

Screening Cage Culture Fish Species for Organic Chlorinated Pesticide and Polychlorinated Biphenyl Residues in Turkey

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Abstract

Organic chlorinated compounds (aldrin, α -endosulfan, β -endosulfan, 2,4'-DDT, and 4,4'-DDE) and polychlorinated biphenyles (PCB28 and PCB52) were screened in fish culture cages off the Aegean Coast of Turkey. Sea bass (*Dicentrarchus labrax*) and sea bream (*Sparus aurata*) were randomly selected from three coastal areas during June-December 2004. Samples of 114 fish were analyzed by gas chromatography (GC) with an electron capture detector and GC-mass spectrometry (GC-MS). No residues exceeding limits established by the European Union Directive were detected. However, 4,4'-DDE was found in 2.63% of the samples. The amounts of residues in all positive samples were lower than the maximum tolerance limits (0.2-1 mg/kg) accepted by the EU Directive. Contamination levels varied with species, ranging 18-200 ng/g wet weight. Other chemicals were not detected in fish samples.

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