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Usage the enzyme activity and some blood variables in moorhen *Gallinula chloropus* as biomarkers to the poison contamination in Southern Iraqi marshes.

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Abstract - Moorhen water birds (*Gallinula chloropus*) hunted by using poisonous material were purchased from Qurna (north Basrah city) during December 2005. Sings of poisoning included decreasing in activity and loose of equilibrium. The birds were sacrificed, blood samples were collected and used for determination of packed cell volume (PCV %), total hemoglobin, plasma total protein and Na+ concentration. Besides exam the activity of some enzymes in blood plasma including GPT, GOT and ALP. The results showed that the signs of poisoning differ from light to severe between birds individuals. Hematological parameters affected as hemoglobin concentration and packed cell volume decreased severely. While total protein increased to 11.3 mg/100ml in some specimens and decreased to less that 1 gm/1ooml in others. However, Na+ concentration increased to 3000 mmol/l. The enzymes activity also affected. GOT activity was increased to 106.3-143.3 u/l. GPT activity also increased to 163-26.2 u/l, while ALP activity did not affect. This study showed the dangerous use of poisons in hunting aquatic animals on the biodiversity of the marshes and the enzyme activity is useful to be biomarkers to the poison exposure in the southern Iraqi marshes.