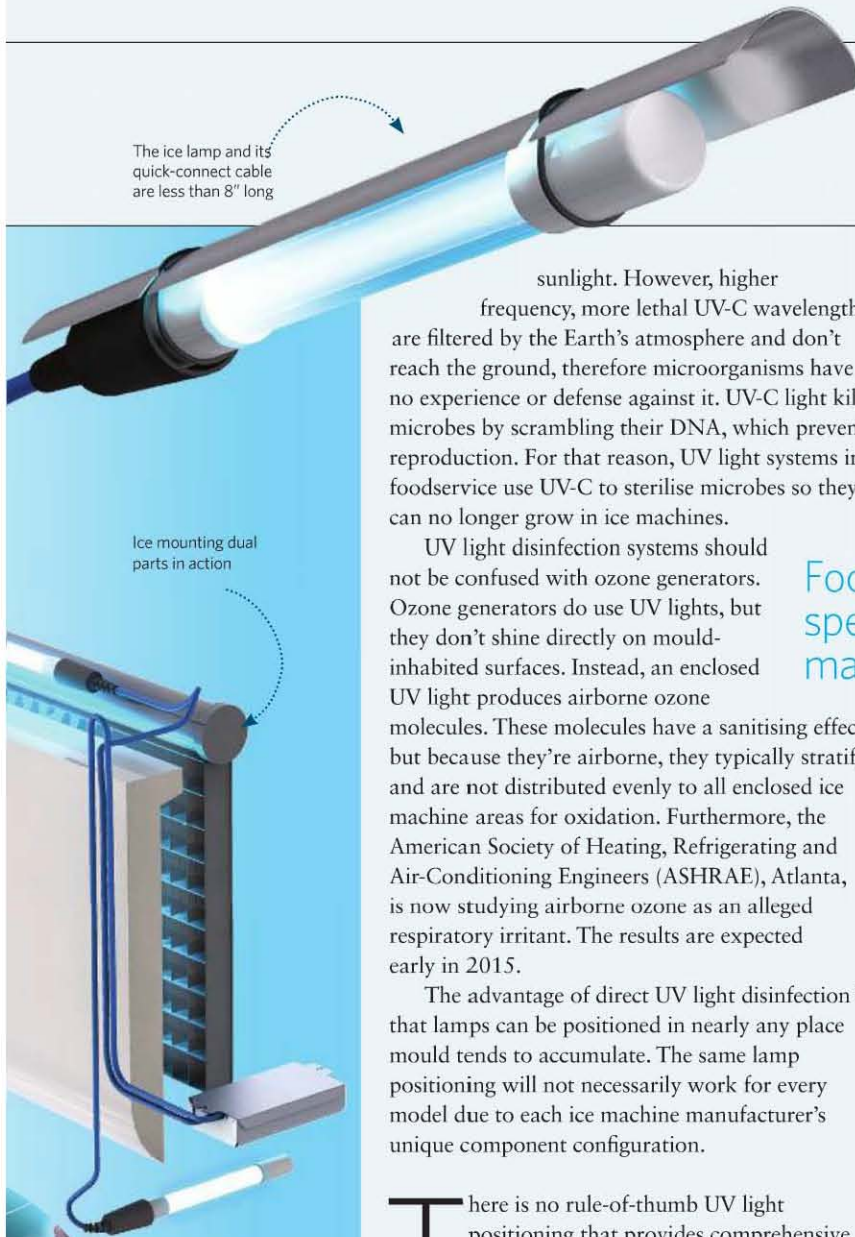
UV-A (that is used for black lights and is harmless), UV-B (used in tanning salons and causes sunburn) and UV-C wavelengths are all present in





The ice lamp and its quick-connect cable are less than 8" long

Ice mounting dual parts in action



### Preventing bacterial growth

Inside an ice machine, micro-contaminants such as fungus and bacteria can grow at an incredibly quick rate. There are several species of bacteria that can expand at geometric growth rates and are capable of doubling in population size every 10 minutes.

sunlight. However, higher frequency, more lethal UV-C wavelengths are filtered by the Earth's atmosphere and don't reach the ground, therefore microorganisms have no experience or defense against it. UV-C light kills microbes by scrambling their DNA, which prevents reproduction. For that reason, UV light systems in foodservice use UV-C to sterilise microbes so they can no longer grow in ice machines.

UV light disinfection systems should not be confused with ozone generators. Ozone generators do use UV lights, but they don't shine directly on mould-inhabited surfaces. Instead, an enclosed UV light produces airborne ozone molecules. These molecules have a sanitising effect, but because they're airborne, they typically stratify and are not distributed evenly to all enclosed ice machine areas for oxidation. Furthermore, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), Atlanta, is now studying airborne ozone as an alleged respiratory irritant. The results are expected early in 2015.

The advantage of direct UV light disinfection is that lamps can be positioned in nearly any place mould tends to accumulate. The same lamp positioning will not necessarily work for every model due to each ice machine manufacturer's unique component configuration.

There is no rule-of-thumb UV light positioning that provides comprehensive coverage for every ice machine model on the market. Positioning and the required number of lamps will depend on the size of the machine, the number of evaporator coils it uses and the extent of anticipated or historical mould contamination. A typical lamp placement is above the evaporator coil. Surrounding areas such as walls and gaskets will most likely get ample UV light reflected from an evaporator coil positioning. If not, systems with multiple lamps can be connected via quick-connect cables to the same power supply, so simultaneous multiple areas can be disinfected.

Direct exposure of UV light can damage both eyes and skin. Therefore, any enclosed ice

machine area using a UV lamp, whether it's the evaporator coil area or the ice bin, must have a door interlock switch that deactivates the system when opening the door.

The UV light system power supply can be easily hard-wired to the ice machine's line voltage and inline before the control package. It can also be specified with a grounded plug for use with any nearby electrical outlet.

## Foodservice consultants that specify UV light kits for ice machines will save clients costs

Once the UV light system is mounted, it should run continuously and not cycle on and off. UV light systems are designed to run 24/7 with the exception of door openings. The only maintenance required is a lamp replacement every one to two years.

UV light does not compromise the structural integrity or chemical composition of internal ice machine plastics. However, a UV lamp may discolour some plastics, therefore it's a good practice to adhere vinyl blocking tape (typically included in a UV light system kit) on any plastic surfaces within two inches of the lamp.

Foodservice consultants that specify UV light kits for ice machines will also save their clients maintenance costs in the long run. A typical ice machine service call cleaning ranges from \$200 to \$300 and machines often require several cleanings every year. A UV light costs less than \$300, therefore the end-user's return-on investment is quick.

Most importantly however, UV lights will proactively prevent potential ice machine mould accumulation that could affect a client's quality control or make their patron's sick. ■



Mike Walrath is a 15-year HVAC industry veteran and the sales engineer for the commercial products division of Fresh-Aire UV, a division of Triatomic Environmental Inc, Jupiter, Florida. Fresh-Aire UV is an international manufacturer of UV systems for all types of HVAC, refrigeration ice machine systems. Its premier ice machine product is the award-winning ICE-UV.