

TEST REPORT

Number: HKGH02504466

Date: Oct 16, 2019

Submitted sample said to be :
Item Name : **Germ Shield**
Buyer : TAO Clean
Manufacturer :
Model # : BA-0401
Country of Origin : China
PO# : 30741



Conclusion:

The submitted sample was tested under the following requirements requested by the applicant, subject to the information stated in the remark and attached page(s) for details :

<u>Requirement</u>	<u>Result</u>
(1) Toothbrush UV sterilizer performance verification	Pass
- <i>Staphylococcus aureus</i> (ATCC 6538)	
- <i>Enterococcus hirae</i> (ATCC 10541)	
- <i>Pseudomonas aeruginosa</i> (ATCC 9027)	

For and on behalf of :
Intertek Testing Services HK Ltd.

Cindy I.K. Chan
Vice President



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(1) Toothbrush UV sterilizer performance verification

Culture used: *Staphylococcus aureus* (ATCC 6538)
Enterococcus hirae (ATCC 10541)
Pseudomonas aeruginosa (ATCC 9027)

UV exposure time: 4 minutes

Medium used: Nutrient Agar

Rinsing solution / diluent Phosphate Buffered Saline

- Procedure:
1. Adjust known amount of bacteria suspension at around $\sim 10^8$ CFU/mL.
 2. Add the 0.01mL culture suspension ($\sim 10^6$ CFU/mL) evenly distributed onto the cover lips stuck on the samples (one as control and the other one as tested sample) and repeat the tests for 3 times each.
 3. Place the control product into 5mL buffer saline for rinsing. Then perform pour plating with serial dilution as a initial count.
 4. Another one tested product place into UV light sanitizer box and turn on the UV light for 4 mins for sanitizer.
 5. After the process, put it out and place into 5mL buffer solution for rinsing. Then perform pour plating as final count.
 6. Incubate all plates at 37°C for 48 hours.
 7. Perform the above steps with another bacteria.
 8. Count and plates and calculate the percentage reduction:

$$\% \text{ Reduction} = [1 - 10^{-(\text{Log Initial Count} - \text{Log Final Count})}] \times 100\%$$



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Result:

Tested organism: *Staphylococcus aureus*

	Product initial count	Product after UV sanitation count	% Reduction	Log Reduction	Limit	Conclusion
Trail 1	2.0 x10 ⁶	25	> 99.9%	4.9	≥ 3 log	Pass
Trail 2	1.9 x10 ⁶	155	> 99.9%	4.1	≥ 3 log	Pass
Trail 3	1.9 x10 ⁶	115	> 99.9%	4.2	≥ 3 log	Pass

Tested organism: *Enterococcus hirae*

	Product initial count	Product after UV sanitation count	% Reduction	Log Reduction	Limit	Conclusion
Trail 1	1.8 x10 ⁶	<5	> 99.9%	5.6	≥ 3 log	Pass
Trail 2	1.7 x10 ⁶	<5	> 99.9%	5.5	≥ 3 log	Pass
Trail 3	2.5 x10 ⁶	<5	> 99.9%	5.7	≥ 3 log	Pass

Tested organism: *Pseudomonas aeruginosa*

	Product initial count	Product after UV sanitation count	% Reduction	Log Reduction	Limit	Conclusion
Trail 1	1.7 x10 ⁶	<5	> 99.9%	5.5	≥ 3 log	Pass
Trail 2	1.8 x10 ⁶	<5	> 99.9%	5.6	≥ 3 log	Pass
Trail 3	1.9 x10 ⁶	<5	> 99.9%	5.6	≥ 3 log	Pass

Sample received condition: sample in closed plastic bag.

Date sample received : Sep 04 & Sep 16, 2019

Testing period : Sep 16, 2019 to Sep 27, 2019

End of report

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