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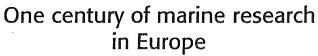


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Wednesday 13 - Friday 15 September 2006

Institut océanographique, Paris, France











Workshop organized by European Federation of Marine Science and Technology Societies & Union des océanographes de France, in partnership with the 100th anniversary of the Institut océanographique, Foundation Albert Ist, Prince of Monaco



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Comparison of total mercury concentrations in various tissues from two commercial shark species in the eastern Mediterranean Sea

Spiny dogfish (Squalus acanthias), ranging from 30 to 729 mm in length, and smooth-hound sharks (Mustelus mustelus), ranging from 428 to 720 mm, were collected in the Eastern Mediterranean Sea. Total mercury was determined in various tissues (muscle, liver, gonad) with Cold Vapour Atomic Absorption Spectrometry.

In both shark species, statistically significant differences were observed among the mercury concentrations in the three tissues examined, whilst higher total mercury concentrations were found in the muscle tissue. Higher total mercury concentrations were observed in the spiny dogfish than in the smooth-hound shark. The total mercury concentrations in all muscle samples of the smooth-hound shark were below the maximum permitted level of 1 mg/kg w.w., whilst the total mercury concentrations in most of the spiny dogfish muscle samples were above this limit.

The differences in the mercury concentrations observed between the two species and the various tissues, could probably be explained by differences in diet and age.

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Biogeochemical research on coastal organosedimentary forms

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In coastal marine environments with shallow, warm and calm waters organosedimentary structures can sometimes be observed. They are formed as a result of the growth and metabolic activity of microorganisms, principally cyanobacteria, by sediment trapping, binding and/or precipitation. These organisms are called microbial or algal mats and one of their typical properties is their laminated structure. Various functional groups of microorganisms occur in vertically stratified layers. Such formations have been observed in various Greek coastal areas.

The studied organosedimentary formations consist of three layers. The surface layer, which is 0.5 - 1.2 mm thick, includes the cyanobacterial mat; the middle layer, which is up to 5 cm thick, is anoxic, of dark colour and has a characteristic H₂S odour; the third layer, which is 5 - 10 cm thick, represents the background sediment.