Investigation of pausing fermentation of salamis with multispectral imaging for optimal sensory evaluations - DTU Orbit (04/08/2019)

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The fermentation process of salamis involves several parameters influencing taste, texture, and color of the salami. One significant parameter is the fermentation time. It is difficult to conduct sensory evaluations to assess the effect of time without introducing variation between observation days. It may be possible to overcome this by stalling or pausing the fermentation by deep-chilling the salamis. This study investigates the difference of non- and deep-chilled salamis with the use of a multispectral imaging system. The statistical investigation, based on image features relating to size, visual texture, and color of the sausages over time, showed that it may be possible to stall the fermentation process. It was shown that a statistical difference in the two kinds of samples is present. For the size feature the difference could be quantified into a number of days. However, for the important color feature only a statistical difference was observed, whereas the visual difference expressed in terms of $\Delta E_{ab}$ was barely present.

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