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Depuration of Anomalocardia brasiliana to increase the value of shellfish collected on the Piaui Coast, Brazil

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The shellfish Anomalocardia brasiliana (GMELIN 1791) has a great socio-economic importance to the Brazilian coastal communities as a source of income and food. However, the low commercial value of this seafood is attributed to their flesh extraction process, which is performed in inadequate hygienic and sanitary conditions. Depuration is a simple method, which can be used to reduce the microbial contamination and the sand content in shellfish. This study aimed to evaluate the quality of depurated shellfish flesh using sensory and microbiological analysis. Approximately 15 kg of clams were depurated in polyethylene boxes with capacity for 100 litres for 24 hours. Subsequently, the clams were baked at 100 °C for 10 minutes. The flesh was manually removed, boiled with 1% salt and frozen at -18 °C. Sensory evaluation was performed using Quantitative Descriptive Analysis (QDA), comparing the depurated and not depurated products by means of a hedonic scale (0 to 10 points). Total bacteria count was carried out using Plate Count Agar (PCA) medium incubated at 10 °C for seven days. The depurated shellfish showed higher sensory scores for attractiveness/odor (7.21) and lower for the solid waste presence (2.47) compared to no-depurated group. Total bacteria counts were significantly lower (P<0.05) in depurated products (1.2 x 10⁴) and higher in nodepurated group (3.0×10^4) . The depuration process has shown to be efficient to increase shellfish quality, to dispose solid waste disposal and to assure sanitary quality. This method reduced the microbial load of shellfish flesh, and had a low cost of deployment.