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*Dear Sir/Madam*

We would like to report you about the result of the suitable contact time of your chemical disinfectant with your recommended concentration product namely "CLEANLAB FS SANITIZER CONCENTRATE" (Lot No : 630 330 01) to inactivate the highly pathogenic avian influenza virus subtype H5N1 at viral concentration of  $1 \times 10^6$  EID<sub>50</sub> in chicken feces. According to methods including chicken embryonated eggs inoculation, hemagglutination assay and hemagglutination-inhibition test, it was found that "CLEANLAB FS SANITIZER CONCENTRATE" with diluted concentration of 1:256 can inactivate HPAI H5N1 at 30 minutes of contact time.

Best Regards,

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Head, Avian Influenza Division, Faculty of Veterinary Medicine

The study of the suitable contact times of chemical disinfectant products against highly pathogenic avian influenza subtype H5N1

Laboratory code BF630123

### Principle and methods

The contact time is one of important factor of chemical disinfectants that can completely inactivate any causative agents. For this study, your chemical disinfectant namely "CLEANLAB FS SANITIZER CONCENTRATE" was tested the suitable contact time to inactivate completely highly pathogenic avian influenza (HPAI) virus subtype H5N1 at the concentration of  $1 \times 10^6$  EID<sub>50</sub>/ml. According to methods of viral isolation, hemagglutination assay and hemagglutination-inhibition test, your product was processed. In brief, 1 ml. of the HPAI virus subtype H5N1 ( $1 \times 10^6$  EID<sub>50</sub>/ml) was added in 4 ml of chicken feces. Then 5 ml of your recommended concentration chemical disinfectants were added and well mixed at ratio of 1:1 v/v in various contact times at 1, 5, 10, 15 and 30 minutes, respectively. At each time point of contact times, swab samples were collected and processed for detecting the HPAI virus by the methods described above. The shortest contact time (table 1) was determined by the complete viral inactivation, shown by negative virus isolation.

Result of the suitable contact time of chemical disinfectant products against highly pathogenic avian influenza subtype H5N1

Chemical Disinfectant	Testing concentration	The minimal contact time against to HPAI virus subtype H5N1
CLEANLAB FS SANITIZER CONCENTRATE	1:256 v/v	Can inactivate virus within 30 minutes.

**Remarks:** The main chemical components of the commercial chemical disinfectant products:

1. Alkyl dimethyl benzyl ammonium chloride 4% w/w
2. Didecyl dimethyl ammonium chloride 1.8% w/w
3. Dioctyl dimethyl ammonium chloride 1.2 w/w
4. Octyl decyl dimethyl ammonium chloride 30% w/w