IN VITRO INFECTIVITY AND ALLERGENICITY OF *Anisakis simplex* L3 AFTER FREEZING FISH MUSCLE

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The importance of *Anisakis* infection of fish is well recognized by the fisheries sector and food safety authorities since humans can get infected by *Anisakis* larvae in the third stage (L3) through consumption of fish parasitized with live L3, whenever the fish is being consumed raw or when the technological processes, cooking, or storing practices the fish product has been subjected to, are insufficient to kill the larvae. Freezing fish muscle and their subsequent frozen storage is the most adequate technology treatment to control the risk of infection of consuming raw or undercooked infected fish. Most of the studies found in the literature describing the survival of *Anisakis* L3 along freezing do not take into account the possible infective characteristics of those who have survived technological treatments. It is thought that the larval penetrability may play an important role in the pathogenicity for the invasion of the gastrointestinal mucosa of patients. In this study the ability of the larvae to enter into an agar layer and the rate of mortality in an artificial gastric fluid were checked in larvae who had survived a freeze thaw treatment. Results showed that from those larvae surviving a freeze thaw cycle, only 10 % could penetrate an agar gel, as compared to 50 % in controls. 80 % of treated larvae died within 24 h under acid conditions simulating those of the gastric fluid, suggesting that they have an impaired infectivity as compared to the untreated ones. However, the release of allergens suggests that the pathogenic potential of these moribund larvae cannot be discarded.