

EVALUATION OF WATER CALTROP (*TRAPA NATANS* L.) HARVESTED FROM LAKE TISZA, HUNGARY

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Water caltrop (*Trapa natans* L.) is a floating-leaved aquatic plant and protected species in Hungary. However, it reduces the free water surface, and its fruits with barbed spines are dangerous in the mud. We aimed to study the nutritional potential and food safety parameters of *Trapa natans* L. for further food utilization. Floating water caltrop plants with fruits were harvested from Lake Tisza, Hungary, under official permission. We analyzed the fruits' macro-composition and inorganic elements content, including heavy metals. The fruits were selected into groups by weight and hardness. The hardness of the fruits was determined after a 1% cellulase treatment. The dehulled, fresh kernel was separated into juice and pomace using a screw press juice maker. Juice was clarified by centrifugation. The separated biomass was immediately measured based on color, dry material, and water-soluble dry material. The water caltrop kernel is a good source of bioactive substances (protein, ash, carbohydrates), is high in Potassium, and does not contain heavy metals (As, Hg, Pb, Cd). The water caltrop juice has high dry material and soluble solids content (Brix). The juice and the pomace color do not change within a shorter time - during processing and measuring- at room temperature. The water caltrop fruit harvested from Lake Tisza (Hungary) is suitable for food utilization.