

# The evaluation of virucidal activity of chemical disinfectants used in the veterinary area NF EN 14675

## A. PRODUCT

Name of biocid : **PhotoACTIVE Equine**

Batch number : **201123**

Manufacturing : **Virus PROTECT PHOTOACTIVE**

Expiry date : **23/11/22**

Storage condition :  Darkness     +2 à +10°C     Room temperature

Active substance : **Dioxyde titanium nano =< 0.99% silver phosphate glass =<0.05%**

Special precaution : security form

Active concentration (m/v ou v/v) : **Dilution at 70%**

## B. METHOD AND BIOLOGICAL MATERIALS

**Method** :  By dilution-neutralization     Others (préciser) :

**Virus** : Name : **EHV1**

Batch number: **EHV1/2022 PRODUCTION : 06/2022**

Infectious titer :  **$T = 10^{-4.43}$  for 25  $\mu$ l**

**$T = 10^{-4.43-0.3} = 10^{-4.73}$  for 50  $\mu$ l**

**$T = 10^{-4.73-0.3} = 10^{-5.03}$  for 100  $\mu$ l that is  $10^{-6.03}$ /mL.**

**Cell line** : Name : **RK13**

Date of last maintenance : **27/10/22**

Cell passage number : **RK13 (219)**

Composition of the culture medium : **complete medium = EMEM + 1% NEAA + 10 % SVFV**

## C. EXPERIMENTAL CONDITIONS

Date of test : **27/10/22**

Technician : **CPLN/CMIL/MVER**

### **Description of test:**

Biocide used during the test : Dure water (*less than 12 hours*) **prepared on 27/10/22 at 9H30, pH = 7.18**

Solution A (*1 month*) prepared on : **10/10/22 expiry 10/11/22**

Solution B (*1 week*) préparée le : **25/10/22 expiry 01/11/22**

Biocid test oncentration: **70 %**

Interfering substance (SI) : **BSA 22-1684 du 25/10/22 expiry 25/11/22**

Neutralizing :  Culture medium  Others : **119 expiry : 24/10/22**

Virus contact time and temperature – SI – biocid : **45 min ± 10 sec**

10°C ± 1°C

Others : **Room temperature**

Incubation temperature for virus and cells : **37°C ± 1°C, 5% CO<sub>2</sub>**

## D. RESULTS

### D.1. Preparation of the test biocid solution (valid for 2h) :

Stock solution at 1.25X (v/v, m/v) « ready for use » undiluted	<b>Diluted at 70 % (toxicity test)</b>
Biocid (m ou v) mL	<b>28 ML</b>
Diluent (v) mL	<b>12 ML</b>
<b>Final concentration (X) of test v/v, m/v</b>	<b>70%</b>

Biocid solution prepared : (test : **10h**) / (validation : **AGRA**)

End of contact time : (test : **10h45**) / (validation : **AGRA**)

### D.2. Résultats des essais de validation :

Reading : **31/10/22 et 02/11/22** by : **MVER**

- Virus control : infectious titer obtained : **10<sup>-6.03</sup> /mL**
- Viral test suspension : infectious titer obtained : **10<sup>-6.98</sup>/mL**
- Cytotoxicity of biocid : concentration : **70%**  
**Date of test : 27/10/22 AGRA**  
**Medium used : EMEM 119 expiry : 01/11//2022**  
**Cells : RK13 (219) 500 000 cells/mL expiry : 27/10/22**

✓ Alteration of the structure of RK13 cells :  YES  NO

Remark : no remark

### D.3. Result of test:

Biocid concentration	<b>70%</b>		
Contact time	<b>45 MIN</b>		
Interfering substance	<b>BSA</b>		
<b>Viral titer</b> (TCID <sub>50</sub> / mL)	<b>10<sup>-2.1</sup></b>	<b>10<sup>-2.1</sup></b>	<b>10<sup>-2.1</sup></b>

<b>Viral suspension control</b> (TCID <sub>50</sub> / mL)	<b>10<sup>-6.98</sup></b>
<b>Reduction</b> (Log <sub>10</sub> )	<b>4.88</b>

**Criteria for virucidal activity against viruses according to standard NF EN 14675 :**

Reduction at least equal to 4,0 Log<sub>10</sub> of the infectious titer in 45 min at room temperature with albumine serum bovine.

**D.4. Conclusion :**

According to standard NF EN 14675

Product name : **PhotoACTIVE Equine**

Batch number : **201123**

**X Shows virucidal activity against the HVE-1 virus**

Concentration at **70%**

**PRODUCT CONFORM at 45 min (reduction in titer >4 log)**

**Does not show virucidal activity against the HVE-1 virus for the dose tested**

Head of manager : **Alexandra Grasteau**

Date : **18/11/22**