International Journal of ChemTech Research
CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.4,pp558-563,2017

Additional Seminal Plasma Crude Protein to Preserve DNA Integrity of Goat Spermatozoa on Freezing Process

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Abstract : Recently, freezing post-thawing goat semen has not provided satisfying result due to low spermatozoa quality. It may be caused by triglycerol lipase enzyme content inside goat semen plasma which may reduce spermatozoa motility inside milk diluter.

This study aims to investigate the DNA integrity of goat's spermatozoa inside milk diluter after being supplemented from crude protein plasma seminalis of goat on freezing process.This researchutilized three treatment groups, namely Controlled group (P0): goat semen thawed into skim milk without crude protein seminal plasma supplementation; P1: crude protein plasma seminalis supplemented into thawed goat semen inside skim milk diluter in composition 1:1 (one part of crude protein seminal plasma was added into one part of thawed goat semen); and P2: crude protein plasma seminalis supplemented into thawed goat semen inside skim diluter in composition 1:2 (two part of crude protein seminal plasma was added into one part thawed goat semen). Then the third group performed freezing and post-thawing checked against motility, viability and DNA integrity of spermatozoa.

Observations of semen without addition of crude protein seminal plasma diluter produce the percentage of motility, viability lowest and DNA integrity showed the highest percentage. Anova test for motility, viability and DNA integrity spermatozoa are significant differences ($p < 0,05$) between P0, P1 and P2. Duncant Multiple Range Test observation in group P1 generates the percentage of motility, viability were highest and the lowest percentage of spermatozoa DNA integrity.

The conclusion of this study is addition of crude protein seminal plasma of goat's can maintain motility, viability and can increase of DNA integrity in goat's spermatozoa in skim milk diluter postthawing.

Keywords: Crude protein seminal plasma of goat, post-thawing, motility, viability and DNA integrity.

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