

# Effects of different cryoprotectants on semen traits in New Zealand rabbits <sup>(1)</sup>

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## Abstract

The aim of this study was designed to identify a suitable freezing protocol for rabbit semen by comparing the effects of different operating procedures. In our study, pooled semen was diluted 1:1 or 1:4 (v:v) with a freezing extender composed of Tris-citrate-glucose solution [containing 0.5% BSA (bovine serum albumin) and 0.1 M or 0.058 M sucrose] and 6, 10, or 16% DMSO (Dimethyl sulfoxide), 4% Ficoll70 or 10% LDL (low-density-lipoprotein) after cooling down to 5°C. The semen suspension was then loaded into 0.25 mL plastic straws and equilibrated at 5°C for 45 minutes before freezing in liquid nitrogen vapor (5 cm above the liquid nitrogen surface). The sperm characteristics evaluated after thawing were sperm motility, vitality, and progressive motility. The best results of rabbit sperm freezing could be obtained by using 1:1 (v:v) dilution with the freezing extender consisting of 10% DMSO which contributed to the sperm characteristics after thawing of motility ( $40.19 \pm 7.65\%$ ), vitality ( $31.45 \pm 6.6\%$ ), and progressive motility ( $15.23 \pm 2.77\%$ ).

Key words: Cryoprotectant, Rabbit, Semen cryopreservation.

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