

The oxidative status of milking goats after per os administration of N-acetylcysteine

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Abstract :

Investigated were changes in selected redox parameters – vitamin C, malondialdehyde (MDA) and glutathione (GSH) content of goat blood plasma – as markers of oxidative stress after per os administration the N-acetylcysteine (NAC). Used were 20 Polish White Improved goats, selected from the flock of 60 animals. Within the selected goats distinguished were four groups according to somatic cell counts (SCC) of milk: group I – below 1×10^6 , group II – 1×10^6 - 2×10^6 , group III – 2×10^6 - 4×10^6 and group IV – above 4×10^6 /ml. Concentrations of GSH, MDA and vitamin C of blood plasma were assessed just at start of the experiment and then after 7 days of daily administration of 12 mg NAC per kg body weight to goats. After 7 days of administering NAC to goats the plasma concentration of both MDA and GSH dropped and that of vitamin C increased. It is concluded that NAC administered per os increases the anti-oxidant capacity and may reduce the content of lipid peroxidation products in blood plasma of milking goats.

Key Word :

glutathione, goat, lipid peroxidation, malondialdehyde, N-acetylcysteine, oxidative stress, vitamin C

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