



**DR. BRILL + DR. STEINMANN**  
INSTITUTE FOR HYGIENE AND MICROBIOLOGY



17/08/2020

## Test report L20/1023MV.1

### Evaluation of the effectiveness of **SEIFREI Desinfektions Hand-Gel**

Test virus: modified vaccinia virus Ankara (MVA)

Method: EN 14476:2013+A2:2019 (clean conditions)

quantitative suspension test for the evaluation  
of virucidal activity of chemical disinfectants and  
antiseptics used in human medicine

**Sponsor:**

NEMADIA GmbH  
Landwehrstraße 55  
DE – 64293 Darmstadt

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TEST REPORT



## 1. Identification of test laboratory

Dr. Brill + Partner GmbH Institute for Hygiene and Microbiology, Norderoog 2, DE - 28259 Bremen

## 2. Identification of sample

Manufacturer	NEMADIA GmbH
Name of product	SEIFREI Desinfektions Hand-Gel
Confirmation no.	216941
Product diluent recommended by the manufacturer	-
Batch number	L-071420GGAC
Application	hand disinfection
Production date	16/06/2020
Expiry date	15/06/2022
Active compound (s) (100 g)	70 % Ethanol
Appearance, odour	clear, colorless gel product specific
pH-values	undiluted: 7.20 (20 °C)
Storage conditions	room temperature in the dark (area with restricted access)
Date of arrival in the laboratory	07/07/2020

## 3. Materials

### 3.1 Culture medium and reagents

- Eagle`s Minimum Essential Medium with Earle`s BSS (EMEM, Biozym Scientific GmbH, catalogue no. 880121)
- fetal calf serum (Thermo Fisher, article no. CH30160.02)
- 1.4 % formaldehyde solution (dilution of Roti®-Histofix 4 %, Carl Roth GmbH)
- Aqua bidest. (SG ultrapure water system, type Ultra Clear; serial no. 86996-1)
- PBS (Invitrogen, article no. 18912-014)

- BSA (Sigma-Aldrich-Chemie GmbH, article no. CA-2153).

### 3.2 Virus and cells

The modified vaccinia virus Ankara (MVA) originated from Dr. Manteufel, Institut für Tierhygiene und Öffentliches Veterinärwesen, DE - 04103 Leipzig. Before inactivation assays, virus had been passaged four times in *BHK 21-cells* (Baby Hamster Kidney).

*BHK 21-cells* (passage 34) originated from the Friedrich-Löffler-Institut, Bundesforschungsinstitut für Tiergesundheit (formerly Bundesforschungsanstalt für Viruskrankheiten der Tiere, isle of Riems).

The cells were inspected regularly for morphological alterations and for contamination by mycoplasmas. No morphological alterations of cells and no contamination by mycoplasmas could be detected.

### 3.3 Apparatus, glassware and small items of equipment

- CO<sub>2</sub> incubator
- Agitator (Vortex Genie Mixer, type G 560E)
- pH measurement 315i (WTW, article no. 2A10-100)
- Centrifuge (Sigma-Aldrich-Chemie GmbH, type 113)
- Microscope (Olympus, type CK 30)
- Centrifuge 5804 R (Eppendorf AG)
- Water bath (JULABO, Julabo U 3)
- Adjustable and fixed-volume pipettes (Eppendorf AG)
- Polyesterol 96-well microtitre plate (Nunc GmbH & Co. KG, Wiesbaden)
- Cell culture flask (Nunc GmbH & Co. KG, Wiesbaden)
- Sealed test tubes (Sarstedt AG & Co., Nümbrecht).

