

عنوان مقاله:

Effects of holding semen for 4 h at 15 °C in different extenders prior to cryopreservation on sperm characteristics and subpopulation kinematics in INRA180 sheep

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خلاصه مقاله:

The aim of the present study was to evaluate the effects of holding semen for 4 h at 15 °C in different extenders prior to cryopreservation on sperm characteristics and subpopulation kinematics in INRA180 sheep. Semen samples were collected using an artificial vagina from two animal groups. Group 1: the rams kept next to the lab (G1) considered as a control and group 2: the rams kept in a farm faraway (170 km) from the lab (G2). The semen was extended in Milk egg yolk, Andromed® and Tryladil® extenders to reach 0.2×10^9 spermatozoa/mL. Before freezing, the samples from G1 were directly cooled to 5 °C during 2 h. While those for G2 were transported within 4 h to the laboratory in a temperature-regulated cooler box at 15 °C then cooled to 5 °C. Differences in sperm motility, viability and abnormality in pre- and post-thaw steps and subpopulation kinetic parameters in post thaw step were detected between the two groups, and between extenders within the groups. Evaluation of the kinetic data obtained with a CASA (Computer-Assisted Sperm Analysis), applying a cluster analysis, yielded in INRA180 rams two post thaw sperm subpopulations (SPs). The SP1 and SP2 included spermatozoa characterized by low and high kinetic parameters, respectively. Disregarding the extender type, the proportional size of SP1 was lower than SP2 in G1, Nevertheless, in G2 the percentage of SP1 was higher than SP2. In conclusion, changing conditions during the equilibration time (from 2 h at 5 °C to 4 h at 15 °C) can extend the total process duration and causes a decrease in post-thawed semen quality in INRA180 rams.

کلمات کلیدی:

Ram, Spermatozoa, extenders, sperm subpopulation, cryopreservation

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