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# Characterization of nematodes (Anisakidae) and their prevalence in most consumed fish in France sampled in North East Atlantic and Mediterranean Sea

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## Résumé

To better define the impact of fish parasites on consumers' health and to improve the safety of fish products, we set up the French national Fish-Parasites network (ANR-10-ALIA-004). Among parasites frequently present in edible fish, nematode larvae belonging to the Anisakidae family occur in numerous fish and cephalopods. These larvae may induce digestive and/or allergic symptoms in human. One aim of this project was to identify nematode species and to determine their prevalence in fish sampled on the basis of risk ranking analysis. Among the 18 fish species sampled in North East Atlantic and Mediterranean Sea, only one wild species, *Pleuronectes platessa* was not parasitized at all. Whereas all the farmed fish (sea bass and Atlantic salmon species) sampled were found not infected. On a total of 1768 sampled marine fish, 43.3% of them were not infected by nematodes. Regarding infected fish, 28.6% were contaminated in viscera organs, 23% in both visceral organs and fillets, and 5.5 % were infected by nematodes only on fillets. The five fish species with the highest prevalence of Anisakidae in their fillets were by decreasing values, *Molva dypterygia*, *Lepidorhombus whiffiagonis*, *Pollachius virens*, *Lophius piscatorius* and *Merluccius merluccius*. The Anisakidae infestation was highly dependent from the fishing area. Nematodes were mostly identified as belonging to the genus *Anisakis*, mainly *A. simplex* and *A. pegreffii*. Species belonging to other genera such as *Pseudoterranova*, *Contracaecum* and *Hysterothylacium* were also identified. *Anisakis simplex* was found in fish from all the studied fish areas except the Gulf of Lion.

**Mots-Clés:** Anisakidae, risk ranking, nematode, fish, prevalence

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