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## THE POTENTIAL OF CRAYFISH SHELLS AS A FEED SUPPLEMENT

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The spiny cheek crayfish, *Faxonius limosus* (Rafinesque, 1817), is one of the most invasive crayfish species in Europe, threatening river ecosystems by potentially causing the extinction of native species and altering ecosystem functions. Recent research has highlighted the potential of crayfish shells not only for chitin extraction, but also as a valuable source of amino acids and minerals that can serve as a feed supplement. These shells are particularly rich in calcium carbonate, a mineral crucial for the development and maintenance of bone and shell structures in animals. This research evaluated the chemical composition of the crayfish shell, focusing on its amino acids and mineral content. The spiny cheek crayfish were collected from the Begeč region of the Danube River. The shells, separated from the meat, were dried, ground, and analyzed. Amino acid profiling revealed the presence of 17 amino acids, with essential amino acids comprising 8.57 g / 100 g and non-essential amino acids constituting 14.19 g/100 g of the total content. The chemical analysis of the shell revealed 7 elements, with calcium being the most abundant in the dry residue. The calcium content in the crayfish shell was 17.90 g/100g dry weight. The shells also contained other microelements in the following concentrations: Ca > Na > Mg > Mn > Fe > Zn > Cu. The concentrations of heavy metals such as Pb, Cd, Hg, and As were below detection limits. These findings suggest that crayfish shells from this Danube location, rich in amino acids, calcium, and other essential minerals like magnesium and zinc, have significant potential as a cost-effective feed supplement. Using crayfish shells as a feed supplement enhances animal nutrition while being cost-effective and eco-friendly. This approach meets the demand for quality feed and supports environmental sustainability by utilizing waste materials.

**Keywords:** Invasive species, spiny-cheek crayfish, crayfish shells, zero waste, feed supplement

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