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## LEVELS OF METALS AND ORGANOCHLORINE COMPOUNDS IN SEAFOOD CONSUMED IN CLUJ-NAPOCA, ROMANIA

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### Abstract

Marine species (n=36) available in a supermarket of Cluj-Napoca city, Romania were collected and analyzed for the levels of heavy metals (Cr, Cu, Zn, Cd, Pb, Hg) and As, polychlorinated biphenyls (PCBs), and organochlorine pesticides (OCPs), such as dichlorodiphenyltrichloroethane (DDT) and analogous, hexachlorocyclohexanes (HCHs) and hexachlorobenzene (HCB). The collection included samples from twelve fish groups (sardine, tuna, herring, pangasius, marbled rockcod, hake, shrimp, pink shrimp, lobster, shortfin squid, spider octopus, and aquaculture shortfin squid). Of the heavy metals and As, the highest concentrations were recorded for Zn and Cu (ranging from 1432 to 17381 and from 377 to 7637 µg/kg wet weight basis (ww), respectively). The average concentration (±standard deviation) of Cr, Cd, Pb, Hg and As were 310 (±200), 44.1 (±27.8), 76.0 (±61.8), 152 (±137) and 614 (±601) µg/kg ww, respectively. Concentrations of PCBs, HCHs, DDTs and HCB varied below the detection limit (<DL)-142 µg/kg lipid weight (lw), <DL-52.7 µg/kg lw, <DL-10 µg/kg lw and <DL-17.3 µg/kg lw. All the obtained concentrations were below the maximum admitted levels, according to the legislation.

*Key words:* fish, heavy metals, organochlorine pesticides, polychlorinated biphenyls

*Received:* September, 2011; *Revised final:* January 2012; *Accepted:* January, 2012

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