

## Contamination level of syringes - how can we improve the hygiene?

This experiment was performed in farms in the Netherlands and Belgium by a pharmaceutical company.



The intention was to investigate the degree of contamination in the syringes that are used for vaccines in the herds and what factors that have an effect on it. The degree of contamination can have in worse case an impact on the effect of the vaccine and on the occurrence of abscess after injection.

5 new syringes and 79 used syringes were included in the experiment. In addition, a questionnaire should be answered on whether or not the syringes were cleaned and whether they were stored in a refrigerator. The level of bacteria and fungi was investigated.

The results showed that by simply cleaning syringes there is no clear difference in the number of bacteria in the syringes. On the contrary, it was known that after cleaning there were several syringes with high levels of bacteria. This is probably because that the syringes are left moist in a warm environment and it can promote bacterial growth.

If you store the syringes after use in a refrigerator, you can reduce the proportion of syringes with high levels of bacteria. When combined with cleaning and subsequently storing syringes in the refrigerator, the proportion of syringes with high levels of bacteria is reduced. The same applies to contamination with fungi/ yeast.

- **Many syringes were intermediate to highly contaminated**
- **Assessment of predictors syringe hygiene:**

Contamination	Rinsing	Fridge	Rinsing + Fridge
<b>Bacteria</b> 	☹️	😊	😊😊
<b>Yeast fungi</b> 	☹️	😊	😊😊

- **Take home**

- Syringe contamination: room for improvement!
- Prevention rather than problem solving
- Need for quick detection method on-farm

The conclusion is that cleaning combined with the storage in the refrigerator is clearly preferable.

Remains of soap and disinfection must be rinsed out before using the syringes otherwise it can destroy the vaccines. Therefore it is recommended that the syringes be flushed by water properly.

Syringes still need to be replaced regularly.