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#### 4. Experimental conditions

Test temperature	20 °C ± 1.0 °C
Concentration of test product	undiluted (80.0 %) and as 50.0 % and 10.0 % (demonstration of non-active range) solutions
Appearance of product dilutions	no precipitation
Contact times	15, 30 and 60 seconds
Interfering substance	0.3 g/l bovine serum albumin (clean conditions, EN 14476)
Procedure to stop action of disinfectant	immediate dilution
Diluent	Aqua bidest.
Stability of product in the mix with virus and interfering substance (80.0 % solution)	medium clouding, no precipitation
Virus strain	modified vaccinia virus Ankara (MVA) (ATCC VR-1508)
Date of testing	08/07/2020 – 17/08/2020
End of testing	17/08/2020

#### 5. Methods

##### 5.1 Preparation of test virus suspension

For preparation of test virus suspension, *BHK 21-cells* were cultivated with MEM and 10 % or 2 % fetal calf serum. *Cells* were infected with a multiplicity of infection of 0.1. After cells showed a cytopathic effect, they were subjected to a freeze/thaw procedure followed by a low speed centrifugation in order to sediment cell debris. After aliquotation, test virus suspension was stored at – 80 °C.

##### 5.2 Preparation of disinfectant (dilutions)

The test product was tested undiluted. Due to the addition of interfering substance and test virus suspension an 80.0 % solution resulted.

Furthermore, the product was evaluated 50.0 % and 10.0 % solutions (demonstrating of non-active range). These solutions were prepared with Aqua bidest. immediately before the inactivation tests.

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### 5.3 Infectivity assay

Infectivity was determined as endpoint titration according to EN 5.5 transferring 0.1 ml of each dilution into eight wells of a microtitre plate to 0.1 ml of freshly trypsinised *BHK 21-cells* ( $10\text{--}15 \times 10^3$  cells per well), beginning with the highest dilution. Microtitre plates were incubated at 37 °C in a 5 % CO<sub>2</sub>-atmosphere. The cytopathic effect was read by using an inverted microscope after six days. Calculation of the infective dose TCID<sub>50</sub>/ml was calculated with the method of Spearman (2) and Kärber (3).

### 5.4 Calculation and verification of virucidal activity

The virucidal activity of the test disinfectant was evaluated by calculating the decrease in titre in comparison with the control titration without disinfectant. The difference is given as reduction factor (RF).

According to the EN 14476, a disinfectant or a disinfectant solution at a particular concentration is having virus-inactivating efficacy if the titre is reduced at least by 4 log<sub>10</sub> steps within the recommended exposure period. This corresponds to an inactivation of ≥ 99.99 %.

### 5.5 Inactivation assay (end point dilution)

Determination of virucidal activity has been carried out according to EN 5.5. The test product was examined undiluted (80.0 %) and as 50.0 % and 10.0 % (demonstration of non-active range) solutions in Aqua bidest. at 20 °C according to EN 14476. 15, 30 and 60 seconds were chosen as contact times.

Immediately at the end of a chosen contact time, activity of the disinfectant was stopped by dilution to 10<sup>-8</sup>.

Titration of the virus control were performed at the beginning of the test and after the longest exposure time (EN 5.5.7). One part by volume of test virus suspension was mixed with one part interfering substance and eight parts by volume of WSH or Aqua bidest. (RTU products).

Furthermore, a cell control (only addition of medium) was incorporated.

Inactivation tests were carried out in sealed test tubes in a water bath at 20 °C ± 1.0 °C. Aliquots were retained after appropriate exposure times and residual infectivity was determined.

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## 5.6 Determination of cytotoxicity

Determination of cytotoxicity was performed according to EN 5.5.4.1.

## 5.7 Cell sensitivity to virus

For the control of cell sensitivity to virus two parts by volume of water were mixed with eight parts by volume of the lowest apparently non-cytotoxic dilution of the product. These mixtures or PBS as control were added to a volume of double concentrated cell suspension. After 1 h at 37 °C the cells were centrifuged and re-suspended in cell culture medium (EN 5.5.4.2b).

Finally, a comparative titration of the test virus suspension was performed on the pre-treated (disinfectant) and non-pre-treated (PBS) cells as described above.

## 5.8 Control of efficacy for suppression of disinfectant's activity

Furthermore, a control of efficiency for suppression of disinfectant's activity was included (EN 5.5.5).

