



## TETRODOTOXIN (TTX) LEVELS OF *TORQUIGENER FLAVIMACULOSUS* (HARDY & RANDALL, 1983) CAUGHT IN THE NORTHEASTERN MEDITERRANEAN SEA

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### Abstract

In this study, the seasonal and sexual differences in tetrodotoxin (TTX) levels of different tissues of Yellowspotted puffer, *Torquigener flavimaculosus* (Hardy & Randall, 1983) caught from Mersin Bay, the Northeastern Mediterranean were investigated. Yellowspotted puffer was caught by trawl fishing from December 2015 to October 2016. The seasonal and sexual TTX changes in gonad, liver, intestines, skin and muscle tissues were found out by using Q-TOF LC/MS. The analyses indicated that all the tissues of *T. flavimaculosus* that were studied contained TTX above the toxic limit and were highly toxic throughout all the seasons. Maximum TTX levels in tissues of this species were in skin, liver, gonad, intestines and muscles, respectively. It was found out that female species contained more TTX than male species except for summer. In terms of seasons, it was observed that the highest toxicity was in winter, and the lowest toxicity was in autumn. In conclusion, *T. flavimaculosus* is dangerously toxic for human health, and it mustn't be consumed. The pufferfish species contains high levels of toxin, so it can be a valuable source for TTX isolation.

**Keywords:** Pufferfish, *Torquigener flavimaculosus*, Toxicity, Mersin Bay

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