

EFFECT OF STORAGE TEMPERATURE OF EXTENDERS ON THE QUALITY OF BOAR SEMEN

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Introduction

In artificial insemination, semen extenders are important to maintain the quality and survivability of sperm. This study aimed to determine the effects of different storage temperatures of KRUUSE Beltsville Thawing Solution (BTS) powder on motion characteristics, live percentage and morphology of extended boar semen.

Materials and Methods

Semen samples were collected from seven different boars. Each sample was mixed with 3 different BTS extenders that were stored at 4°C, 16°C and room temperature prior to preparation of the extender. All the extended semen samples were kept at 16°C and evaluated at 24 hour intervals for 3 days. Data was analyzed with one-way ANOVA (SPSS 22) with $P < 0.05$ considered statistically significant.

Results and Discussion

General motility and live percentage of spermatozoa decreased gradually over time for all temperatures. However, there was no significant difference in the general motility, live percentage and abnormal morphology between all temperatures. There was a positive correlation ($P < 0.05$) between general motility and live percentage of the sperm. Negative correlation ($P < 0.05$) was observed between both general motility and live percentage with the abnormal morphology percentage. In conclusion, storing the extender in room temperature prior to preparation can maintain the highest quality of extended boar semen. However, statistically there was no difference in the survivability of sperm in extended boar semen for all storage temperatures.