

THE EFFECT OF USING DIFFERENT AMOUNTS OF SODIUM NITRITE IN SALAMI ON QUALITY

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THESIS ABSTRACT

THE EFFECT OF USING DIFFERENT AMOUNTS OF SODIUM NITRITE IN SALAMI ON QUALITY

In our study, salami was produced using two different amounts (75 mg/kg and 150 mg/kg) nitrite curing salt (NaNO_2). Salami samples were collected at the 1st stage of production (salami paste), 2nd stage (after pre-drying), 3rd stages (after boiling), and nitrite (NO_2^-) (NaNO_2) and nitrate (NO_3^-) analyzes were performed with HPLC device according to TS EN 12014-4 and TS EN 12014-2 standards. In the first group salamis, the nitrite values were 72,00 mg/kg, 59,20 mg/kg, 54,00 mg/kg, and in the second group salamis 141,75 mg/kg, 126,57 mg/kg, 90,00 mg/kg respectively, according to the production stages. According to the statistical analysis, the difference between the groups in the mean nitrite values between the production stages of the two groups was significant ($P < 0.05$). When the storage stages of both groups of salami kept in the refrigerator with vacuum package were compared, the values obtained at the end of the first month of storage were also found to be statistically different ($P < 0.05$). There was no statistically significant difference between the groups in microbiological analyzes, pH values, chemical analyzes and sensory test values ($P > 0.05$).

Since there is no restriction on the amount of nitrite in the final product ready for consumption in salami in the Turkish Food Codex (TGK), the evaluation of the ready-to-eat product can be made without exceeding the 150 mg/kg limit added to the product, which does not represent the truth. During storage, this value drops further. In this case, it would be appropriate to impose a limitation on the maximum nitrate and nitrite values that should be present in the final product in salami in TGK. In addition, since there is no significant difference in sensory properties in the first group salami produced by reducing the nitrite amount, the use of nitrite below 150 mg/kg in salami should be brought to the agenda and it is recommended to apply this value in the TGK.

APPLICATION AREAS OF THE THESIS RESULTS

Meat products manufacturing companies

Food analysis control laboratories

ACADEMIC ACTIVITIES

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KEY WORDS

- ✓ Salami
- ✓ Nitrite
- ✓ Nitrate
- ✓ Food additive
- ✓ Residual level

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