## 5.9 Reference virus inactivation test

As reference for test validation a 0.7 % formaldehyde solution according to EN 5.5.6 was included. 5, 15, 30 and 60 minutes were chosen as contact times. In addition, cytotoxicity of formaldehyde test solution was determined based on EN 5.5.6.2 with dilutions up to 10<sup>-5</sup>.

## 6. Verification of the methodology

The following criteria as mentioned in EN 5.7 were fulfilled:

- a) The titre of the test virus suspension allowed the determination of a  $\geq 4 \log_{10}$  reduction (maximal virus reduction  $\geq 4.25 \pm 0.48$ ).
- b) The test product (80.0 %) showed cytotoxicity in the 1:10 dilutions thus allowing the detection of a 4  $\log_{10}$  reduction of virus titre.

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- c) The difference of the logarithmic titre of the virus control minus the logarithmic titre of the test virus in the reference inactivation test (see EN 5.7b) was  $\geq 1.50 \pm 0.52$  (between 0.75 – 3.5) after 5 min and  $\geq 2.00 \pm 0.35$  (between 2.0 –  $\geq 4.0$ ) after 15 min for MVA .
- d) The comparative titration on pre-treated (disinfectant) and non-pre-treated (PBS) *BHK 21-cells* showed no significant difference ( $< 1 \log_{10}$ ; EN 5.7) of virus titre:  $6.88 \pm 0.37$  (PBS) versus  $6.63 \pm 0.25$  (1:100 dilutions of disinfectant as 80.0 % solution)  $\log_{10}$  TCID<sub>50</sub>/ml.
- e) The control of efficacy for suppression of disinfectant's activity (80.0 %) showed no decrease ( $\leq 0.5 \log_{10}$ ; EN 5.5.5.1) in virus titre ( $6.25 \pm 0.50$  versus  $6.75 \pm 0.48 \log_{10}$  TCID<sub>50</sub>/ml).
- f) One concentration demonstrated a 4  $\log_{10}$  reduction and (at least) one concentration demonstrated a  $\log_{10}$  reduction of less than 4.

Since all criteria according EN 5.7 were fulfilled, examination with MVA according to EN 14476 is valid.

## 7. Results

Results of examination are shown in tables 1 to 8. Tables 1 to 7 demonstrate the raw data, whereas table 8 (a+b) gives a summary of results.

The undiluted test product in an 80.0 % assay was able to inactivate MVA after 15 seconds of exposure time under clean conditions (tables 1 and 2). The reduction factors were  $\geq 4.25 \pm 0.48$  and  $\geq 4.13 \pm 0.41$ . The mean value was  $\geq 4.19 \pm 0.45$ . This corresponded to an inactivation of  $\geq 99.99$  %.

The test product as 50.0 % solution was able to inactivate MVA after 60 seconds of exposure time under clean conditions (table 3). The reduction factor was  $\geq 4.25 \pm 0.48$ .

The 10.0 % solution was also not active within 60 seconds of exposure time (table 4).

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## 8. Conclusion

The hand disinfectant SEIFREI Desinfektions Hand-Gel tested undiluted demonstrated activity against MVA after an exposure time of 15 seconds under clean conditions.

Therefore, the hand disinfectant SEIFREI Desinfektions Hand-Gel can be declared as active against MVA as follows:

**undiluted                      15 seconds                      clean conditions**

**Bremen, 17/08/2020**

**- Dr. Britta Becker -**  
Head of Laboratory

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## 9. Quality control

The Quality Assurance of the results was maintained by performing the determination of the virus-inactivating properties of the disinfectant in accordance with Good Laboratory Practice regulations:

- 1) Chemicals Act of Germany, Appendix 1, dating of 01.08 1994 (BGBl. I, 1994, page 1703). Appendix revised at 14. 05. 1997 (BGBl. I, 1997, page 1060).
- 2) OECD Principles of Good Laboratory Practice (revised 1997); OECD Environmental Health and Safety Publications; Series on Principles of Good Laboratory Practice and Compliance Monitoring – Number 1. Environment Directorate, Organization for Economic Co-operation and Development, Paris 1998.

