

Effect of feeding frequency and feeding satiation rate of extruded diets containing different protein, lipid and carbohydrate levels on apparent digestibility coefficients of dietary macro-nutrient of grower flounder *Paralichthys olivaceus*

Joo-Young Seo, Kyoung-Hyun Choi, Choi Jin and Sang-Min Lee*

*Faculty of Marine Bioscience and Technology, Kangnung National University,
Gangneung 210-702, Korea*

This study was carried out to investigate apparent nutrients digestibility of diets contained different levels of macro-nutrient by flounder according to feeding frequency and satiation rates. Three replicates of grower flounder averaging 280 g fed the three extruded pellets containing different protein, lipid and carbohydrate levels with two feeding satiation rates (satiation and 80% satiation) and four feeding frequencies (three meals a day, two meals a day, one meal a day and one meal every two days). Feces were collected using a fecal collection column attached to fish rearing tanks for 6 weeks. Apparent digestibility was determined using a experimental diets with 0.5% chromic oxide indicator. Apparent dry matter, protein, lipid, energy and nitrogen-free extract digestibilities of fish fed experimental diets were not affected by both dietary composition and satiation rate but those of fish fed the high-protein diet showed a tendency to higher compared to those of fish fed the high-carbohydrate diet and high-lipid diet with satiation at the same feeding frequency. Apparent lipid, energy and nitrogen-free extract digestibilities tended to decrease with increasing of feeding frequency at same dietary composition.

*Corresponding author: smlee@kangnung.ac.kr