

OCTOBER
NOVEMBER
2020

INTEGRAL SURFACE PROTECTION PROGRAM EVALUATION

BACKGROUND:

Cleaning and disinfecting surfaces can remove/kill pathogens on surfaces, but studies have shown that more than half of the time surfaces are not adequately cleaned or are re-contaminated within minutes. A durable or persistent antimicrobial bonded to a facility's surfaces has the potential to reduce microbial load and facilitate better cleaning and sanitizing. A lower bacterial load can reduce staff and guest's risk of cross-contamination and acquired infections.

BEST WESTERN PLUS SAWRIDGE SUITES:

Is a 151-suite hotel in Fort McMurray, Alberta. They cater to both short- and long-term stays. The hotel is known for their attention to detail, their updated common areas and their sizable suites.

Best Western Plus Sawridge Suites has taken every step possible to ensure the safety of their staff and guests, including housekeepers following new, deeper cleaning protocols, a second housekeeper coming in to do disinfection (using Oxivir, the highest rated disinfectant by Health Canada) and having staff members doing continual disinfection in all common areas.

In the summer of 2020 Paul Jones, the GM of the BW Sawridge, began discussing a new program with Integral Services Group, the developers of the Integral Surface Protection Program, utilizing AEGIS, by Microban. In September, Paul engaged with Integral to do a hotel-wide application of the program.

OBJECTIVE:

Evaluate the ability of the AEGIS durable antimicrobial, across the hotel, to reduce the growth of microorganisms on treated surfaces as an adjunct to existing cleaning and disinfecting protocols.

METHOD:

The study was performed at the hotel facility at 410 TaigaNova in Fort McMurray, AB October 2nd through October 5th, 2020.

AEGIS Microbe Shield was applied using state-of-the-art Victory Electrostatic Sprayers, at their lowest setting. All touch surfaces at the facility received the application, including all surfaces in guest rooms, the lobby, the restaurant (front and back-of-house), the fitness and business centres and staff areas. These surfaces were tested for presence of microbial growth after a full cleaning, but prior to the application of AEGIS, and then again thirty days post-application (October 8th). Consistent test sites were identified and tested using a Hygiena ATP meter.

MEASURE:

SystemSURE Plus ATP hygiene monitoring system was used to measure cleanliness of surfaces. The Hygiena system was set with a Pass and Fail limits of 60 and 100 respectively. Any score of 60 RLU or less is a Pass. Scores from 61 to 100 RLU are a Caution. Any score greater than 100 RLU is a Fail. These are the standards set out in the Integral Surface Protection Program for Educational Facilities.



RAW DATA:

Location

Room #230

	Pre-Application baseline October 5 th	Post-Application November 4 th	% Reduction
Entry Handle	877	2	99.8
Entry Light Switch	173	31	82.1
Fridge Handle	446	20	96.2
Bathroom Counter	243	10	95.9
Toilet Buttons	263	8	97.0
Bedroom Remote	2,024	27	98.7
Main Phone	271	16	94.1
TV Tray Table	296	32	95.6
Kitchen Counter	141	14	90.1

Room #233

Entry Handle	565	14	97.6
Entry Light Switch	504	0	100
Fridge Handle	665	12	98.2
Bathroom Counter	99	10	89.9
Shower Handle	236	6	97.5
Toilet Buttons	73	12	83.6
Bedroom Remote	1,234	4	99.7
Main Phone	211	5	97.7
TV Table Tray	1,331	0	100
Kitchen Counter	184	14	92.4

Common Area

Reception Counter	272	9	96.7
ATM Keypad	88	8	91.0

Total Reduction Across Facility : 97.3%

DATA SUMMARY:

	Baseline	Post-AEGIS Application November 5 th
# Sites Pass	0	21
% Sites Pass	0%	100%
# Sites Caution	3	0
% Sites Caution	14%	0%
# Sites Fail	21	0
% Sites Fail	100%	0%

DISCUSSION:

Baseline measure on all surfaces was above the ISPP limits for 'Pass'. These results were seen despite full facility cleaning and disinfection, just hours before. This reinforces that 'clean' is not necessarily disinfected. For disinfection it is recognized that the right product, right concentration, right dwell time and correct application are all required for optimal effect and even optimal effect is not perfect. It is this relatively long list of variables which conspire to challenge the effectiveness of existing cleaning and disinfection protocols, everywhere.

Complicating the task is the ability of bacteria to form a biofilm. This is essentially a colony of bacteria that have adhered to the surface and created a barrier that is extremely resistant to chemical treatments. In fact, this biofilm is often composed of multiple strains of bacteria that are co-operating for their mutual survival. The AEGIS Microbe Shield does not utilize chemicals, instead physically punching through existing biofilms and preventing the formation of new colonies.

The simple addition of the AEGIS Microbe Shield applied via a spray-on system was shown to have a dramatic impact on the measurable growth of microbes on treated surfaces. It was demonstrated that 100% of sites exhibited either a pass or caution result only weeks after the initial application.

CONCLUSION:

The addition of the AEGIS Microbe Shield can be seen as a valuable addition to all cleaning and disinfection efforts in a hotel setting, as measured by the ability to reduce the growth of microbes on treated vs untreated surfaces.