Variation in Sensory Profile of Individual Rainbow Trout (Oncorhynchus mykiss) from the Same Production Batch

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The variation in sensory profile of rainbow trout (Oncorhynchus mykiss), belonging to the same aquaculture production batch and handled the same way, was explored by using objective sensory profiling on heat-treated minced fillets. In addition, quality index, mechanical texture, pH, fat, and water content were measured. Different groups of fish were sampled 3 different times during a production day. The results showed significant differences in the sensory profiles of individual fish within all 3 groups as well as significant differences between the groups. Differences in mechanical texture were found between individuals in 2 of the 3 groups and between the groups. No differences were found in quality index neither between individuals nor groups. A significant negative correlation between lipid content and firm texture was observed, but in general, the chemical and physical measurements could not explain the differences in the sensory profiling or in the mechanical texture measurements. The results showed that significant differences in the sensory profiles of individual fish from the same aquaculture production batch may occur. Furthermore, the results also showed sensory differences between groups of samples taken at different times during a production day.

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