Maturity acceleration of Italian dried sausage by Staphylococcus carnosus - Relationship between maturity and flavor compounds

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The mature flavor of Salame Milano, an Italian dried sausage, was increased in two ways: by increasing maturation time or with a strain of Staphylococcus carnosus. The sensory and volatile profiles of the sausages were determined and the data analyzed by analysis of variance and chemometrics. Sausages with S. carnosus 833 matured more than 2 wk faster than control sausages. Maturity correlated significantly with higher amounts of branched-chain aldehydes and alcohols and both branched- and straight-chain methyl ketones-compounds arising from the breakdown of the amino acids leucine, isoleucine, and valine, or from microbial beta-oxidation of fatty acids. Also, sulfur compounds arising from added garlic correlated positively with mature flavor.