The plausibility of the results was additionally confirmed by controls incorporated in the inactivation assays.

## 10. Records to be maintained

All testing data, protocol, protocol modifications, the final report, and correspondence between Dr. Brill + Partner GmbH and the sponsor will be stored in the archives at Dr. Brill + Partner GmbH.

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The test results in this test report relate only to the items examined.

## 11. Literature

1. EN 14476:2013+A2:2019: Chemical disinfectants and antiseptics – Quantitative suspension test for the evaluation of virucidal activity of chemicals disinfectants and antiseptics in human medicine test - Test method and requirements (phase 2, step 1)
2. Spearman, C.: The method of `right or wrong cases` (constant stimuli) without Gauss's formulae.  
Brit J Psychol; 2 1908, 227-242
3. Kärber, G.: Beitrag zur kollektiven Behandlung pharmakologischer Reihenversuche.  
Arch Exp Path Pharmac; 162, 1931, 480-487

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## Appendix:

### Legend to the Tables

- Table 1: Raw data for SEIFREI Desinfektions Hand-Gel (80.0 %) tested against MVA (1<sup>st</sup> assay)
- Table 2: Raw data for SEIFREI Desinfektions Hand-Gel (80.0 %) tested against MVA (2<sup>nd</sup> assay)
- Table 3: Raw data for SEIFREI Desinfektions Hand-Gel (50.0 %) tested against MVA
- Table 4: Raw data for SEIFREI Desinfektions Hand-Gel (10.0 %) tested against MVA
- Table 5: Raw data for formaldehyde solution (0.7 %) tested against MVA
- Table 6: Raw data for control of efficacy for suppression of disinfectant's activity (80.0 %)
- Table 7: Raw data (MVA) for cell sensitivity (80.0 %)
- Table 8 (a+b): Summary of results with SEIFREI Desinfektions Hand-Gel and MVA

### Legend to the Figures

- Figure 1: Virus-inactivating properties of SEIFREI Desinfektions Hand-Gel (80.0 %)
- Figure 2: Virus-inactivating properties of formaldehyde (0.7 %)



**Table 1: Raw data for SEIFREI Desinfektions Hand-Gel (80.0 %) tested against MVA at 20 °C (quantal test; 8 wells) (#6743) (1<sup>st</sup> assay)**

Product	Concentration	Interfering substance	Contact time (min)	Dilutions (log <sub>10</sub> )									
				1	2	3	4	5	6	7	8	9	
test product	80.0 %	clean conditions	0.25	n.d.	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	n.d.	n.d.
			0.5	n.d.	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	n.d.	n.d.
			1	n.d.	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	n.d.	n.d.
			30	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
test product cytotoxicity	80.0 %	clean conditions	n.a.	tttt tttt	0000 0000	0000 0000	0000 0000	0000 0000	n.d.	n.d.	n.d.	n.d.	
virus control	n.a.	clean conditions	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	3000 4300	0000 0000	0000 0000	n.d.	
			60	4444 4444	4444 4444	4444 4444	4444 4444	4440 4343	0020 0002	4000 0000	0000 0000	n.d.	

n.a. = not applicable  
n.d. = not done

0 = no virus present; t = cytotoxic  
1 to 4 = virus present (degree of CPE in 8 cell culture units) (wells of microtitre plates)

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**Table 2: Raw data for SEIFREI Desinfektions Hand-Gel (80.0 %) tested against MVA at 20 °C (quantal test; 8 wells) (#6744) (2<sup>nd</sup> assay)**

