

## Effect of Formic acid, Potassium Di format and Formic acid Nano-Chitosan Solution on survival, growth Indices and body composition of Common carp (*Cyprinus carpio*)

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### Abstract

This study was conducted to evaluate the effects of formic acid, potassium Di format and formic acid nano-chitosan solution application on different growth factors and body composition of common carp. The experiment was conducted in a randomized complete design with 10 treatments and three replications. In total, 450 common carp fingerlings (10 treatment × 15 fish in each tank × 3 replication) with an initial average body weight (BW) of 16.5±0.5 g were studied. The treatments were included i) three diets supplemented with formic acid nano-chitosan solution levels, ii) three formic acid levels, iii) three potassium Di format levels using commercial feed as 0.25, 0.5, 0.75% of diet and also one treatment as control that were fed with commercial feed without additive. Fish in the experimental treatments were fed for 8 weeks ad libitum. Effects of the treatments on growth performance, and body composition of common carp (*Cyprinus carpio* fingerlings) were evaluated. Results showed that formic acid, potassium Di format and nano-chitosan acidifier as 0.75% level had negative effects on final fish weight and special growth rate compared with control group (P<0.05). On the other hand, the highest amount of food conversion ratio was observed in formic acid, potassium Di format and nano-chitosan acidifier treatments as 0.75% level of diets compared with control group (P<0.05). In this study, the protein and fat contents of the whole body were significantly different among treatments (P<0.05) and the beneficial effect of the diets was observed in the level of 0.25% formic acid nano-chitosan Solution. The results showed that survival rate was not significantly different between the treatments and control group (P>0.05). Therefore, in order to improve the biochemical composition of the body, it is recommended to use 0.25% Formic acid Nano-Chitosan Solution in common diets of common carp.

**Keywords:** Common carp, Formic acid, Potassium Di format, Nano-chitosan, *Cyprinus carpio*.