

Different Feedings on Chemical Characteristics of Atlantic Salmon Fillet

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Abstract : The quality of fish muscle is a key factor in fish industry, and dietary ingredients can influence fish quality. The aim of this study was to examine the impact of krill meal, soybean meal, Bactocell® and butyrate fortified feeds and control diet on characteristics of salmon fillet. Thirty Atlantic salmon (6 per each group) were farmed for 12 weeks. All the fish were killed and frozen immediately. The white muscle from top posterior part of dorsal fin was dissected to analyze fat content, carotenoid content, content of water-soluble and salt-soluble proteins, cathepsin B and cathepsin B-L activities. ANOVA test was used to analyze mean and standard error of mean values at 0.05 significance level. There were significant difference in cathepsin B activity, water-soluble proteins and salt-soluble proteins (p-value= 0.005, 0.009 and 0.002). The mean values of other factors were not significantly different among the groups. Cathepsin B activity was higher in soymeal group. Water-soluble proteins were reported higher in soy meal and krill groups and salt-soluble proteins were significantly higher in soy meal and butyrate rich diets. Although soy meal has proven effect on enteritis, it results in higher percentage of protein in fillets. On the other hand, this feeding may have role in textural deterioration of fillets owing to higher values of endogenous cathepsin B in soymeal group.

Keywords : aquaculture, food quality, Krill protein extract, prebiotics, probiotics, Salmo salar, soy

Conference Title : ICFDP 2018 : International Conference on Food Design and Production

Conference Location : Tokyo, Japan

Conference Dates : March 27-28, 2018