Testing of an Air Treatment Machine based on the methodology of NF T 72-281

Client Details:	Eco-Mist Biotechnics Ltd, Unit A2, Mainline Ind Est Milnthorpe
Client Contact Name:	Eric Warren
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Date Of Report:	14/10/18
MelBec Reference Number:	7784
No. of samples:	1

Sample Details:

Name of Product:	Toucan
Batch Number:	-
Manufacturer / Supplier:	Eco-mist
Product Storage conditions:	Ambient in the dark
Appearance of the Product (as supplied):	-
Active Substance and concentration:	-
Product Dilutions/Concentrations and Diluent:	Ready to Use

Date Product Received: 10/10/18 **Date Tested: 10/10/18**

Experimental Conditions:

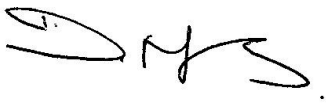
Interfering Substance:	Not applicable
Test Temperature:	20˚C
Contact Time:	One cycle of the machine
Test Organisms:	*Pseudomonas aeruginosa* ATCC 15442, *Escherichia coli* ATCC 10536, *Staphylococcus aureus* ATCC 6538, *Enterococcus hirae* ATCC 10541 *Bacillus subtilis* spores NCTC 10400
Incubation Temperature:	36˚C
Neutraliser:	N1 Broth (5ml)

Conclusion:

There was no recovery of the vegetative cells from the discs after one cycle of the machine with the test product.

The spores gave a mean reduction of 4 lg after one cycle of the machine with the test product.

Testing carried out by:	Report authorised by:
Danika Weatherburn	Dawn Mellors
Laboratory Manager	Technical Director



Test Results

Organism	N_c (Control) cfu/test surface	N_d (Test) cfu / test surface
Ps. aeruginosa		
Replicate 1	0,0 neat	46,37 -5
Replicate 2	0,0 neat	27,35 -5
Replicate 3	0,0 neat	217, 206 -4
Mean	< 5.00×10^0 < 0.7 lg	1.56×10^7 7.19 lg
St. aureus		
Replicate 1	0,0 neat	29, 44 -6
Replicate 2	0,0 neat	27, 26 -6
Replicate 3	0,0 neat	42, 33 -6
Mean	< 5.00×10^0 < 0.7 lg	1.68×10^8 8.23 lg
E.coli		
Replicate 1	0,0 neat	45, 36 -5
Replicate 2	0,0 neat	48, 51 -5
Replicate 3	0,0 neat	43, 31 -5
Mean	< 5.00×10^0 < 0.7 lg	2.12×10^7 7.33 lg
Enterococcus hirae		
Replicate 1	0,0 neat	160, 166 -5
Replicate 2	0,0 neat	201, 201 -5
Replicate 3	0,0 neat	246, 274 -5
Mean	< 5.00×10^0 < 0.7 lg	1.04×10^8 8.02 lg
Bacillus subtilis *spores*		
Replicate 1	71, 63 neat	41,76 -4
Replicate 2	103, 97 neat	59,43 -4
Replicate 3	1, 7 neat	63,60 -4
Mean	2.85×10^2 2.45 lg	2.85×10^6 6.45 lg

Organism	Mean lgNc	Mean lgNd	Log Reduction
Ps. aeruginosa	7.19	<0.7	>6.49
St. aureus	8.23	<0.7	>7.53
E.coli	7.33	<0.7	>6.63
Enterococcus hirae	8.02	<0.7	>7.32
Bacillus subtilis spores	6.45	2.45	4.00

	Validation cfu/test surface	
	Control	**Test**
Ps. aeruginosa		
Replicate 1	1.30×10^7	2.15×10^7
Replicate 2	2.01×10^7	2.60×10^7
St. aureus		
Replicate 1	1.56×10^6	1.39×10^6
Replicate 2	1.63×10^6	1.51×10^6
E.coli		
Replicate 1	7.65×10^5	7.80×10^5
Replicate 2	8.65×10^5	8.65×10^5
Enterococcus hirae		
Replicate 1	6.2×10^5	8.25×10^5
Replicate 2	7.95×10^5	6.45×10^5
Bacillus subtilis spores		
Replicate 1	1.35×10^6	1.45×10^6
Replicate 2	2.02×10^6	1.78×10^6