

# EVALUATION OF THE INFLUENCE OF UV/IR RADIATION ON IRON RELEASE FROM FERRITIN

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***Abstract*** – In the present work the influence of UV/IR radiation on the iron-releasing process from ferritin is investigated. The ferritins are a family of iron-storing proteins playing a key role in the biochemical reactions between iron and oxygen – processes of exclusive importance for the existence of all living organisms. The iron is stored within the ferritin core in the form of insoluble crystals containing Fe(III). Therefore for its release, the mineral matrix has to be decomposed, usually through a reduction of Fe(III) to Fe(II). Our study considers the action of UV/IR radiation on the structure of the protein molecule. Eventual changes in the ferritin conformation under the irradiation could result in the change of channel forming regions responsible for the iron efflux. This can be assessed by the quantity of Fe (II) obtained in a subsequent mobilization procedure evoked by exogenous reducing agents. In our case the content of the reduced iron is determined electrochemically by the method of potentiometric titration. As already was shown, this method promises to become highly useful for quantitative evaluation of released Fe<sup>2+</sup>.