Journal

J. Biol. Chem. Environ. Sci., 2017, Vol. 12(4): 419-438
http://biochenv.blogspot.com.eg/

BIOCHEMICAL STUDIES ON IRON AND FOLIC ACID ADDITION TO BISCUIT

Abdel lattif, M.S.*, A.Hanafy, Eman, *, G.El-Amry, Hoda, ** and E.El-Ansary, Azza, **

** Faculty of Agriculture, Cairo University, Department of Biochemistry, Giza, Egypt*
*** Agricultural Research Center; Food Technology Research Institute, Giza, Egypt*

ABSTRACT

This study was undertaken to create a healthy nutritive biscuit which can be considered as valuable source of non-heme iron in diet by fortifying the biscuit recipe with thyme to improve iron status in rats. The results showed that control (+ve) rat group showed a significant decrease in hemoglobin (12.69g/dl) & hematocrit (39.07g/dl) compared with control (-ve) group. Thyme 3% biscuits rat group showed a significant decrease in hemoglobin (10.67g/dl) & hematocrit (32.03g/dl) compared with control (-ve) group. Thyme 4.5% biscuits rat group showed a significant increase in hemoglobin (13.87g/dl) & hematocrit (41.63g/dl) compared with control (-ve) group. Ferrous sulfate 0.049% biscuits rat group showed a significant decrease in hemoglobin (10.81g/dl) & hematocrit (32.54g/dl). But ferrous sulfate 0.074% biscuits rat group showed a significant decrease in hemoglobin (11.33g/dl) & hematocrit (33.99g/dl) compared with control (-ve) group. It could be concluded that thyme can be used as a safe source of iron in producing biscuits to overcome iron deficiency anemia.

Key words: Anemia, Ferrous sulfate, Folate deficiency, Fortification, Iron deficiency, Iron deficiency anemia, thyme.