

Title: DEVELOPMENT OF MUSSEL FLOUR FOR HUMAN CONSUMPTION

Author Deschamps, J.L.N.¹ , Ribeiro, A.¹ , Oliveira, M.F.P.¹, Frezzatti, R.¹, Apati, G.P.¹, Montagnolli, M.S.¹, Schneider, A.L.¹

Institution ¹ UNIVILLE- University of the Joinville Region (10 Paulo Malschitzki Street - North Industrial Zone, Joinville – SC).

Abstract:

Mussels are rich in vitamins A, B1, B2, B12, C and minerals salts such as calcium, iron, potassium, zinc, copper, phosphorus, magnesium and iodine. The meat is considered lean by having a low percentage of fat (2.3%) and is an excellent source of fatty acids, like omega-3 and 6. However, the mussels, as well as other fish, are a highly perishable food and must be consumed right after their capture or should be conserved. The conservation methods are performed soon after cooking and taking the mussels off the shell, as an example, freezing, smoking and canning. In order, to propose new conservation alternatives, associated with the development of new products, it came out the possibility of developing mussel flour for human consumption. The *Perna perna* mussels were collected in the coastal region of São Francisco do Sul in the state of Santa Catarina. After cleaning, cooking and taking the mussels off the shell, they were dehydrated in an oven with air circulation at different temperatures: 60 ° C, 75 ° C and 90 ° C, or lyophilized, and then crushed in industrial blender until the formation of flour. The average yield was 25 g of flour for each 100 g of mussels out the shell. This flour was analyzed microbiologically, physical-chemically and nutritionally for each tested temperature condition including the freeze-dried condition. The microbiological analyzes were performed according to RCD No. 12 Resolution 01/02/01 of the National Health Surveillance Agency. The superior limits allowed for *Salmonella* spp, positive *Staphylococcus coagulase* and fecal coliforms are respectively: absent in 25g, less than 10³ UFC/g e 5x10 NMP/g. All results obtained were framed up in the limits. As for the physical-chemical aspects we notice that as the drying temperature rise occurs a decrease in the concentration of moisture and water activity, an increase in the concentration of ash and lipids and a small decrease in pH. The results indicate the temperature of 90°C for dry mussel flour production, thus beginning the research of the culinary applications and self-live.

Key words: Mussel *Perna perna* , Drying , Lyophilization, Flour.

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