Product	Concentration	Interfering substance	Contact time (min)	Dilutions (log <sub>10</sub> )										
				1	2	3	4	5	6	7	8	9		
test product	80.0 %	clean conditions	0.25	n.d.	0200 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	n.d.	n.d.	
			0.5	n.d.	0200 0200	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	n.d.	n.d.	
			1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
			30	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
test product cytotoxicity	80.0 %	clean conditions	n.a.	tttt tttt	0000 0000	0000 0000	0000 0000	0000 0000	n.d.	n.d.	n.d.	n.d.		
virus control	n.a.	clean conditions	0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	
			60	4444 4444	4444 4444	4444 4444	4444 4444	4444 4432	3000 0300	0000 0000	0000 0000	n.d.		

n.a. = not applicable  
n.d. = not done

0 = no virus present; t = cytotoxic  
1 to 4 = virus present (degree of CPE in 8 cell culture units) (wells of microtitre plates)

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Medizinprodukten  
ZLG-AP-216.11.02



**Table 3: Raw data for SEIFREI Desinfektions Hand-Gel (50.0 %) tested against MVA at 20 °C (quantal test; 8 wells) (#6743)**

Product	Concentration	Interfering substance	Contact time (min)	Dilutions (log <sub>10</sub> )									
				1	2	3	4	5	6	7	8	9	
test product	50.0 %	clean conditions	0.25	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
			0.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
			1	n.d.	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	n.d.	n.d.	
			30	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
test product cytotoxicity	50.0 %	clean conditions	n.a.	tttt tttt	0000 0000	0000 0000	0000 0000	0000 0000	n.d.	n.d.	n.d.	n.d.	
virus control	n.a.	clean conditions	0	4444 4444	4444 4444	4444 4444	4444 4444	4444 4444	3000 4300	0000 0000	0000 0000	n.d.	
			60	4444 4444	4444 4444	4444 4444	4444 4444	4440 4343	0020 0002	4000 0000	0000 0000	n.d.	

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**Table 4: Raw data for SEIFREI Desinfektions Hand-Gel (10.0 %) tested against MVA at 20 °C (quantal test; 8 wells) (#6743)**

Product	Concentration	Interfering substance	Contact time (min)	Dilutions (log <sub>10</sub> )									
				1	2	3	4	5	6	7	8	9	
test product	10.0 %	clean conditions	0.25	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
			0.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
			1	n.d.	4444	4444	4444	3343	0002	0000	0000	n.d.	n.d.
			30	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
test product cytotoxicity	10.0 %	clean conditions	n.a.	tttt	0000	0000	0000	0000	0000	n.d.	n.d.	n.d.	n.d.
virus control	n.a.	clean conditions	0	4444	4444	4444	4444	4444	3000	0000	0000	0000	n.d.
			60	4444	4444	4444	4444	4440	0020	4000	0000	0000	n.d.

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n.d. = not done

0 = no virus present; t = cytotoxic  
1 to 4 = virus present (degree of CPE in 8 cell culture units) (wells of microtitre plates)

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**Table 5: Raw data for formaldehyde solution (0.7 %) tested against MVA at 20 °C (quantal test; 8 wells) (#6743)**

Product	Concentration	Interfering substance	Contact time (min)	Dilutions (log <sub>10</sub> )								
				1	2	3	4	5	6	7	8	9
formaldehyde	0.7 % (m/V)	PBS	5	tttt tttt	tttt tttt	tttt tttt	2110 0020	0000 0000	0000 0000	0000 0000	0000 0000	n.d.
			15	tttt tttt	tttt tttt	tttt tttt	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	n.d.
			30	tttt tttt	tttt tttt	tttt tttt	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	n.d.
			60	tttt tttt	tttt tttt	tttt tttt	0000 0000	0000 0000	0000 0000	0000 0000	0000 0000	n.d.
formaldehyde cytotoxicity	0.7 % (m/V)	PBS	n.a.	tttt tttt	tttt tttt	tttt tttt	0000 0000	0000 0000	n.d.	n.d.	n.d.	n.d.
virus control	n.a.	PBS	0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
			60	4444 4444	4444 4444	4444 4444	4444 4444	4103 4244	0000 0004	0000 0000	0000 0000	n.d.

