Henkel AG & Co. KGaA

Microbiology

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Test report

25-62853

on the
virucidal efficacy against
Modified Vaccinia Virus Ankara (MVA), ATCCVR-1508

of

GOLD LINE

According to DIN EN 14476:2025

Chemical disinfectants and antiseptics – Quantitative suspension test for the evaluation of virucidal activity in the medical area – Test method and requirements (Phase 2/Step 1);
German version EN 14476:2025

Client:	WESSO® AG, Altdorf b. Nürnberg
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Date:	February 20, 2026

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Content

1. Test laboratory

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2. Information about the test substance

2.1. Product name*	GOLD LINE
2.1.1. Batch*	#101.225/WGL.EU/TM
2.1.2. Manufacturing date*	December 10, 2025
2.1.3. Expiry date*	N/A
2.1.4. Manufacturer	WESSO® AG, Altdorf b. Nürnberg
2.1.5. Date of sample entry	December 18, 2025
2.1.6. Storage conditions in the lab*	RT
2.1.7. Appearance	colourless, clear, liquid
2.1.8. Active Substance*	Peracetic acid 0.03%; Hydrogen peroxide 3.15%; Acetic acid 0,06%; Propan-2-ol 2,52%; Ethanol 1.61%

3. Test method and neutralization

3.1 Suspension test according to DIN EN 14476:2015
Chemical disinfectants and antiseptics – Quantitative suspension test for the evaluation of virucidal activity in the medical area – Test method and requirements (Phase 2/Step 1);
German version EN 14476:2025

Scope of application: Efficacy testing of disinfectants in chemical products including industrial, domestic and institutional areas, food, veterinary medicine and hospital hygiene
(with the exception: no testing and statements of conformity of medical devices)

3.2 Neutralization: Inactivation occurs by dilution in ice-cold medium

* information provided by the client

4. Experimental conditions

4.1	Test period:	January 28, 2026 – February 03, 2026	
4.2	Test concentration(s):	GOLD LINE	10%-50%-80%
		Glutaraldehyde (GA) (reference):	50 ppm
		Formaldehyde HCOH (reference):	0.7%
4.3	Test assay:	1) tempering of 700 µl FC900418 (conc. x1.43) to test temperature for 5 minutes 2) adding 100 µl Virus suspension + 100 µl load and tempering to test temperature for 2 minutes 3) Starting the test by adding 100 µl product (x10)	
4.4	Diluent:	WSH acc. EN14476	
4.5	Appearance of the test product solution(s):	Clear, colorless, liquid, no precipitation	
4.6	Appearance of product(s) plus load and virus:	Clear, colorless, liquid, no precipitation	
4.7	pH values:	1. 100% (1,25*80%)	3,18
		2. 62,5% (1,25*50%)	3,35
		3. 12,5% (1,25*10%)	4,03
4.8	Test organism(s) / Host cell(s)	MVA, Ankara strain, Clone 6 (MVA F6 LMH SF 14-2 obtained from LMU (2016), P07 from May 27, 2022 EFC- Cells UMNSAH/DF-1, ATCC-CCL-10, obtained from ATCC (2010), 159 from January 28, 2026	
4.9	Contact time(s):	60 min	
4.10	Test temperature(s):	20°C±1°C	
4.11	Interfering substance(s):	low soil conditions: 0,3 g/l BSA	
4.12	Incubation temperature:	36°C / 10% CO_2	
4.13	Calc. of the virus titre:	acc. to DIN EN 14476:2025	

5. Results

An overview of the achieved reduction factors is given in the table below. Detailed test results are given in the appendix. Non-affection of cell susceptibility (IF) and sufficient virus susceptibility to the reference substance were demonstrated. Sufficient reduction factors were obtained in the standard assay and the disinfection suppression test was valid.

Test according to EN14476:2025 with GOLD LINE against MVA, St. Ankara - obtained from ATCC VR-1508			
Test temperature	Resulting Reduction Factors RF incl. 95% ci(s)		
	contact time: 60 minutes; soiling: 0,3 g/l BSA		
	10%	50%	80%
20°C	3,375 ± 0,366	≥ 3,375 ± 0,366	≥ 3,375 ± 0,366

6. Conclusion

In the standard DIN EN 14476 the minimum requirements for virucidal efficacy are defined as the capability to reduce the titer of the test virus(es) by a factor of ≥ 4lg within the defined parameters of contact time and temperature under the influence of the chosen level of interfering substances.

For the product GOLD LINE a complete reduction by ≥ 3,375 log steps against Modified Vaccinia Virus Ankara (MVA) could be achieved with 50% product concentration at 20°C, 60 min contact time and low-soil conditions.
Due to the high cytotoxicity of the product a maximum reduction of ≥ 3,375 log steps could be measured. Further techniques, like Large Volume Plating would support the measurement of a reduction by 4 log steps.

