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## 原料肉的机械前处理工艺对猪肉切片火腿品质的影响

### Effect of mechanical pretreatment technology for raw meat on qualities of porcine sliced ham

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中文关键词: [肉,品质保证,质构,机械处理,注射,刀片嫩化,滚揉,切片火腿](#)

英文关键词: [meat quality assurance](#) [textures](#) [mechanical treatments](#) [injection](#) [blade tenderization](#) [tumbling](#) [sliced ham](#)

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中文摘要:

为了改善猪肉切片火腿出水、质构和口感问题,以精选猪后腿肉的股四头肌为主要原料,研究5种机械处理工艺对猪肉切片火腿系水性(蒸煮损失率、压榨失水率和杀菌失水率)、质构特性(硬度、弹性、内聚性和咀嚼度)、色泽和感官品质的影响。5种对原料肉的机械处理工艺包括只滚揉、注射腌制液后滚揉、嫩化后滚揉、注射后嫩化滚揉、腰刀绞制后滚揉。结果表明:注射和嫩化均可显著降低火腿的蒸煮损失率和压榨失水率,注射后嫩化滚揉的火腿的蒸煮损失率最低,为7.90%,而腰刀绞制后滚揉的火腿切片杀菌失水率最低,为2.66%,注射后嫩化滚揉与腰刀绞制后滚揉的火腿压榨失水率均最低,并且均显著低于其他处理组。注射和嫩化均可提高产品的硬度、内聚性和咀嚼度,注射嫩化滚揉组合处理与进行1种机械处理或2种机械处理相比,样品具有更好的质构特性,但是5种机械处理工艺中,腰刀绞制后滚揉的猪肉火腿硬度、内聚性和咀嚼度均最大。注射和嫩化有利于提高产品的亮度值(L\*)和红色值(a\*),降低产品的黄色值(b\*)。通过感官评价可知,只经过滚揉的火腿具有最差的感官品质,注射后滚揉和嫩化后滚揉火腿的感官品质差异不大,注射后嫩化滚揉的火腿的质地和切片性低于腰刀绞制后滚揉的火腿,但是显肉性和色泽优于腰刀绞制后滚揉火腿。因此,工业化生产建议原料肉采用注射后嫩化滚揉处理,猪肉切片火腿具有最好的品质。

英文摘要:

To improve water exuding, textures and edible quality of porcine ham, the effects of five raw meat mechanical treatments on porcine sliced ham quality characteristics were investigated. The five mechanical treatments included only tumbling, post-injection tumbling, post-tenderization tumbling, post-injection tenderization and tumbling, post-grinding with broadsword and tumbling. Hams were prepared of Quadriceps femoris from prok hind leg muscle. Water binding characteristics (cooking loss, expressible moisture (EM), pasteurization water loss), textural characteristics (hardness, springiness, cohesiveness, chewiness), color parameters and sensory quality of hams were detected. The results showed that injection or tenderization could help to significantly decrease the cooking loss and expressible moisture of the hams, and the lowest cooking loss of hams made by post-injection tenderization and tumbling treatment was 7.90%. The hams subjected to post-grinding with broadsword and tumbling exhibited the lowest pasteurization water loss, which was 2.66%. Besides, the hams made by post-injection tenderization and tumbling treatment and the post-grinding with broadsword and tumbling treatment exhibited the lowest pasteurization water loss which was significantly lower than that in the other treatments. Injection and tenderization improved the hardness, cohesiveness and chewiness of the products. The hams manufactured by post-injection tenderization and tumbling treatment showed better texture characteristics than those made by only one treatment or combination of two treatments. However, among the five mechanical treatments, the hams made by post-grinding with broadsword and tumbling treatment exhibited the largest hardness, cohesiveness and chewiness properties. In addition, injection and tenderization improved the lightness and redness, but decreased the yellowness of the hams. Sensory evaluation results indicated that the only tumbling treatment resulted in the worse sensory qualities of the hams, there were no significant differences in sensory qualities between the two kinds of hams which were made by post-injection and post-tenderization tumbling. The sensory textures and sliceability of the hams produced by post-injection tenderization and tumbling treatment were less than those hams made by post-grinding with broadsword and tumbling treatment, but higher visibility of meat matrix and better colour properties were exhibited. Therefore, it's suggested that in industrialized production by post-injection tenderization and tumbling of raw meat porcine sliced ham has the best qualities.

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