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TEST: To assess the antimicrobial properties of Touch-Guard Doorplate samples

Report prepared for: Metatec Environmental Ltd
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To assess the antimicrobial properties of Touch-Guard Doorplate samples coated with Bactiguard by challenging the samples with *MRSA* and comparing the death rate over a period of time.

Samples Touchplate Samples

The Touch-guard Doorplate samples were prepared and provided by Metatec Environmental Ltd.

Lab Number	Samples
41188	ABS Touch-Guard - Control
41189	ABS Touch-Guard + Bactiguard Plus
41190	ABS Touch-Guard + Bactiguard

Method

The samples were challenged with the diluted overnight broth cultures of *MRSA* at the concentration stated below.

Drops of the bacterial suspension, 0.1 ml, were pipetted onto 2.0 cm² sections of the samples. The samples were kept at room temperature throughout the trial. At the required times of 0, 1, 2, 5, 10, 30 minutes and 1, 2, 3, 4, 5, 6 hours, the samples with the bacterial suspension were placed into 10 ml Phosphate Buffered Solution with 0.5% Tween and shaken gently to release the bacteria into the solution. The numbers of remaining *MRSA* in the elution were enumerated using a spiral plater with Standard Plate Count Agar. Incubation was at 30 ± 1°C for 24 ± 2 hours and the total number of colonies was counted and calculated. The results from the samples treated with Bactiguard and Bactiguard plus were compares with the ABS Touch-Guard control.

Organism

MRSA NCTC 33591 1.2 x 10⁶ cfu/ml



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Results

Numbers of MRSA, cfu/ml, remaining in the suspension after contact with the Touch-Guard Doorplate samples

Time			
Lab number	41188	41189	41190
0 mins (Original suspension)	12190	<2000	<2000
1 min	12190	<2000	<2000
2 mins	12190	<2000	<2000
5 mins	20320	<2000	<2000
10 mins	22350	<2000	<2000
30 mins	24390	<2000	<2000
1 hour	24390	<2000	<2000
2 hours	24390	<2000	<2000
3 hours	26420	<2000	<2000
4 hours	65040	<2000	<2000
5 hours	65040	<2000	<2000
6 hours	65040	<2000	<2000

Cfu = colony forming units NB:< = less than, these were not detected on the plate at this dilution

Conclusion

Two Touch-guard Doorplate samples with Bactiguard and Bactiguard + were tested against MRSA (NCTC strain number 33591) to demonstrate the antimicrobial properties of Bactiguard. A control Touchplate was supplied without Bactiguard. The control plate showed microbial growth, as demonstrated by the graph. Both plates containing Bactiguard showed consistent growth of less than 2000cfu/ml.

