

Analysis of Histamine Content in Selected Food Products from the Serbian Market

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Abstract : Histamine is a biogenic amine, which is formed by enzymatic decarboxylation from the amino acid histidine. It can be found in foods such as fish and fish products, meat and fermented meat products, cheese, wine and beer. The presence of histamine in these foods can indicate microbiological spoilage or poor manufacturing processes. The consumption of food containing large amounts of histamine can have toxicological consequences. In 62 food products (31 canned fish products, 19 wines and 12 cheeses) from the market of Serbia the content of histamine was determined using enzyme-linked immunosorbent assay (ELISA) test kit according to the manufacturer's instructions (Immunolab GmbH, Kassel, Germany). The detection limits of this assay were 20 µg/kg for fish and cheese and 4 µg/L for wine. The concentration of histamine varied between 0.16-207 mg/kg in canned fish products, 0.03-1.47 mg/kg in cheeses and 0.01- 0.18 mg/L in wines. In all analyzed canned fish products the results obtained for the histamine were below the limits set by European and national legislation, so they can be considered acceptable and safe for the health consumers. The levels of histamine in analyzed cheeses and wines were very low and did not pose safety concerns.

Keywords : cheese, enzyme-linked immunosorbent assay, histamine, fish products, wine

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