Duesseldorf, February 20, 2026

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Sampling was performed by the customer (if not described otherwise). All results refer only to the samples provided by the customer. This document is valid without signature. A copy of the original signed version of this report and the raw data are filed at Corporate Scientific Solutions/ Microbiology for a storage period of 10 years. The report may only be distributed in complete form without any changes.

Appendix: Detailed test results

7. Appendix: Test results, validation and controls

7.1 Tab. 1 Interference control(s)

Interference control(s)												
Sample	**Time [min]**		**log_{10} dilution(s)**								**m incl. 95% ci**	Δm < 1 lg
			-1	**-2**	**-3**	**-4**	**-5**	**-6**	**-7**	**-8**		
PBS	60	CPE	8	8	8	8	8	3	0	0	5,875 ± 0,366	valid
		Pi	1	1	1	1	1	0,375	0	0		
GOLD LINE 80% (1:1000)	60	CPE	8	8	8	8	8	2	0	0	5,750 ± 0,328	0,125 ± 0,491
		Pi	1	1	1	1	1	0,25	0	0		
GOLD LINE 80% (1:100)	60	CPE							0	0	0,500 ± 0,366	5,250 ± 0,491
		Pi	0	0	0	0	0	0	0	0		

7.2 Tab 2 Disinfection suppression assay (DSA) on ice for 30 minutes

Disinfection suppression assay												
Sample	**soiling**		**log_{10} dilution(s)**								**m incl. 95% ci**	**Reduction Factors RF incl. 95% ci(s) ≤0,5lg**
			-1	**-2**	**-3**	**-4**	**-5**	**-6**	**-7**	**-8**		
WSH	w/o	CPE	8	8	8	8	8	4	0	0	6,000 ± 0,378	valid
		Pi	1	1	1	1	1	0,5	0	0		
GOLD LINE 80%	w/o	CPE	8	8	8	8	3	0	0	0	4,875 ± 0,366	1,125 ± 0,526
		Pi	1	1	1	1	0,375	0	0	0		
GOLD LINE 50%	w/o	CPE	8	8	8	8	8	0	0	0	5,500 ± 0,000	0,500 ± 0,378
		Pi	1	1	1	1	1	0	0	0		
GOLD LINE 10%	w/o	CPE	8	8	8	8	8	2	0	0	5,750 ± 0,328	0,250 ± 0,500
		Pi	1	1	1	1	1	0,25	0	0		

7.3 Tab. 3 Cytotoxicity control(s) at room temperature

Cytotoxicity control(s) (0 min) 20°C											
Sample	**soiling**		**log_{10} dilution(s)**								**m incl. 95% ci**
			-1	**-2**	**-3**	**-4**	**-5**	**-6**	**-7**	**-8**	
WSH	0,3 g/L BSA	CPE	0	0	0	0	0	0	0	0	≤ 0,500 ± 0,000
		Pi	0	0	0	0	0	0	0	0	
A. dest	PBS	CPE	0	0	0	0	0	0	0	0	≤ 0,500 ± 0,000
		Pi	0	0	0	0	0	0	0	0	
HCHO 0,7%	PBS	CPE	x	x	x	0	0	0	0	0	≤ 3,500 ± 0,000
		Pi	1	1	1	0	0	0	0	0	
GA 50 ppm	PBS	CPE	0	0	0	0	0	0	0	0	≤ 0,500 ± 0,000
		Pi	0	0	0	0	0	0	0	0	
GOLD LINE 80%	0,3 g/L BSA	CPE	x	x	0	0	0	0	0	0	2,500 ± 0,000
		Pi	1	1	0	0	0	0	0	0	
GOLD LINE 50%	0,3 g/L BSA	CPE	x	x	0	0	0	0	0	0	2,500 ± 0,000
		Pi	1	1	0	0	0	0	0	0	
GOLD LINE 10%	0,3 g/L BSA	CPE	x	x	0	0	0	0	0	0	2,500 ± 0,000
		Pi	1	1	0	0	0	0	0	0	

7.4 Reference test for virus inactivation

Tab. 4.1 HCHO control(s) without soiling

Formaldyhde control(s) (RF 0.75-3.5 after 5 min, RF 2.0-≥ 4with 0.7% HCHO after 15 min)												
Sample	**Time [min]**		**log_{10} dilution(s)**								**m incl. 95% ci**	**Reduction Factors RF incl. 95% ci(s)**
			-1	**-2**	**-3**	**-4**	**-5**	**-6**	**-7**	**-8**		
HCHO 0.7% i.A	5	CPE	x	x	x	2	0	0	0	0	3,750 ± 0,328	2,375 ± 0,491
		Pi	1	1	1	0,25	0	0	0	0		
HCHO 0.7% i.A	15	CPE	x	x	x	0	0	0	0	0	≤ 3,500 ± 0,000	≥ 2,625 ± 0,366
		Pi	1	1	1	0	0	0	0	0		
A.dest	15	CPE	8	8	8	8	8	5	0	0	6,125 ± 0,366	valid
		Pi	1	1	1	1	1	0,625	0	0		
WSH	15	CPE	8	8	8	8	8	7	0	0	6,375 ± 0,250	
		Pi	1	1	1	1	1	0,875	0	0		

