TRACE METALS IN THE ŠIBENIK AQUATORIUM
P-4 CONCENTRATIONS OF Zn, Cd, Pb, Cu AND Hg IN THE EDIBLE PART OF THE MUSSEL Mytilus galloprovincialis ANALYZED IN THE 1983/84 PERIOD

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Summary. The preliminary results of concentration of Zn, Cd, Pb, Cu and Hg in the edible part of the mussels from the River Krka estuary and the Kornati Islands are in the lower range than the already published data. These data are in a good correlation with the trace metal distribution into the sediments.

Résumé. Les résultats préliminaires sur la concentration du Zn, Cd, Pb, Cu et Hg dans la partie comestible des moules provenant de l'estuaire de la rivière Krka et de l'archipel des Kornati ont montré les concentrations dans la gamme inférieure aux valeurs publiées. Ces données sont en bonne corrélation avec la distribution des métaux en traces dans les sédiments.

In the frame of the UNEP Mediterranean coastal monitoring program, and in accordance with the "mussel watch" proposed by E. Goldberg, the metal concentration in mussels, which are used as pollution indicator organism, was determined. The preliminary results of Zn, Cd, Pb, Cu and Hg concentrations in the mussels Mytilus galloprovincialis, (the edible part) sampled in October 1983, February, May and July 1984 at the stations located in the Šibenik aquatorium are given in Table 1. The analysis were carried out on the composite samples of 25 specimens. The soft parts were removed from the shells and homogenized into appropriated quartz beakers using a Sonicator Cell Disruptor (Model W 185 F, Heat System Ultrasonic, Plainview, N.Y.). The homogenated sample (of 0.2 g wet material) was wet digested by the mixture of HNO_3 (4 ml) and $HClO_4$ (0.5 ml). The analyses of metals were performed for the following: cadmium, lead and copper by AAS with graphite furnace using

Table 1 The average metal concentration in the mussels of the Šibenik aquatorium (mg/kg and Hg/ug/kg) at different locations

	Length(m)	Weight(g)	Zn	Cd	Pb	Cu	Hg
E - 2	4.0	2.0	15.6	0.12	0.19	1.01	21.3
E - 4	3.1	2.0	15.2	0.12	0.59	1.08	46.9
E - 5	4.4	3.6	20.3	0.15	0.65	1.40	73.4
C - 2	4.0	2.1	20.3	0.11	0.39	1.14	55.2
C - 1	3.3	0.84	20.5	0.25	0.35	0.90	30.9
R	3.7	1.27	17.2	0.28	0.17	0.65	27.6
C - 3	3.8	1.70	30.6	0.10	1.40	3.36	9.7

Perkin-Elmer AAS-Model 3030, and HGA-400 and AS-1; and zinc by FAAS using Perkin-Elmer AAS-Model 5000, and AS-50, and Hg by cold-vapour technique using Perkin-Elmer AAS-Model 410.
The average metal concentration values are in the lower range than the already published data. A remarkably high lead, zinc and copper concentrations found in the mussels from the location C-3 could be attributed to the vicinity of the waste-water outflow from industrial and domestic sources. The correlation between corresponding results of metals in sediments and in mussels from the same locations will be discussed.