Optimal Dietary Copper and Zinc Requirements for Juvenile Chinese Mitten Crab, *Eriocheir sinensis*

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**Abstract**

Two independent 25-day feeding trials were conducted to determine the optimum dietary copper and zinc requirements of juvenile Chinese mitten crab, *Eriocheir sinensis*. In experiment I, megalopa (6.86±0.34 mg) were fed one of six experimental diets containing supplemental Cu sulfate at 0, 15, 30, 45, 60, or 75 mg/kg diet. In experiment II, megalopa (7.16±0.48 mg) were fed one of six experimental diets containing supplemental Zn sulfate at 0, 25, 50, 100, 200, or 400 mg/kg diet. Results indicate that the weight gain rate, survival rate, and cytochrome oxidase activity were significantly affected by the dietary copper level (*p*<0.05). Although no significant difference was observed in survival rate of juvenile crab fed diets with increasing zinc levels, there were significant differences in weight gain rate and carboxypeptidase A activity among dietary treatments (*p*<0.05). Broken-line regression analysis of the weight gain rate against the dietary copper and zinc levels indicates that the optimal dietary requirements for maximum growth of *E. sinensis* are 41 mg copper and 84 mg zinc per kg dry diet.

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