

THE INFLUENCE OF POLYPHENOLS EXTRACT FROM NETTLE (*Urtica dioica*) ON THE MINERAL ANTIOXIDANT STATUS IN THE BLOOD SERUM OF BREEDING ROOSTERS AND ITS ROLE IN THE PROPHYLAXIS OF OXIDATIVE STRESS

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Abstract

Excessive oxidative stress in the body causes various types of cellular and tissue damages, which subsequently influences the functioning of the body's organs and systems. Some micronutrients act as antioxidants, functioning as cofactors for various antioxidant enzymes. The involvement of minerals in biological processes to block and prevent the formation of reactive oxygen species are of major importance in detoxifying the body at the cellular level. Deficiency of micro- and macronutrients can cause oxidative stress, and oxidative stress inevitably affects the cellular metabolism of tissues and the body as a whole. This study was conducted to evaluate changes in major antioxidant micronutrients in the blood serum of breeding roosters. To maintain protective mechanisms against oxidative stress, the presence of antioxidant microelements is necessary, which directly or indirectly affect enzymatic and non-enzymatic defense mechanisms. Given the complexity of oxidative stress and its harmful effects on health, this paper aims to provide updated information on the mechanisms involved in the role of mineral antioxidants in protecting living organisms from oxidative factors and preventing the occurrence of disorders caused by oxidative stress.

Key words: antioxidants, antioxidant status, minerals, oxidative stress.