ANIMAL WELFARE CONCEPT AND MEASUREMENTS

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Key words : welfare, concept, assessment, measurement, behaviour

SUMMARY

The term “welfare” refers to the state of an individual in relation to its environment, and this can be measured. In this regard this paper summarizes some of the most important ideas of welfare and the measurement that can be done in order to establish the level of welfare.

ANIMAL WELFERE AND HYGIENE

ASSESSMENT OF WATER AND FISH CONTAMINATION LEVEL WITH RESIDUAL MATERIALS IN MOGOSOAIA LAKE

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Key words: quality parameters, water, fish, heavy metals, admitted limits

SUMMARY

Having in view the importance of fish in human's nutrition and the existence of various surface waters pollution sources, the above study had as target the assessment of water physical and chemical parameters influence on fish quality in Mogosoaia Lake.
For this purpose, there where harvested both water and fish samples in order to establish the following physical and chemical parameters: pH, water hardness, nitrites (NO_2^-), nitrates (NO_3^-), chlorines (Cl^-), phosphates (PO_4^{3-}), ammonia (NH_4^+) and metal residues with toxic potential (Pb, Cd, Cu, Zn).
The methods used for assessing water physical and chemical parameters were the ones provided by the STAS in force, while results interpretation was done according to the Water and Environmental Protection Ministry Order no. 1146/2002.
Metal residues with toxic potential in fish samples have been established using atomic absorption spectrophotometry and results interpretation was done according to the Health Ministry Order no. 97/2005 (for lead and cadmium) and Health Ministry Order no. 975/1998 (for copper and zinc).
The researches have led to the following conclusions: water nitrites (NO_2^-) have exceeded the limit provided for Ist quality class by 17 times; water phosphates (PO_4^{3-}) have recorded exceeding from the limits provided in Water and Environmental Protection Ministry Order no. 1146/2002 by 8 times and ammonia (NH_4^+) by 4 times; Mogosoaia Lake water registered a continuous pollution with organic compounds, fact proved by the nitrites, phosphates and ammonia overvalues; in fish samples, among the metal residues with toxic potential, lead have exceeded maximum admitted concentration provided in MS Order no. 97/2005 by 1.5 times; the long term existence of polluting elements in the surface water can lead to water eutrophication, solved oxygen concentration reduction and thus fish death.