Effects of anticoagulants time storage on stable isotope values of crocodilians’ blood tissues

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Abstract

Rationale: Rapid coagulation of reptile blood often hinders its use in studies in remote and difficult-to-access areas, necessitating chemical preservation. Therefore, understanding the potential effects of anticoagulants on the isotopic compositions of blood is essential to avoid issues in interpreting the results of ecological studies. In this study we aimed to verify whether the storage time of the blood tissue in anticoagulants can influence its isotopic compositions of the broad-snouted caiman (Caiman latirostris), an ectothermic top predator from eastern South America. Methods: Blood samples were obtained from ten adult females of C. latirostris from a commercial breeding facility in 2015. Samples were stored in vials containing EDTA and SH and centrifuged after 2 and 8 hours to separate red blood cells and plasma. Results: No effect of time was found on the δ¹³C and δ¹⁵N of whole blood, plasma, and red cells in contact with the two types of anticoagulants, EDTA and SH. Conclusion: The findings have practical implications for researchers in this field, as they suggest that anticoagulants can be used effectively for at least eight hours under refrigeration.

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