eurofins | BioPharma Product Testing

Test Report STULV25AA2397-1

SPONSOR	FREUDENBERG HOME AND CLEANING SOLUTIONS GMBH
	IM TECHNOLOGIEPQRK 19
	69469 WEINHEIM
	GERMANY
TEST METHOD	EN 16615:2015 / UNI EN 16615:2015 – Chemical disinfectants and antiseptics – Quantitative test method for the evaluation of bactericidal and yeasticidal activity on non-porous surfaces with mechanical action employing wipes in the medical area (4-field test) – Test method and requirements (phase 2/step2).

TEST ITEM

INFORMATION FROM THE SPONSOR			
PRODUCT NAME	PVAmicro		
MANUFACTURER	Freudenberg Home and Cleaning Solutions GmbH		
SAMPLE TYPOLOGY	mechanical microfiber cleaning cloth, coated with PVA		
BATCH N.	Not applicable	CODE	Not provided
MANUFACTURING DATE	Not provided	EXPIRY DATE	Not provided
COMPOSITION	Not provided		
STORAGE	Room temperature (20 ± 5 °C)		
EUROFINS BIOLAB IDENTIFICATION			
SAMPLE DESCRIPTION	wipes		
MATERIAL ITEM ALIQUOT	LV-MAT-OI64-25-316-0D01:a		
PARCEL REGISTRATION NUMBER	IP-LV-2025314-ADB	RECEIVING DATE	10-Nov-2025
ANALYSIS STARTING DATE	09-Jan-2026	**ANALYSIS ENDING DATE**	12-Jan-2026

ADDITIONS TO, DEVIATIONS, OR EXCLUSIONS FROM THE METHOD

The test was performed to evaluate the mechanical action of the test item. Unlike the standard method, test C was not performed and the wipes were folded according to the Sponsor's instructions and impregnated with purified water (Elix). Furthermore, unlike the standard method and as requested by the Sponsor, no interfering substance was used and no contact time was applied, so the dry control at contact time was not performed and the logarithmic reduction was calculated against the dry control at zero time.

EXPERIMENTAL CONDITIONS

TEST TEMPERATURE	22.5 ± 2.5 °C
CONCENTRATIONS	Not applicable Purified water (Elix) was used to soak the test item. The test item was impregnated 30 minutes ± 5 seconds beforehand with a volume equal to 200% of its weight. For each test microorganism, a wipe on the PVC test support was used.

eurofins | BioPharma Product Testing

TEST SURFACE	PVC carrier, measuring 20 cm×50 cm
CONTACT TIME	Not applied
INACTIVATION OF THE PRODUCT	Dilution- neutralization method - CEN neutralizer: Lecithin 3 g Polysorbate 80 30 g Sodium Thiosulfate 5 g L-histidine 1 g Saponin 30 g Tryptone-treated water (q. s.) to 1000 ml
INTERFERING SUBSTANCES	Not applied
INCUBATION TEMPERATURE	37°C ± 1°C for bacteria and 30°C ± 1 °C for yeast
TEST MICROORGANISM	*Staphylococcus aureus* DSM 799 *Pseudomonas aeruginosa* DSM 939 *Enterococcus hirae* ATCC 10541 *Candida albicans* ATCC 10231

RESULTS

Microrganismi test ***(Test Microrganisms)***	***Dil***	**N**		**Nv**		**B**	
		ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*
Staphylococcus aureus DSM 799	-7	222	196	48	42	41	40
	-8	22	23				
		9.32	**VALIDO (VALID)**	4.5E+02		4.1E+01	
Pseudomonas aeruginosa DSM 939	-7	>330	>330	108	112	98	106
	-8	48	47				
		9.68	**VALIDO (VALID)**	1.1E+03		1.0E+02	
Enterococcus hirae DM 3320	-7	>330	>330	84	113	100	97
	-8	52	41				
		9.67	**VALIDO (VALID)**	9.9E+02		9.9E+01	
Candida albicans ATCC 10231	-6	>330	>330	64	78	72	57
	-7	29	42				
		8.55	**VALIDO (VALID)**	7.1E+02		6.5E+01	

N: conteggio sospensione batterica *(N: count of the bacterial suspension)*
Nv: conteggio sospensione batterica per il saggio preliminare*(Nv: count of the bacterial suspension in the preliminary assay)*
B: conteggio nel controllo di tossicità del neutralizzante *(B: count in the neutraliser toxicity control)*
C: conteggio nel controllo dell'efficacia del neutralizzante *(C: count in the neutraliser effectiveness control)*

eurofins | BioPharma Product Testing

Microrganismi test (Test microrganism)		Water control (ufc/25cm^2)							
		Test field 1		Test field 2		Test field 3		Test field 4	
	Dil.	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*
Staphylococcus aureus DSM 799	10^0	>330	>330	>330	>330	172	160	180	200
	10^{-1}	>330	>330	>330	>330	16	12	21	22
		Nw= > 4.22		**Nw=** > 16500		**Nw=** 8.2E+02		**Nw=** 9.6E+02	
				Nw (Mean T2-T4)		**8.9E+02**		**VALIDO (VALID)**	
Pseudomonas aeruginosa DSM 939	10^0	>330	>330	>330	>330	>330	>330	200	172
	10^{-1}	>330	>330	>330	>330	>330	>330	24	21
		Nw= > 4.22		**Nw=** > 16500		**Nw=** > 16500		**Nw=** 9.5E+02	
				Nw (Mean T2-T4)		**9.5E+02**		**VALIDO (VALID)**	
Enterococcus hirae DM 3320	10^0	>330	>330	>330	>330	275	300	>330	>330
	10^{-1}	>330	>330	>330	>330	28	32	42	51
		Nw= > 4.22		**Nw=** > 16500		**Nw=** 1.4E+03		**Nw=** 2.3E+03	
				Nw (Mean T2-T4)		**1.9E+03**		**VALIDO (VALID)**	
Candida albicans ATCC 10231	10^0	>330	>330	12	7	10	6	10	7
	10^{-1}	74	61	0	0	0	0	1	0
		Nw= 3.53		**Nw=** 4.8E+01		**Nw=** 4.0E+01		**Nw=** 4.3E+01	
				Nw (Mean T2-T4)		**4.4E+01**		**VALIDO (VALID)**	

