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Consistency of sheep's blood sugar using low voltage DC electric current after 3 hours

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In the whole blood samples, total blood sugar generally decreases 7 to 10% per hour due to RBCs consumption of glucose. In order to prevent glucose from being consumed by RBCs, specific amount of sodium fluoride is added to the blood samples to inhibit enolase enzyme involved in glycolysis pathway, therefore, the amount of blood sugar remains consistent. In this survey, the amount of blood sugar in samples contained EDTA and heparin, remained consistent after 3 hours, due to induction of low voltage electric current with the use of non-reactive platinum electrodes. However, after 3 hours a considerable reduction in glucose was clearly seen in absence of electric current in blood samples included EDTA and heparin. Probably due to providing the blood samples with a low voltage electric current, NAD in RBCs changes to NADH, subsequently the process of glycolysis in the RBCs is stopped due to the reduction of NAD. Thus, the glucose no longer is being used. The measured NADH proves what mentioned above. The amount of lactate dehydrogenase enzyme and Mg ion in all samples were not affected by the induced electric current and was remained unchanged. On the other hand, the amount of mentioned parameters above decreased in control samples.

Biography

Seyed Mohamad Sajjadi Dezfooli is a student of Veterinary Medicine at Islamic Azad University of Garmsar, Iran. He has published three papers and three books. He is a member of Iranian young researcher club and elite since 2012 and member of scientific association of Islamic Azad university of Garmsar, Faculty of Veterinary.

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