

Press release

Invisible but essential

Listeria protection: A matter of culture

No other achievement revolutionized meat technology to such an extent as the invention of starter cultures for raw sausage fermentation. Until then, the process of producing raw sausage products with their own bacterial flora was more or less subject to a random principle. Control and securing consistent product quality was nearly impossible. Nowadays, with the right starter culture and the professional control of the fermentation plant, it is possible to achieve target pH-values and *a_w*-values in every produced batch. Therefore, requirements and specifications regarding raw sausage products demanded by food retailing and processing companies are within narrow limits. Also, the consumer expects consistent quality.

The maturing process of good raw sausages depends to a large extent on the fermentation rate of the starter culture. Therefore, back in 2004 the company Meat Cracks Technologie GmbH decided to extend their product portfolio by starter- and protective cultures. These cultures are produced in their in-house class 10 cleanroom. In so doing, starter cultures and raw sausage preparations can be optimally matched to one another and a positive impact on the maturing process is achieved.

All employed culture strains are subject to strict quality assurance in a microbiological laboratory. Every batch is tested for its activity. New strains and strain variations are additionally tested in the Meat Cracks research- and development centre. Here, effectiveness, fermentation rate and impact on the character of the finished product are determined. The requirement for consistent and reproducible raw sausage quality is consistent quality of the fermentation culture and of the maturing compound. With the in-house production, the quality of the starter cultures is not left to chance.

Besides carrying out research activities on acidifying and flavour forming properties of starter cultures, over the past few years the Meat Cracks Technologie GmbH has extended their research activities by analyzing further metabolic products of microorganisms. Here the focus was set on bacteriocin forming strains, which are effective against spoiling microorganisms and pathogenic germs bacteria, such as *Listeria monocytogenes*, and at the same time do not impair the fermentation activity of the acidifying starter cultures. For this purpose, isolated listeria subspecies taken from raw sausages were used

to ensure reliable results in the finished product. As a result of this research work, various protective cultures of the M-CULTURE[®] Safe product range have been developed. These cultures demonstrably ensure better product safety and play an important role in listeria management in different products, such as Zwiebelmettwurst.

Thanks to our extensive business experience and professional knowledge about maturing compounds, starter- and protective cultures as well as the technological implementation into production, we are able to offer comprehensive service in the areas of raw sausage and raw ham technology.

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Photo: Meat Cracks Technologie GmbH