

**Proximate Composition and Sensory Evaluation of
Juvenile Sablefish (*Anoploma fimbria*) Fed Diets Containing 10% to 30% Lipid**

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Sablefish is an important commercial groundfish fishery in the Pacific Northwest. Because of the demand in the market for sablefish, the development of sablefish aquaculture has gained interest. Little is known about farmed sablefish product quality (proximate composition and sensory evaluation) compared to wild fish. The objective of this study was to determine the effects of dietary lipid concentration on growth and product quality of sablefish.

Juvenile sablefish (ca. 500 g) were randomly distributed into 6 tanks (12 ft. diameter, 60 fish/ tank) in a flow through sea water system (50-60 lpm, 5 µm filtered UV sterilized). Three steam-extruded diets formulated to contain equal protein and 10%, 20%, or 30% lipid (dry weight basis) using fish oil as lipid the source were randomly assigned to replicate tanks (2 tank/ diet). Fish were fed to apparent satiation twice daily, 5 days per week, for 37 weeks

Among treatments, there were no significant differences ($P > 0.05$) in: final body weight, VSI, HSI, or whole fish proximate composition. Fillet lipid concentrations showed a significant increasing trend ($P < 0.05$; $R = 0.82$) with increasing dietary lipid concentration, and all fillets from sablefish fed the three experimental diets were significantly higher in lipid than fillets from wild caught fish. A significant number of sensory panelists distinguished fillets from sablefish fed the 10% or 30% lipid diets from the wild caught fillets.

The results suggest that the main effects of feeding the experimental diets (10% to 30% lipid) are a higher fillet lipid concentration and a difference in sensory quality compared to wild fish. Further research is needed to adjust aquacultured sablefish proximate composition and sensory quality to match premium wild fish.

