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Studies on the Viability of Frozen Removed Seminal Plasma by Saline(RSP-S) and Tris-buffer(RSP-T) Semen of Small Spcies Dogs

S. K. Kim

Coll. of Vet. Med., Chungnam National University

This study was carried out to investigate the general characteristics such as volume, sperm concentration, sperm motility, sperm abnormality on whole semen, RSP-S and RSP-T semen and fractional semen of small size dogs, and the effect of temperature and preservation time and cryoproservation on motility of whole and RSP-S and RSP-T semen. Multiple ejaculates were collected from small dogs by the digital manipulation of penis.

1. The volume per ejaculate semen, sperm of concentration and motility and abnormal sperm rate of 1st fractional semen were 0.65±0.09 ml, 4.52±0.35×10^6 cells/ml, 15,64±3.85% and 5.50±0.62%. Also, 2nd fractional semen were 1.25±0.20ml, 3.35±0.48×10^6cells/ml, 96.25±4.65% and 4.24±0.46%. And 3rd fractional semen were 1.45±0.21ml, 3.85±0.52 ×10^6cells/ml, 92.82±4.24% and 4.66±0.58%, respectively.
2. The sperm of concentration and motility and abnormal sperm rates of whole, RSP-S and RSP-T semen were 5.45±0.82×10^6 cells/ml, 95.55±4.65%, 4.58±0.45% and 4.82±0.36 ×10^6cells/ml, 90.10±3.42%, 6.48±0.68% and 4.55±0.45×10^6cells/ml, 93.25±3.85%, 4.82±0.58%, respectively.
3. The motility of whole, RSP-S and RSP-T semen were higher at 4°C than at 38°C. When preservation temperature was at 4°C, survival rates of RSP-S and RSP-T sperm were 97.54%~6.25% at 1-72 hrs, 97.40%~5.62% at 1-100 hrs, respectively.
4. The survival rates of slow and rapid frozen 2nd fraction, RSP-S and RSP-T semen were 67.3±4.45%, 88.8±4.46% and 46.4±3.84%, 74.4±4.20%, respectively. Survival rates was significantly higher in frozen RSP-S and RSP-T semen than that in control group(8.5 ±2.12%).

(Key words : dog, RSP-S, RPS-T, freezing, survival rate)