

**MOTILITY AND VIABILITY OF SPERMATOZOA KOI FISH (*Cyprinus carpio*) IN EGG YOLK CITRATE DILUENT WITH VARIOUS LEVEL OF FRUCTOSE**

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**ABSTRACT**

Fructose is the main energy substrate in spermatozoa and seminal plasma is derived carbohydrates that can be used as a source of energy to support motility and viability of spermatozoa. Egg yolk citrate diluent used as a medium of live spermatozoa that serve as a buffer, keeping the integrity of seminal plasma spermatozoa, preventing cold shock, and as an additional energy source for spermatozoa. The purpose of this study was to determine the appropriate levels of fructose in egg yolk citrate diluent on sperm motility and viability of koi fish (*Cyprinus carpio*). The treatments were tested P0, P1, P2, P3 and P4 respectively using 0,25 ml koi fish's semen + 2,5 ml egg yolk citrate diluent with a variety of different levels of fructose ranging from 0%, 1%, 3%, 5% dan 7%. Results of this study indicate that the addition of egg yolk citrate diluent with fructose on koi fish spermatozoa may affect sperm motility and viability, levels of fructose which is best based on this study was 5% fructose levels.

**Key words:** koi fish, fructose, egg yolk citrate, sperm motility, sperm viability