

**EFFECTIVENESS OF SEPARATION WITH *ELECTRIC SEPARATING SPERM* (ESS) FOR CHROMOSOME X AND Y ON SAPERA SPERM**

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**ABSTRACT**

This study aims to determine the effectiveness of Electric Separating Sperm (ESS) to separate sperm between chromosome X and Y on the anode and cathode with a variable percentage of viability, motility, sperm abnormalities and morphometry. Semen were taken by using an artificial vagina then examined by macroscopic and microscopic examination, if semen in a good condition the next step is dilution the semen with Tris Egg Yolk Extender and then separation. There are three treatments at this study there is P1 (3 minutes), P2 (7 minutes), P3 (10 minutes) with six repetitions on the anode and the cathode. Data on each variable (viability, motility and abnormalities) were tested using ANOVA statistical analysis and to see sperm X and Y chromosomes that separated by measurement of the head using morphometry. The highest separation results in P3 with a separation ratio X:Y amount on the cathode is 65.00:35.00, then ratio X:Y on the anode is 59.00:41.00. The highest percentage of viability contained in P1 that is  $75.00^a \pm 2.00$  in anode and  $76.50^a \pm 2.17$  in cathode, so does the motility of spermatozoa P1 contained individual progressive motility amount of  $60.83^a \pm 2.04$  in anode and  $61.67^a \pm 2.58$  in cathode. Percentage abnormality showed no significant difference between treatments.

Kata kunci : Sperm, Separation, ESS, Quality, Morphometry