

Effects of Stress in the Fatty Acid Profile in Carcass and Whole *Sparus aurata*.

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Fish muscle is rich in unsaturated fatty acids, this being considered as a healthy and desirable aspect in human diets. The intensive fish farming systems carried out in the current Mediterranean aquaculture are characterized by conditions that could easily lead fish to stress, threatening health status of fish, and increasing the susceptibility to opportunistic pathogens. Besides the effects of stress on disease predisposition, a less studied consequence of stress in fish is that related to the potential effects on carcass composition. In this sense, this work broaches up the effect of induced stress in the fatty acids (FAs) profile of Gilthead sea bream muscle. The animals were placed into two tanks under the same conditions (control and stress groups). Stress group, however, was subjected once per day to a soft electric discharge during one month. At the end of the experimental period, animals were killed and then morphometric indexes and FA profile were determined.

Results showed that final weight was not affected although a slight decrease in visceral fat and spleen weight in the stress group was observed. Regarding the FA profile, the stress group showed an increase in the relative amount of n-3 FAs in eviscerated fish, meanwhile no statistics differences were found in whole fish. These results suggest that the relative proportion of saturated vs. unsaturated FAs in fish edible fractions was modified in *Sparus aurata* as a result of stress.