ABSTRACT

To estimate the levels of mercury, cadmium and lead in imported frozen Pangasius hypophthalmus (P. hypophthalmus) fillets and Sardine; 70 random samples (35 of each) were collected randomly from different fish markets in Qalyubia and Gharbia governorates. The obtained results revealed that the mean levels of mercury, cadmium and lead were 0.57±0.06, 0.11±0.01 mg/kg and 0.15±0.01 in the examined samples of P. hypophthalmus and 0.51±0.04, 0.14±0.02 and 0.09±0.01 mg/kg in sardine, respectively. The levels of mercury and lead were significantly (p<0.05) higher in P. hypophthalmus as compared with sardine. Moreover, the majority of the examined fish samples, particularly, P. hypophthalmus exceeded the safe permissible limits. In this respect, 25.71%, 14.29% and 20% of the examined samples of P. hypophthalmus and 17.14%, 11.43% and 8.57% of the examined samples of sardine were over the higher permissible limits recommended by EOS [10] for mercury, cadmium and lead levels, respectively. In conclusion, the examined samples of P. hypophthalmus were significantly more polluted with high levels of toxic metals especially mercury and lead which seriously distress human health. Therefore, measures should be put in place to reduce the exposure to a minimum, and the daily intake should be set in accordance with the present findings.

KEY WORDS: Basa, Cadmium, Lead, Mercury, Sardine