Tab. 4.2 GA control(s) without soiling

Glutaraldehyde control(s) (RF 0.5-2.5 with 50 ppm GA)												
Sample	**Time [min]**		**log_{10} dilution(s)**								**m incl. 95% ci**	**Reduction Factors RF incl. 95% ci(s)**
			-1	**-2**	**-3**	**-4**	**-5**	**-6**	**-7**	**-8**		
GA 50 ppm	5	CPE	8	8	8	8	5	0	0	0	5,125 ± 0,366	1,000 ± 0,366
		Pi	1	1	1	1	0,625	0	0	0		
A. dest	5	CPE	8	8	8	8	8	5	0	0	6,125 ± 0,366	valid
		Pi	1	1	1	1	1	0,625	0	0		
WSH	5	CPE	8	8	8	8	8	6	0	0	6,250 ± 0,328	
		Pi	1	1	1	1	1	0,75	0	0		

7.5 Tab. 5 Efficacy data 20°C

Test according to EN14476 with 25-62853-1 GOLD LINE against MVA, St. Ankara - obtained from ATCC VR-1508 low soil conditions (0,3 g/l BSA / 20°C)														
Time [min]	**Sample**	**conc. [%]**		**log_{10} dilution(s)**								**Results**		**Reduction Factors RF incl. 95% ci(s)**
				-1	**-2**	**-3**	**-4**	**-5**	**-6**	**-7**	**-8**	**titer**	**sm**	
0	25-62853-1 GOLD LINE	80	CPE	X	X	0	0	0	0	0	0	≤ 2,500 ± 0,000	0,000	≥ 3,500 ± 0,378
			Pi	1	1	0	0	0	0	0	0			
		50	CPE	X	X	2	0	0	0	0	0	2,750 ± 0,328	0,164	3,250 ± 0,500
			Pi	1	1	0,25	0	0	0	0	0			
		10	CPE	X	X/8	8	8	8	5	0	0	6,125 ± 0,366	0,183	- 0,125 ± 0,526
			Pi	1	1	1	1	1	0,625	0	0			
	WSH	–	CPE	8	8	8	8	8	4	0	0	6,000 ± 0,378	0,189	
			Pi	1	1	1	1	1	0,5	0	0			
60	25-62853-1 GOLD LINE	80	CPE	X	X	0	0	0	0	0	0	≤ 2,500 ± 0,000	0,000	≥ 3,375 ± 0,366
			Pi	1	1	0	0	0	0	0	0			
		50	CPE	X	X	0	0	0	0	0	0	≤ 2,500 ± 0,000	0,000	≥ 3,375 ± 0,366
			Pi	1	1	0	0	0	0	0	0			
		10	CPE	X	X/8	0	0	0	0	0	0	2,500 ± 0,000	0,000	3,375 ± 0,366
			Pi	1	1	0	0	0	0	0	0			
	WSH	–	CPE	8	8	8	8	8	3	0	0	5,875 ± 0,366	0,183	
			Pi	1	1	1	1	1	0,375	0	0			

Abbreviations:
IF: Interference control,
DSA: disinfection suppressions assay
FA: formaldehyde control
CT: cytotoxicity

Pi: Ratio of virus-positives in a series of parallels
m: Titre as log10-$TCID_{50}$/ ml acc. Spearman & Kärber
ci: confidence interval

Evaluation of individual wells:

0 = no cell damage = no virus activity
1 = <25% cell damage = virus activity
2 = ≈50% cell damage = virus activity
3 = ≈75% cell damage = virus activity
4 = ≈100% cell damage = virus activity

Criteria of validity:
IF: ≤1.0 log_{10}
DSA: ≤0.5 log_{10}
FA: *Vaccinia*: 0.75–3.5 log_{10}/5 min, 2–≥4log_{10} /15 min
FA: *Adeno*: 3-5 log_{10} /30 min, 3.5-5.5log_{10} /60 min
FA: *MNV*: 1-3 log_{10} /30 min, 2-4log_{10} /60 min
FA: *Polio*: 0.5-2.5 log_{10} /30 min, 2-4log_{10} /60 min
FA: *MVM*: 0-2 log_{10} /30 min, 0.5-2.5log_{10} /60 min
CT: Cytotoxicity of the product solution does not affect cell morphology and growth or susceptibility for the test virus in the dilutions of the test mixtures which are necessary to demonstrate a 4 log_{10} reduction of the virus.

25-62853_Report_Goldline_EN14476_Vaccinia

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