

# AGRICULTURAL RESEARCH COUNCIL

## ONDERSTEPSPOORT VETERINARY INSTITUTE

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### TRANSBOUNDARY ANIMAL DISEASES PROGRAMME

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FAO Collaborating Centre for sub-Saharan Africa: foot-and-mouth disease and African swine fever

OIE Reference Laboratory: foot-and-mouth disease and African swine fever

## STUDY REPORT: DISINFECTANT EFFICACY TEST

### GENERAL STUDY INFORMATION

**STUDY TITLE:** Test for efficacy against African swine fever virus (ASFV)

**Client:** Health and Hygiene (Pty) Ltd  
Stormill Ext 10  
Roodepoort  
Gauteng  
South Africa

**Test facility:** OVI-TAD

### TEST SUBSTANCE IDENTITY:

**Test substance name:** F10 SC Veterinary Disinfectant.

### STUDY DATES

Experiment start date: 22/10/2019

Experiment end date: 25/10/2019

### OBJECTIVE:

The objective of this study was to determine the effectiveness of the disinfectant to inactivate ASFV.

### STUDY MATERIALS

| Test organism | Isolate           | Growth medium | Cell line                             |
|---------------|-------------------|---------------|---------------------------------------|
| ASF virus     | ASF-0186 LUS 93/1 | RPMI          | Primary cultures of swine macrophages |

### Cultures used:

Primary swine macrophages grown in 96 well plates with RPMI medium with 12.5 % swine serum as growth medium, in which red blood cells are present.

### TEST METHOD:

#### Preparation of test organism:

ASF virus isolate LUS93/1 was utilised from a stock stored at -70 °C.

#### Preparation of test substance:

1:100 Dilution (High Level Disinfection).

#### Exposure conditions:

0.5ml of the test organism and 0.5ml of the disinfectant was added to 4ml RPMI + 1% normal bovine serum. The contact time was 30 minutes at 20°C.

#### Test system recovery:

Following the completion of the exposure period, eight serial tenfold dilutions of the test substance mixtures and untreated control were prepared in PBS + 1% bovine serum. These were inoculated into swine macrophage cultures.

#### Incubation and Observation:

The plates were held at 37°C for six days and examined daily for haemadsorption.

**Study retention:**

\*\* was tested at a dilution of 1:100.

**RESULTS:****Control results**

|                |          |                               |
|----------------|----------|-------------------------------|
| Test organism: | LUS 93/1 | <b>Titer 10<sup>5.8</sup></b> |
|----------------|----------|-------------------------------|

**Test results**

| Test sample | Sample dilution | Reduction of titer (Log <sub>10</sub> /ml) |
|-------------|-----------------|--|
| F10 SC      | 1:100           | <b>4.8 logs</b>                            |

**Conclusion:**

\*\* was **SUCCESSFUL** in demonstrating a > 4 log<sub>10</sub> reduction of ASFV when used as received following an incubation period of 30 minutes at 20°C in the presence of PBS containing 1% normal bovine serum.

\*\* **PASSED** the disinfectant efficacy test against African swine fever virus.

Produced by: Dr L Heath

Reviewed by: Dr L Heath

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Approved by : Dr LE Heath  
(Research Team Manager: TADP)

Signature :



Date 10/11/2019

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**LAB REF : TAD 19/F10 SC R&D**  
ARCLAB REF : N/A  
CLIENT REF : None

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