Concentrations of heavy metals in tissues of commercially-harvested red crabs from the northwestern Atlantic

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Red crabs (*Chaceon quinquedens*) are benthic and inhibit the continental slope of the Atlantic, Pacific and Indian oceans, usually at depths of 200 to 1800+ meters. There is a small commercial, federally-managed fishery on the US Atlantic coast for deep-sea red crabs. However, management is hindered by the absence of information on their biology, abundance, growth, age, reproduction, or contaminant concentrations. Red crab samples were collected from four geographical locations from the northwestern Atlantic, and metal concentrations were determined in edible muscle and hepatopancreas. Metal concentrations (Arsenic (As), Lead (Pb), Mercury (Hg), and Cadmium (Cd)) did not differ among locations or sexes, and concentrations were not correlated with carapace width or length. Median As, Cd and Pb concentrations in muscle were 1.04, 6.17, and 5.90 mg/kg dry weight, respectively. Most Hg in muscle was methyl mercury, but inorganic mercury was dominant in hepatopancreas. Median Hg concentration in edible muscle was 0.91 mg/kg dry weight (range 0.22-4.46). Some crabs exceed established consumption advisories for Hg in seafood.