The study was composed of 3 experiments. Semen from 5 dogs (3 ejaculates from each dog for experiment 1 and 2; a total of 15 ejaculates for each experiment) and semen from 7 dogs (3 ejaculates from each dog; a total of 21 ejaculates for experiment 3) was collected by manual manipulation. They were assessed for volume, sperm concentration, total sperm number per ejaculate, pH, progressive motility, live and dead sperm, sperm morphology and acrosome and membrane integrity. The objective of the first experiment was to compare the effect of removal seminal plasma from fresh semen before freezing on quality of post-thaw dog semen. The objective of the second experiment was to compare the effect of sodium dodecyl sulphate adding in formulated extender on quality of post-thaw dog semen. The objective of the third experiment was to compare formulated extender to commercial extender on quality of post-thaw dog semen. The post-thaw semen from each treatment was assessed as fresh semen evaluation except volume, pH, sperm concentration and total sperm number.

Result of the first experiment found that removal seminal plasma by centrifugation had significant effect on lower (P<0.05) sperm motility compared to control group. Although post-thawed progressive motility of removal seminal plasma was significantly lower than control group, but live spermatozoa, normal sperm morphology, acrosome and membrane integrity of sperm from treatment group were not significant difference from control group. Result of the second experiment found that post-thaw intact acrosome of dog spermatozoa in treatment group was significantly higher (P<0.05) than control group. Result of the third experiment found that the quality of post-thaw spermatozoa in formulated extender had no significant difference (P>0.05) from commercial extender.

In conclusion, the result of study provides an important information on preparing freezing canine extender including cryopreservation method in dog and these may for the establishment canine sperm bank in our own country.