

Oxidative hemolysis in stress induced rat erythrocytes

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ABSTRACT: Oxidative stress is associated with increased production of oxidizing species or a significantly decrease in the capability of antioxidant defenses, such as glutathione. However, more oxidative stress can cause cell death and even moderate oxidative can trigger apoptosis, while more intense stresses may cause necrosis. This is produced by reactive oxygen species, which is also related to cell aging process. To counter oxidative stress, the body produces an armoury of antioxidants to defense itself. The job of antioxidant to neutralize or 'mop up' free radical that can harm cells. The FRAP analysis and osmotic fragility test were conducted to justify the measurement of oxidative stress. The degree of hemolysis could be measured by determining the absorbance of the supernatant using a spectrophotometer. The present study was planned and carried out in Department of Biochemistry, University of Allahabad and Department of Biological Sciences, Mahatma Gandhi Chitrakoot Gramodaya Vishwavidyalaya Chitrakoot, Satna (M.P.). It has been observed that change in osmotic fragility is closely related to those of water content of erythrocytes, at low concentration of NaCl the % of Hemolysis is increased in normal and stress induced rat erythrocytes.

Key Words: Free radicals, FRAP assay, antioxidants and Hemolysis.