Summary of master thesis

The present study aimed to determination of adenosine triphosphate (ATP) content of bull semen and its correlation with different criteria.

Semen samples were collected from 15 mature Friesian bulls kept in Artificial Insemination Center in Beni-Suef Governorate.

A total of 60 samples were collected and according to the motility percentage they were classified into three groups

Samples were subjected to the determination of some physical properties (pH, individual motility and sperm density) as well as estimation of some biochemical parameters (ATP, pyruvate , fructose, citric acid , calcium and inorganic phosphorous).

The results showed that:

I- Physical characteristics:

1- There were no significant differences in pH.

2- There was a significant differences in sperm density between three groups.

II- Biochemical characteristics of semen samples

1- There was a significant difference in ATP content in whole semen between there groups.

2-There was a high positive correlation between ATP contents of spermatozoa with individual motility percent in three different groups. Moreover there was a positive correlation between ATP contents of spermatozoa with citric acid, fructose and inorganic phosphorous concentration.

3- There were significant differences in pyruvic acid , citric acid , calcium and phosphorous concentration between different groups.