



Oregon Hockey Rink Bacteria and Odor Decontamination: Case Study

Powerful efficacy with low toxicity. *PureX* chlorine dioxide from ORIN Technologies LLC.

The Challenge

Outbreaks of skin infections among athletes engaged in sports activities is an emerging health issue. The methicillin-resistant *Staphylococcus aureus* (MRSA) have recently garnered much of the attention in both the popular media and among health care professionals. While the general population is susceptible to MRSA outbreaks, individuals engaged in athletic events in which the participants are in close contact or share equipment may be at additional risk.

ORIN Technologies research partner worked with the Oregon Hockey Rink in Oregon, WI; they set out to reduce bacteria levels on arena and player equipment. Treatment consisted of wetting suspected contaminated surfaces with *PureX* chlorine dioxide ClO₂ and air drying only, followed by an overnight gas treatment of ClO₂. The facility was ready for use after being aired out. Swabs of tested surfaces were taken before and after treatment, counting bacteria as Colony Forming Units. The following pages report the results.

Results

Colony Forming Units (CFU)—number of individual colonies present in a sample

	Pre-Treatment	Post-Treatment	Percent Reduction
Upper Air Outtake	300	0	100
Upper Locker 5V	168,000	0	100
Locker Room 3-Box	7,600	0	100
Sink	261,000	0	100
Outside Intake	123,000	0	99
Skate Room 12	3,600	0	100
Kitchen Screen	3,200	660	79
Rental Bay	18,000	0	100
Shin Pad	382,000	50,000	87
Goalie Helmet	500,000	2,900	99
Total	1,466,700	53,560	96

*A zero value indicates that the results were below detection limits





Summary

An efficient **PureX** chlorine dioxide treatment effectively reduced bacteria levels associated with athletic equipment and arena related functions. Total reduction exceeded 96 percent. In addition, use of treatment is safe for food related surfaces such as kitchens and venues. There are no residual chemicals left behind on treated surfaces.

