

Changes in Acrosin Activity and Membrane Function of Boar Spermatozoa

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The aims of this work were to determine the acrosin activity and to evaluate the structural and functional integrity of AI boar spermatozoa. The acrosin activity of spermatozoa were 5.40, 4.10 and 3.40 mIU/10⁶sperm in raw, extended and frozen semen respectively, which differed significantly each other (P<0.05). After the raw and extended semen were exposed to cold and thermal shock, the acrosin activities of spermatozoa in the raw semen were 5.39, 5.21 and 5.29 mIU/10⁶sperm for control (non-shock), cold shock and thermal shock, and those of extended semen were 4.21, 3.98 and 4.00 mIU/10⁶sperm. This value among treatments did not differ significantly. The acrosin activities of spermatozoa in the extended and stored semen were 3.27, 3.52, 3.46 and 3.23 mIU/10⁶sperm, while hypo-osmotic test (HOST) values were 56.5%, 64.7%, 66.0% and 56.0%, following 4 days storage at 4°C, 17°C, 25°C and 37°C, respectively. The results at 17°C and 25°C appeared to be best compared with the other storage temperatures.

(Key words) *Acrosin activity, boar sperm, HOST, membrane function*

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