Prophyl® S at 2% (1:50) is effective on *Cryptosporidium parvum* and *Eimeria spp* , in 2 hours at 10°C

Trial description

Study objective

In vitro inactivation of Prophyl®S, at different concentrations, temperatures and contact times, on *Cryptosporidium parvum*.

The objective of the study is to determine the inactivation effect on *Cryptosporidium parvum (C. parvum)* oocysts of Prophyl® S at 0,5% at l0°C during 2 hours, at 2% at l0°C during 2 hours, at 2,5% at 10°C during 2 hours and at a concentration of 3% at l0°C during 2 hours.

Oocyst viability was determined according to DVG guideline by calculation of the in vitro replication rate of *C. parvum* after disinfection with the test product. Enumeration of oocysts obtained after cell culture was made by quantitative PCR targeting the Zinc Protease Telomerase gene of *C. parvum*. The study was conducted according to Good Scientific Practice (ISO 17025, NF U 47-200, NF U 47-600).

Study design

The in vitro efficacy study was conducted using *C . parvum* oocysts purified from calves' feces on a host cell culture. Oocysts were disinfected with Prophyl® S at the different concentrations and times.

Results

The results are summarized in Table 1.

Table 1. Mean inactivation efficacy of Prophyl® S (% inhibition compared to infected untreated negative control group NC; n.a., not applicable).

Group	Mean efficacy (% of NC)	NC used as reference	SD* (absolute %)
NC 2h 10°C	n. a.	n. a.	n. a.
PC (product B)	98,9	NC 2h - 10°C	1,28
Prophyl® S 1 - 0,5%, 2h at 10°C	0	NC 2h - 10°C	0
Prophyl® S 2 - 2%, 2h at 10°C	98,9	NC 2h - 10°C	0,98
Prophyl® S 3 - 2.5%, 2h at 10°C	99,1	NC 2h - 10°C	0.39
Prophyl® S 4 - 3%, 2h at 10°C	99,6	NC 2h - 10°C	0.32

*Standard Deviation

Conclusion

According to the DVG* criteria, the 95% reduction threshold of the *Cryptosporidium parvum* population is reached, Prophyl® S is active on *Cryptosporidium parvum* and *Eimeria spp.* if applied:

- at 2% for an incubation period of 2 hours at l0°C
- at 2,5% for an incubation period of 2 hours at l0°C
- at 3% for an incubation period of 2 hours at l0°C

Use biocides safely. Always read the label and product information before use.

** (Deutsche Veterinärmedizinische Gesellschaft)*

Prophyl S.TB4-EN01.1022/MNArt