

## **Effect of hypotaurine and cysteine on sperm cytological parameters of cooled and post thaw boer goat semen.**

### **ABSTRACT**

The purpose of this study was to determine the influence of antioxidant additives (hypotaurine and cysteine) in different concentrations to the cryopreserving media on the semen cytological parameters pre freezing and post thawing (motility, membrane integrity, morphology, acrosome integrity and viability). The experiment was done on 30 ejaculates collected by artificial vagina method from 5 boer goat bucks during April to May 2011. After collection, ejaculates qualifying standard criteria were pooled. Pooled ejaculates were washed for seminal plasma removal and then diluted in medium based on Tris in which antioxidants were added in various concentrations (hypotaurine 5, 10 and 20mM; cysteine 5, 10 and 20mM) or without antioxidants (control). The diluted semen was cooled at 4°C, filled in 0.25ml French straws and then stored in liquid nitrogen. The results showed that semen quality did not differ ( $P < 0.05$ ) in terms of morphology and acrosome integrity with antioxidants supplementation after cooling. Hypotaurine and cysteine significantly improved the characteristics of boer goat semen motility, membrane integrity, morphology, acrosome integrity and viability after cryopreservation. Addition of hypotaurine at 10mM and cysteine at 5mM concentration leads maximum improvement in liquid and frozen boer goat sperm cytological characteristics.

**Keyword:** Goat; Sperm; Hypotaurine; Cysteine; Cryopreservation.