n.a. = not applicable  
n.d. = not done

0 = no virus present; t = cytotoxic  
1 to 4 = virus present (degree of CPE in 8 cell culture units) (wells of microtitre plates)

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**Table 6: Raw data for control of efficacy for suppression of disinfectant's activity (80.0 %) (#6743)**

Product	Interfering substance	dilutions (log <sub>10</sub> )									
		1	2	3	4	5	6	7	8	9	
test product	clean conditions	n.d.	4444 4444	4444 4444	4444 4444	4444 4444	0004 1220	0240 0000	0000 0000	0000 0000	n.d.
corresponding virus control	clean conditions	4444 4444	4444 4444	4444 4444	4444 4444	4440 4343	0020 0002	4000 0000	0000 0000	0000 0000	n.d.

n.a. = not applicable  
n.d. = not done

0 = no virus present; t = cytotoxic  
1 to 4 = virus present (degree of CPE in 8 cell culture units) (wells of microtitre plates)

**Table 7: Raw data (MVA) for cell sensitivity (80.0 % solution) (#6743)**

Product	Dilution	Dilutions (log <sub>10</sub> )									
		1	2	3	4	5	6	7	8	9	
PBS	-	4444 4444	4444 4444	4444 4444	4444 4444	4434 4324	3000 4004	0000 0000	0000 0000	0000 0000	n.d.
test product	1:100	4444 4444	4444 4444	4444 4444	4444 4444	4414 4244	0003 0000	0000 0000	0000 0000	0000 0000	n.d.

n.a. = not applicable  
n.d. = not done

0 = no virus present; t = cytotoxic  
1 to 4 = virus present (degree of CPE in 8 cell culture units) (wells of microtitre plates)

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**Table 8a: Summary of results with SEIFREI Desinfektions Hand-Gel and MVA**

Product*	Concentration	Interfering substance	Level of cytotoxicity	log <sub>10</sub> TCID <sub>50</sub> /ml after ....min					> 4 log <sub>10</sub> reduction after ...min
				0.25	0.5	1	30	60	
test product (1)	80.0 %	clean conditions	2.50	≤ 2.50±0.00	≤ 2.50±0.00	≤ 2.50±0.00	n.d.	n.d.	0.25 (RF ≥ 4.25±0.48)
test product (2)	80.0 %	clean conditions	2.50	≤ 2.63±0.25	≤ 2.75±0.33	n.d.	n.d.	n.d.	0.25 (RF ≥ 4.13±0.41)
test product (1)	50.0 %	clean conditions	2.50	n.d.	n.d.	≤ 2.50±0.00	n.d.	n.d.	1 (RF ≥ 4.25±0.48)
test product (1)	10.0 %	clean conditions	2.50	n.d.	n.d.	6.63±0.25	n.d.	n.d.	> 1 (RF = 0.13±0.54)

\*the number in the brackets gives the number of the corresponding virus control (see table 8b)

n.a. = not applicable    n.d. = not done

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**Table 8b: Summary of results with SEIFREI Desinfektions Hand-Gel and MVA**

Product	Concentration	Interfering substance	Level of cytotoxicity	log <sub>10</sub> TCID <sub>50</sub> /ml after ....min					> 4 log <sub>10</sub> reduction after ... min
				0	5	15	30	60	
formaldehyde	0.7 % (w/v)	PBS	4.50	n.d.	≤ 5.00±0.38	≤ 4.50±0.00	≤ 4.50±0.00	≤ 4.50±0.00	≥ 15 (RF ≥ 2.00±0.35)
virus control	n.a.	PBS	n.a.	n.d.	n.d.	n.d.	n.d.	6.50±0.35	n.a.
virus control (1) (+ suppression)	n.a.	clean conditions	n.a.	6.88±0.37	n.d.	n.d.	n.d.	6.75±0.48	n.a.
virus control (2)	n.a.	clean conditions	n.a.	n.d.	n.d.	n.d.	n.d.	6.75±0.33	n.a.
suppression control	80.0 %	clean conditions	2.50	n.d.	n.d.	n.d.	6.25±0.50	n.d.	n.a.
sens. PBS	n.a.	n.a.	n.a.	n.d.	n.d.	n.d.	n.d.	6.88±0.37	n.a.
sens. product	80.0 % → 1:100	n.a.	n.a.	n.d.	n.d.	n.d.	n.d.	6.63±0.25	n.a.

