TEST REPORT

Applicant: MID OCEAN BRANDS B.V.
7/F KINGS TOWER
111 KING LAM STREET
CHEUNG SHA WAN
KLN

Attn: JOYCE WONG/DEREK HUI

Number: HKGH03078338

Date: Dec 20, 2023

Sample and Information provided by customer :
Item Name : **Antibacterial stylus ballpen**
Item No. : **MO6153**
Quantity : 15 pieces
Packaging Provided : No
Vendor : 104901
Country of Origin : China

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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 :

	Requirement	Result
(1)	ISO 22196:2011 - Measurement of antibacterial activity on plastics and other non-porous surfaces	See details enclosed

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Decision Rule(s):
When a statement of conformity to a specification or standard is provided on test report, the decision rule shall be applied. For details, please refer to Intertek's "Decision Rule Document" and is available on Intertek's website. https://intertekhk.grd.by/decision-rule-doc..
If decision rule already inhered in the requested specification or standard, Intertek's "Decision Rule Document" is not applicable and indication of "∞" was shown as above table.

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

Dorothy M.Y. Lau
Vice President

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(1) Measurement of antibacterial activity on plastics and other non-porous surfaces

Test Standard : International Standard ISO 22196:2011.

Test culture:	*Escherichia coli* (ATCC 8739) – $2.7x10^5$ CFU/mL *Staphylococcus aureus* (ATCC 6538P) - $4.1x10^5$ CFU/mL
Test specimen:	50 mm x 50 mm flat square of submitted sample 50 mm x 50 mm flat square of untreated sample as control
Neutralizing solution:	D/E neutralizing broth
Contact time / temperature:	24 hours / 35°C
Agar medium:	Plate Count Agar
Incubation period / temperature of agar:	48 hours / 35°C
Test condition:	0.4 mL bacterial inoculum was added onto one surface of the test specimen sample

Result :

Test microorganism	U_o **Criteria: $3.7 \leq U_o \leq 4.4$**	U_t **Criteria: $U_t \geq 1.8$**	A_t	Log R	% R	Comment*
Escherichia coli	3.75	5.87	0	5.87	99.999	Significant
Staphylococcus aureus	3.86	4.66	0	4.66	99.99	Significant

Remark : U_o = Log (bacteria recovered from untreated specimen in CFU/cm^2) immediately after inoculation
U_t = Log (bacteria recovered from untreated specimen in CFU/cm^2) after 24 hours incubation
A_t = Log (bacteria recovered from treated specimen in CFU/cm^2) after 24 hours incubation
R = Log reduction value (U_t - A_t)

Reference Rating*:	%R	Antibacterial activity
	≤90%	Not acceptable
	>90 - <99%	Insignificant
	≥99%	Significant

Sample received condition: Samples in closed plastic bags.

Date sample received : Dec 06, 2023
Testing period : Dec 11, 2023 to Dec 19, 2023

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End of report

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