

## **Abstract**

The aroma of dry fermented sausages is one of the most appreciated attributes by consumers. Therefore, one of the main objectives of the meat industry is to understand the highest acceptance of traditional meat products, the main aromatic compounds present and the factors contributing to their generation as well as their evolution along processing. Among the reasons for the generation of aromatic compounds in traditional dry fermented sausages is the presence of an autochthonous microbiota which metabolism and activity favours the generation and improvement of aroma in these products.

The present Thesis has studied the yeast isolated from traditional dry fermented sausages and their contribution to the generation of volatile compounds with aroma activity.

On the one hand, molecular techniques were applied to identify and characterize the isolated yeasts from traditional dry fermented sausages. On the other hand, the aromatic potential of the characterized yeasts was studied through the analysis of volatile compounds using Solid Phase Micro Extraction (SPME) and Gas Chromatography with Mass Spectrometry (GC-MS). In addition to that, this technique was also applied to study the effect of the yeast strains selected by their aromatic potential, in the generation of volatile compounds when inoculated in meat models system and in traditional dry fermented sausages.

This Doctoral Thesis confirmed the large genetic variability within strains of *D. hansenii* isolated from traditional dry fermented sausages and confirmed the contribution of two selected *D. hansenii* strains to the aroma profile of dry fermented sausages. Finally, a direct mass spectrometric technique Selected Ion Flow Tube – Mass Spectrometry (SIFT-MS) was used to evaluate the yeast inoculation in dry fermented sausages and the results confirmed that this is a reliable technique for monitoring changes in the volatile compounds associated to yeast population.