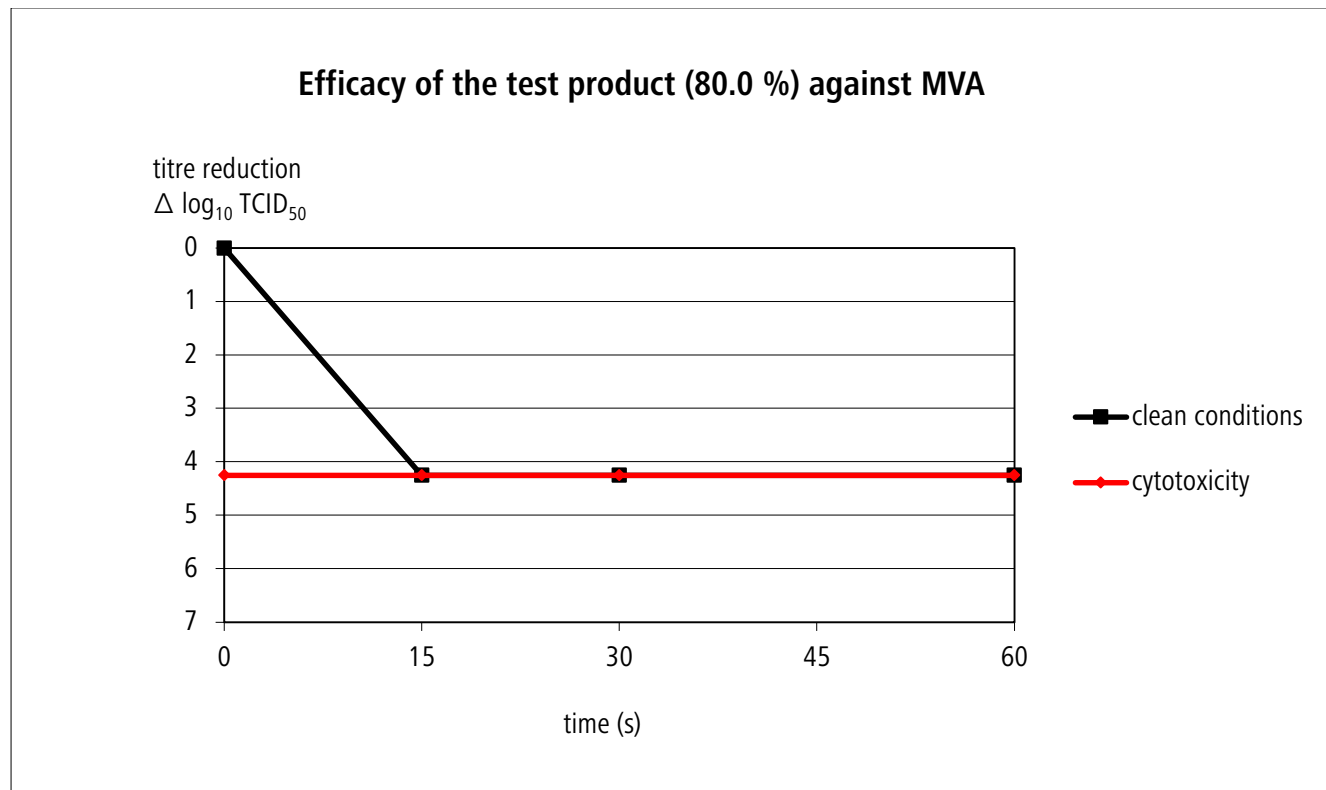
n.a. = not applicable    n.d. = not done    sens. = sensitivity

