


SPONSOR	CROMOLOGY ITALIA		
	Via IV Novembre, 4		
	55016 Porcari (LU)		
	ITALY		
TEST METHOD	ISO 22196 - Measurement of antibacterial activity on plastics and other non-porous surfaces		
TEST ITEM			
PRODUCT NAME	DUCOTONE SANI TECH OPACO		
MATRIX OF THE PRODUCT	Biocides and Antimicrobials		
ACTIVE INGREDIENT	Not Provided	CONCENTRATION	Not Provided
BATCH	PL0322	CODE	DUC045396
MANUFACTURING DATE	31/07/2020	EXPIRY DATE	31/07/2022
STABILITY	2 years		
MATERIAL ITEM ALIQUOT	LV-MAT-FOV7-20-239-0C35:a		
REFERENCE ITEM			
NAME	DUCOTONE SANI TECH OPACO NON TRATTATI		
MATERIAL ITEM ALIQUOT	LV-MAT-FOV7-20-239-0C36:a		
PARCEL REGISTRATION N.	IP-LV-2020217-ADF	RECEIVING DATE	04-Aug-2020
ANALYSIS STARTING DATE	September 17 th , 2020	ANALYSIS ENDING DATE	September 19 th , 2020
EXPERIMENTAL CONDITIONS			
TEST STRAINS	<i>Staphylococcus aureus</i> <i>Escherichia coli</i>	ATCC 6538P ATCC 8739	
CONTACT TIME	24 hours	INOCULUM VOLUME	0,4 ml
SPECIMENS SIZE	25 cm ²	COVER FILM SIZE	1600 mm ²
INACTIVATION OF THE PRODUCT	Dilution- neutralization method - CEN neutralizer (NEU CEN): Lecithin 3 g Polysorbate 80 30 ml Sodium Thiosulfate 5 g L-histidine 1 g Saponin 30 g Tryptone-treated water (q. s.) to 1000 ml		
RESULTS	Log Reductions of viable microorganisms	24 hours	
For details See Addendum#1		Log R	R%
	<i>S. aureus</i> ATCC 6538P	>4,11	>99,993%
	<i>E. coli</i> ATCC 8739	>3,69	>99.980%
CONCLUSIONS	On the basis of obtained results, can be stated that the test item "DUCOTONE SANI TECH OPACO" has antimicrobial activity in adopted experimental conditions.		
ADDENDA	Addendum#1 - Data sheet (2 Pages)		

This test report may not be reproduced in part unless expressly approved in writing by Eurofins Biolab S.r.l. The test results relate only to the tested items. Sampling, except specific indication on test report, is always intended to be made by the Sponsor. Information provided by the Sponsor are under Sponsor responsibility.

Eurofins Biolab Srl – via B.Buozzi 2, Vimodrone (Milano), Italy - P.IVA / VAT Number: 007620140960
Tel: +39-022507151 – Fax: +39-0225071599 – E-mail: InfoFarma@eurofins.com

Reviewed and electronically signed for Study Technical Supervisor Approval by
Fabiana Faccioli, Employee
for Eurofins Biolab Srl, on 09-Oct-2020 17:11:27 UTC+02:00

	Measurement of antibacterial activity on plastics and other non-porous surfaces ISO 22196
---	--

ID. Study: STULV20AA4481-1LV-MAT-FOV7-20-239-0C35:a
ID. sample: LV-MAT-FOV7-20-239-0C36:aStarted on: 17/09/20**ASSAY**Specimen Area (cmq): 25Film Area (mmq): 1600Volume of inoculum (ml): 0,4Neutralizer: neu cenVolume of Neutralizer (ml): 16

STRAIN		RESULT (cfu/ml)	Bacterial concentration $2,5 \times 10^5 \leq x \leq 10 \times 10^5$ cfu/ml	RESULT (cfu/inoculum)
A38	S. aureus ATCC65389	6,8E+05	COMPLIES	2,7E+05

Contact time	Specimen	1 (cfu/ml)	2 (cfu/ml)	3 (cfu/ml)	Geometric mean (ufc/ml)
t0	Untreated	1,70E+04	1,80E+04	1,70E+04	1,73E+04
	Treated	4,65E+04	3,80E+04	3,65E+04	4,01E+04
t24	Untreated	1,18E+04	4,40E+03	4,70E+04	1,35E+04
	Treated	< 1,00E+00	< 1,00E+00	< 1,00E+00	< 1,00E+00

