Fatty Acid Profile of Muscle Lipid of Cultured Meagre (*Argyrosomus regius)*: Effects of Feed Composition

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The composition of the feed delivered to the fish in a fish-farm is one of the most relevant factors related not only with the performance of the culture but also with the quality of the product. It has been shown that the dietary fatty acid pattern influences the body fat stores, including muscle ones, and so the quality of this source from the point of view of the human consumers' health.

In this study, two lots of juvenile meagre were fed on two different commercial foods: C- 1 (43% protein / 26% fat) and C-3 (46% protein / 22% fat) throughout 330 days in the facilities of an off-shore cages-based fish-farm. At the end of that period, some fishes were randomly sampled of each lot and once they were killed a piece of muscle was quickly obtained *in situ*, frozen and stored (-80 °C) until analysis.

Analytical data showed only minor differences between the lots concerning the fatty acid profile in muscle. In summary, C-3 fed fish displayed higher relative levels of 18:0 and 18:2*n*-6 and lower ones of 18:1*n*-9. When considered by groups, only polyunsaturated fatty acids of the *n*-6 series (*n*-6 PUFA) presented significant differences between groups, showing C-3 fed fish higher values. These same fishes exhibited also lower but not significantly different monounsaturated fatty acids (MUFAs) content. In both cases, the differences can be attributed to those existing for the most representative element of each group (linoleic and oleic acid, respectively). These minor differences were not in line with those detected in food lipids. In any case, both lots of fishes offered to the human consumer high levels of the greatly appreciated *n*-3 PUFA, resulting in good indices of lipid quality.