Dietary Iron Requirement of Goldfish (*Carassius auratus*) Fry


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Abstract

To estimate the dietary iron requirement of common goldfish, *Carassius auratus* (Linnaeus, 1758), eight isoproteinous diets containing graded levels of dietary iron (FeSO₄·7H₂O) ranging 34.27-537.14 mg/kg were fed to triplicate groups of *C. auratus* fry in glass tanks. The rearing medium was groundwater passed through a reverse osmosis water treatment unit. Fish were fed 3% of their body weight per day. After 75 days, the fish were randomly sampled and anesthetized, blood was withdrawn from the caudal vein, and red blood cell count, hemoglobin content, and hematocrit value were evaluated. Tissue samples were randomly collected for muscle, liver, and whole-body iron analysis. The iron concentrations in the diets and fish tissues were measured by atomic absorption spectrophotometer. Broken-line regression analysis and analysis of variance (ANOVA) with multiple mean comparisons of the data indicate that the dietary iron requirement for optimal hematological values and tissue iron levels of *C. auratus* fry should be at least 139.06 mg/kg dry diet.

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