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VIROLOGY DEPARTMENT

CENTRAL VETERINARY LABORATORY

DATE:	10.7.95
DISINFECTION TEST:	Laboratory evaluation of "STALOSAN F" - dry disinfectant powder.
CLIENT:	Stormollen PO BOX 508 Uxbridge Middelsex UB9 6QH
PRODUCT:	"STALOSAN F" - Dry disinfectant Powder (Pink)
TEST ORGANISM:	Canine Parvovirus

COMMERCIAL IN CONFIDENCE

METHOD

The disinfectant test was preformed using the AOAC (USA) drying method with some modifications for the control test.

The canine parvovirus was suspended in WHO hard water to give a TCID50 of 109. The virus suspension (0.2 ml) was placed onto sterile glass petri dishes and spread evenly. This was allowed to dry at 37° C for approximately 50 minutes. To each dried aliquot of virus "Stalosan F" was added, 0.5 g per Qm^2 (equivalent to 50 gram per m^2). The disinfectant was allowed to remain in contact with separate aliquots of virus for 5 mins, 15 mins and 30 mins. respectively.

After these exposure times, the disinfectant powder was removed and each aliquot of dried virus was resuspended in 2.0 ml of MEM tissue culture growth medium. Tissue culture plates were set up to contain 1.8 ml of MEM in each group of 9 wells. 0.2 ml. of the mixture from a chosen petri dish was then placed into the first well of a group and mixed with the MEM. 0.2 ml. from this 10^{-1} well was then transferred to the next well and so on up to a dilution of 10^{-9}.

To one of the dried aliquots of virus 2.0 ml of hard water only was added and a virus control thus prepared. This was titrated in cell-culture medium as above.

Aliquots of 0.025 ml of each dilution were placed onto preseeded 96 well microtitre plates (0.05 ml of CRFK cell suspension per well; 4 wells in a column were used for each tenfold dilution of disinfectant mixture, and 8 for the virus control. The 3 end columns of the microtitre plate were used as cell controls (0.05 ml of cells was mixed with 0.025 ml of MEM only). The plates were incubated at 37° C in a CO2 incubator for 6 days, and then fixed in 20% acetone. The virus, was detected using a CPV monoclonal antibody and a goat anti-rat immunoperoxidate enzyme assay.

The Virus titres were calculated by the Karber method.

RESULTS

Disinfectant "Stalosan F" Contact times	wet conditions virus titre $TCLD_{50}$	Log Reduction
10 minutes 15 minutes 30 minutes	4.5 4.0 2.67	4.93 (Pass) 5.43 (Pass) 6.76 (Pass)

Virus control (wet) titre 9.43

A log reduction of 4.0 or greater is a pass.

CONCLUSION

The Veterinary Disinfectant "Stalosan F" (dry disinfectant powder) reduced the titre of canine parvovirus by a titre of greater than 4.0 under wet conditions.

Under normal AOAC test procedures the virus suspension is dried and then a dilution of disinfectant under test is used to resuspended the virus. This is then left at room temperature for 10 minutes before the virus dilutions are made.

With the disinfectant powder it is difficult to determine whether the "efficacy" of the disinfectant is due to the adsorption of the virus suspension into the powder, or to its active chemical ingredients.

These results for "Stalosan F" in no way constitute official approval under the MAFF Diseases of Animal (Approved Disinfectants) order 1978 (as amended)

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