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**Figure 1: Virus-inactivating properties of SEIFREI Desinfektions Hand-Gel (80.0 %)**

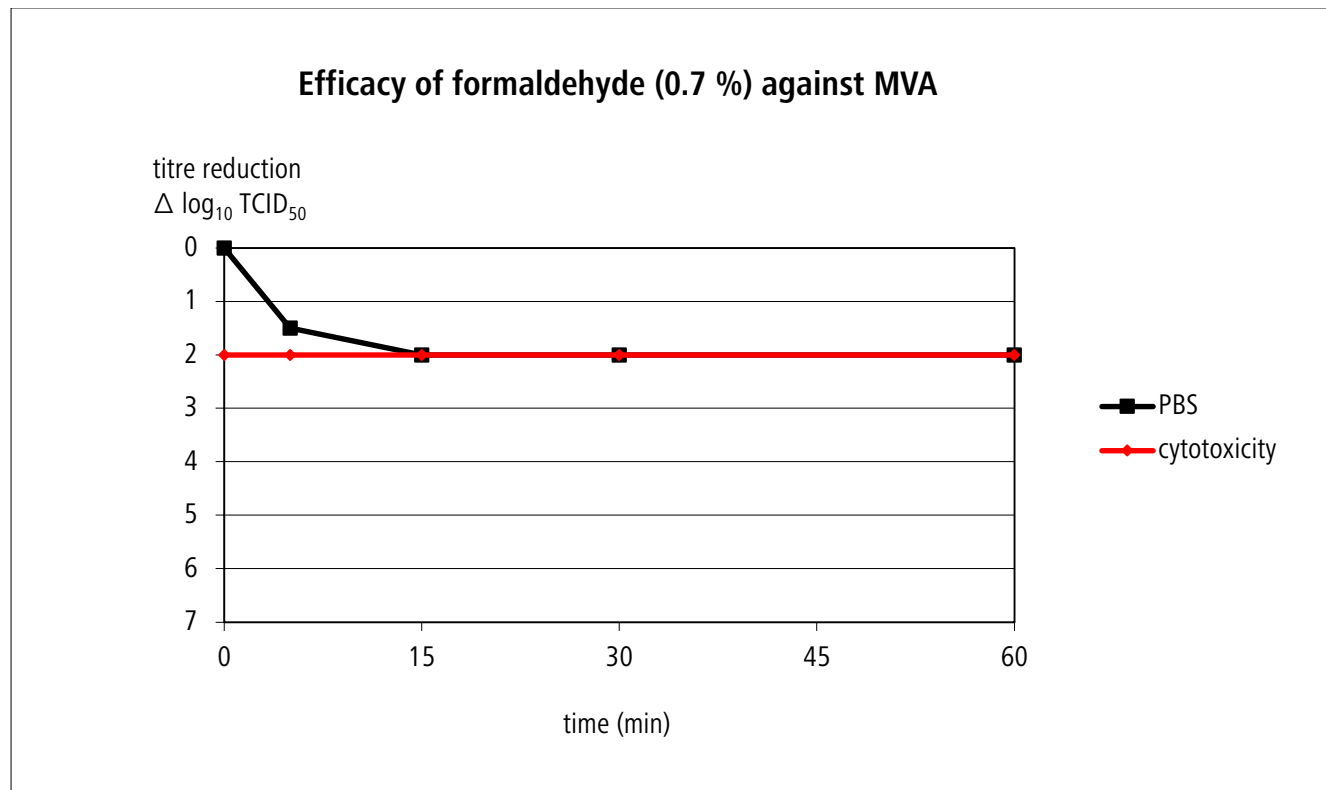


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**Figure 2: Virus-inactivating properties of formaldehyde (0.7 %)**



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