Contact time	Specimen	1 (ufc/cm ²)	2 (ufc/cm ²)	3 (ufc/cm ²)	Geometric mean (ufc/cm ²)
t0	Untreated	1,70E+04	1,80E+04	1,70E+04	1,73E+04
	Treated	4,65E+04	3,80E+04	3,65E+04	4,01E+04
t24	Untreated	1,18E+04	4,40E+03	4,70E+04	1,35E+04
	Treated	< 1,00E+00	< 1,00E+00	< 1,00E+00	< 1,00E+00

ASSAY VALIDITY CRITERIA	1	The Log value (L) of cfu/ml recovered immediately after inoculation from the untreated test specimens (NT t ₀) shall satisfy the following requirement: $(L_{max} - L_{min})/(L_{mean}) \leq 0,2$	COMPLIES
	2	The average number of viable microorganisms recovered immediately after inoculation from the untreated test specimens (NT t ₀) shall be within the range $6,2 \times 10^3$ to $2,5 \times 10^4$ cells/cm ² .	COMPLIES
	3	The number of viable microorganisms recovered from each untreated test specimen after incubation for 24 h (NT t _{24h}) shall not be less than $6,2 \times 10^1$ cells/cm ² .	COMPLIES

Contact time	Specimen	1 (Log ufc/cm ²)	2 (Log ufc/cm ²)	3 (Log ufc/cm ²)	Log ufc/cm ²
t0	Untreated	4,23	4,26	4,23	4,24
	Treated	4,67	4,58	4,56	4,60
t24	Untreated	4,07	3,64	4,67	4,11
	Treated	< 0,00	< 0,00	< 0,00	< 0,00

Strain	Log reduction	% Reduction
S. aureus ATCC65389	> 4,11	> 99,993



**Measurement of antibacterial activity on
plastics and other non-porous surfaces
ISO 22196**

ID. Study: STULV20AA4481-1LV-MAT-FOV7-20-239-0C35:a
ID. sample: LV-MAT-FOV7-20-239-0C36:aStarted on: 17/09/20**ASSAY**Specimen Area (cmq): 25Film Area (mmq): 1600Volume of inoculum (ml): 0,4Neutralizer: neu cenVolume of Neutralizer (ml): 16

STRAIN		RESULT (cfu/ml)	Bacterial concentration $2,5 \times 10^5 \leq x \leq 10 \times 10^5$ cfu/ml	RESULT (cfu/inoculum)
B5	E.coli ATCC8739	7,3E+05	COMPLIES	2,9E+05

Contact time	Specimen	1 (cfu/ml)	2 (cfu/ml)	3 (cfu/ml)	Geometric mean (ufc/ml)
t0	Untreated	1,83E+04	1,83E+04	1,78E+04	1,81E+04
	Treated	2,75E+04	2,19E+04	2,66E+04	2,52E+04
t24	Untreated	1,67E+05	1,51E+05	1,45E+05	1,54E+05
	Treated	< 3,00E+01	3,45E+01	< 3,00E+01	< 3,14E+01

Contact time	Specimen	1 (ufc/cm ²)	2 (ufc/cm ²)	3 (ufc/cm ²)	Geometric mean (ufc/cm ²)
t0	Untreated	1,83E+04	1,83E+04	1,78E+04	1,81E+04
	Treated	2,75E+04	2,19E+04	2,66E+04	2,52E+04
t24	Untreated	1,67E+05	1,51E+05	1,45E+05	1,54E+05
	Treated	< 3,00E+01	3,45E+01	< 3,00E+01	< 3,14E+01

ASSAY VALIDITY CRITERIA	1	The Log value (L) of cfu/ml recovered immediately after inoculation from the untreated test specimens (NT t ₀) shall satisfy the following requirement: $(L_{max} - L_{min}) / (L_{mean}) \leq 0,2$	COMPLIES
	2	The average number of viable microorganisms recovered immediately after inoculation from the untreated test specimens (NT t ₀) shall be within the range $6,2 \times 10^3$ to $2,5 \times 10^4$ cells/cm ² .	COMPLIES
	3	The number of viable microorganisms recovered from each untreated test specimen after incubation for 24 h (NT t _{24h}) shall not be less than $6,2 \times 10^1$ cells/cm ² .	COMPLIES

Contact time	Specimen	1 (Log ufc/cm ²)	2 (Log ufc/cm ²)	3 (Log ufc/cm ²)	Log ufc/cm ²
t0	Untreated	4,26	4,26	4,25	4,26
	Treated	4,44	4,34	4,42	4,40
t24	Untreated	5,22	5,18	5,16	5,19
	Treated	< 1,48	1,54	< 1,48	< 1,50

Strain	Log reduction	% Reduction
E.coli ATCC8739	> 3,69	> 99,980