Nw = conteggio nel controllo dell'acqua *Nw = count of the water mixture)*

Microrganismi test (Test microrganism)		Drying control (ufc/25cm^2)	
		Dc_0	
	Dil.	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*
Staphylococcus aureus DSM 799	10^{-4}	>330	>330
	10^{-5}	46	42
	10^{-6}	5	6
		Dc_0	7.34
			VALIDO (VALID)
Pseudomonas aeruginosa DSM 939	10^{-4}	>330	284
	10^{-5}	28	19
	10^{-6}	2	2
		Dc_0	7.18
			VALIDO (VALID)
Enterococcus hirae DM 3320	10^{-4}	>330	>330
	10^{-5}	114	129
	10^{-6}	17	20
		Dc_0	7.80
			VALIDO (VALID)
Candida albicans ATCC 10231	10^{-3}	>330	>330
	10^{-4}	34	37
	10^{-5}	1	2
		Dc_0	6.25
			VALIDO (VALID)

Dc0 = controllo essiccamento al tempo zero *(drying control at the contact time zero)*
Dct = controllo essiccamento al tempo di contatto più lungo *(drying control at the higher contact time)*

eurofins | BioPharma Product Testing

Microrganismi test (Test microrganism)	*Dil.*	*Test (cfu/test field)*							
		Test field 1		Test field 2		Test field 3		Test field 4	
		imbibite con H2O Elix con volume pari al 200% del peso Recupero immediato							
		ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*	ufc/piastra *(cfu/plate)*
Staphylococcus aureus DSM 799	10^0	>330	>330	>330	>330	>330	>330	>330	>330
		Na= > 3.22		**Na=** > 1650.00		**Na=** > 1650.00		**Na=** > 1650.00	
		R= < 4.12		**Na (Mean T2-T4)**		**> 1650.00**			
Pseudomonas aeruginosa DSM 939	10^0	>330	>330	>330	>330	>330	>330	>330	>330
		Na= > 3.22		**Na=** > 1650.00		**Na=** > 1650.00		**Na=** > 1650.00	
		R= < 3.96		**Na (Mean T2-T4)**		**> 1650.00**			
Enterococcus hirae DM 3320	10^0	>330	>330	>330	>330	>330	>330	>330	>330
		Na= > 3.22		**Na=** > 1650.00		**Na=** > 1650.00		**Na=** > 1650.00	
		R= < 4.58		**Na (Mean T2-T4)**		**> 1650.00**			
Candida albicans ATCC 10231	10^0	124	133	28	33	14	15	40	57
		Na= 2.81		**Na=** 153.00		**Na=** 72.50		**Na=** 243.00	
		R= 3.44		**Na (Mean T2-T4)**		**156.17**			

Na (valore Log) = conteggio della miscela test *(Na (Log value) = count of the test mixture)*
R = riduzione della vitalità *(R = vitality reduction)*

LOGARITHMIC REDUCTION PERCENTAGE

Test microrganism	Dc_0	Na	Log R	%
Staphylococcus aureus DSM 799	7.34	> 3.22	< 4.12	< 99.9924
Pseudomonas aeruginosa DSM 939	7.18	> 3.22	< 3.96	< 99.9890
Enterococcus hirae DSM 3320	7.80	> 3.22	< 4.58	< 99.9974
Candida albicans ATCC 10231	6.25	2.81	3.44	99.9637

CONCLUSIONS

The mechanical action of the item:

DOES NOT CAUSE A REDUCTION ≥ 5 LOG against S. aureus DSM 799

DOES NOT CAUSE A REDUCTION ≥ 5 LOG against P. aeruginosa DSM 939

DOES NOT CAUSE A REDUCTION ≥ 5 LOG against E. hirae DSM 3320

DOES NOT CAUSE A REDUCTION ≥ 4 LOG against C. albicans ATCC 10231

in the adopted test conditions.

"Eurofins sample number" is the actual and unambiguous TEST REPORT identification. Sampling is always intended to be made by the Sponsor and results apply to the sample as received. The test results relate only to the tested items. Information provided by Sponsor are reported in section "Information from the Sponsor". Eurofins Biolab declines responsibility on the information provided by Sponsor. This test report may not be reproduced in part unless expressly approved in writing by Eurofins Biolab S.r.l. The Attachments, if present, must be considered as part of the test report; the end of the report corresponds to the last page of the last Attachment.

Eurofins Biolab Srl – via B. Buozzi 2, Vimodrone (Milano), Italy - P.IVA / VAT Number: 00762140960
Tel: +39-022507151 – Fax: +39-0225071599 – E-mail: InfoFarma@eurofins.com

Reviewed and electronically signed for Study Technical Supervisor Approval by
Andrea De Bortoli, Employee
for Eurofins Biolab Srl, on 29-Jan-2026 12:07:35 UTC+01:00