

MEASUREMENT OF SAFETY PARAMETERS OF SIMULTANEOUS ADMINISTRATION OF TWO VACCINES AGAINST MASTITIS

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INTRODUCTION

STARTVAC® and UBAC® are vaccines to control mastitis caused by different environmental and contagious bacterial pathogens. The vaccination plan of those is scheduled around the calving period and it might overlap in those farms implementing both products in their mastitis prevention programs.

This study presents the findings on safety of a simultaneous administration of those products in lactating cows.

MATERIALS AND METHODS

Cows during the early lactation phase were allocated into two groups. Group 1 (G1, n=10) was vaccinated simultaneously with STARTVAC® and UBAC® at different side of the neck by intramuscular injection. Group 2 (G2, n=10) was used as control and thus vaccinated with sterile PBS in the same way. Clinical signs, rectal temperature, local reactions and daily milk production were monitored up to 3 days post vaccination.

RESULTS

No **clinical sign** was observed during the entire study. Average rectal temperature (Fig. 1) in G1 were slightly higher compared G2 at 6 hours post vaccination; however, the difference **was not statistically significant** ($\Delta=+0.48^{\circ}\text{C}$; t-test, $p=0.064$).

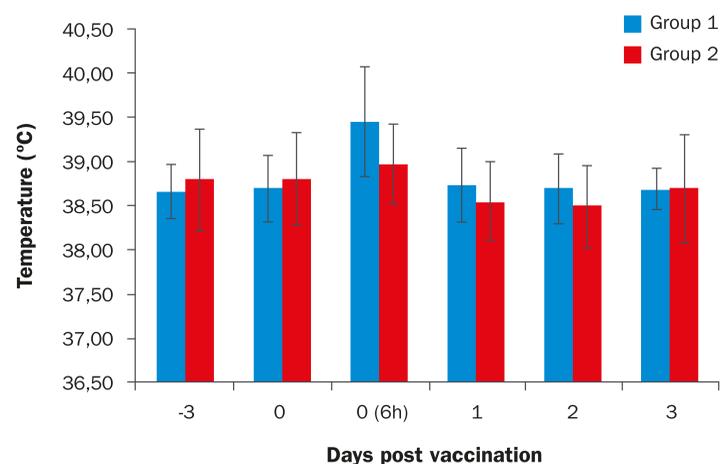


Figure 1. Rectal temperature. Average and standard deviation of each experimental group. t-test; * $p<0.05$.

Hard spot in the skin less than 5 mm (injection point) and tumefaction (maximum diameter of 15-30 mm) were the only local reactions observed in G1 (Fig. 2). G2 showed just injection point reactions (data not shown).

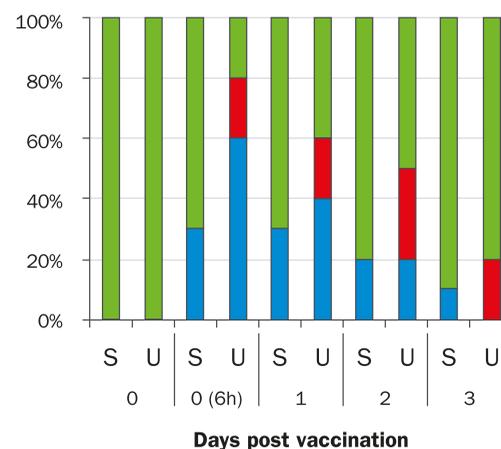


Figure 2. Local reactions of G1. Percentage of cows showing no reaction (green), inoculation point (blue) or tumefaction (red) at the inoculation sites of UBAC® (U) or STARTVAC® (S).

Finally, daily milk production after vaccination was ranging between 20-65 Kg, regardless group allocation (Fig. 3). **Similar daily milk productions were observed between groups.** However, the sample size was not enough to determinate statistically significant differences.

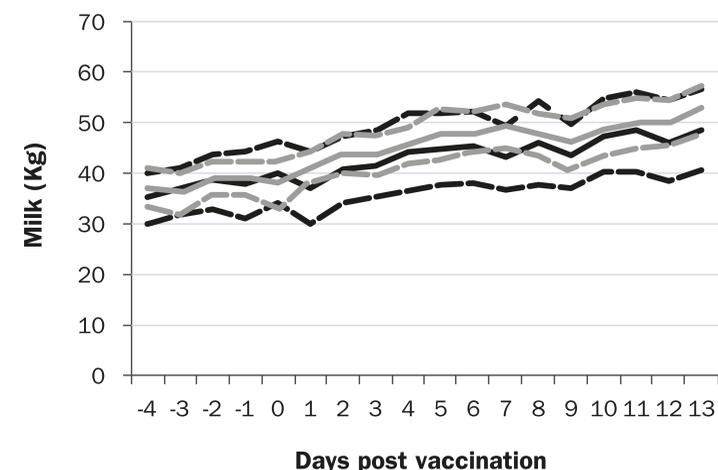


Figure 3. Daily milk production. The continuous line represent the average of G1 (black line) and G2 (grey line). The dashed lines represent the limits of the 95% confidence interval.

CONCLUSIONS

Simultaneous administration of STARTVAC® and UBAC® do not induce adverse reaction out of specification of the Specific Product Characteristics.

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