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Sommario/riassunto The biogenic amines histamine, putrescine, cadaverine,

The biogenic amines histamine, putrescine, cadaverine, tyramine, tryptamine, 2-phenylethylamine, spermine and spermidine are the most important in food. Regardless of the food type, high amounts of biogenic amines have been reported for products resulting from the fermentation process and/or ripening, and can be found as a consequence of microbial activity in foods such as wine, fermented meat and fish products, cheese and fermented vegetables. Biogenic amines in food are generated by decarboxylation of the corresponding amino acids through substrate-specific decarboxylase enzymes derived from microorganisms, even if this activity is highly variable. Excessive consumption of these amines can be of health concern because an assumption of biogenic amines that cannot be degraded by amine oxidase enzymes can generate different degrees of diseases in the human organism, which can be determined by their action on the nervous, gastric and intestinal systems as well as on blood pressure. An increasing attention is given to biogenic amines, especially in relation to the higher number of consumers with enhanced sensitivity to them,

determined by the inhibition of amino oxidases, the enzymes involved in the detoxification of these substances. For example, tyramine is one of the most biologically active biogenic amines, and it is the most abundant of those found in cheese. In fact, the term "cheese reaction" has been coined to refer to the symptoms that this biogenic amine can provoke; these include migraines and hypertension, especially in sensitive. To provide data on biogenic amine formation and concentrations in fermented foods, and to discuss the most important factors influencing their accumulation will give an important support for resolving this problem. These include process and implicit factors as well as the role of starter and nonstarter microbiota growing in the different steps of food fermentation and ripening. Moreover, new technologies that could help to control or reduce the accumulation of biogenic amines have to be considered, such as rapid and easy methods to detect them. PCR and DNA hybridization have become important methods and offer the advantages of speed, simplicity and specific detection of the target genes. In fact, early detection of BA producing bacteria is important in the food industry because it could be a cause of food poisoning.