



## **QUALITY STUDY OF HOMEMADE SAUSAGES WITH ROSEMARY SMOKED USING PLUM WOOD**

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### **Abstract**

This study analyzes the quality of homemade smoked sausages made from 80% pork and 20% bacon, compared to similar commercial products. The uniqueness lies in the use of rosemary, a natural antioxidant, and plum wood sawdust for smoking. Physico-chemical and sensory characteristics were evaluated. Rosemary helps extend shelf life, while plum wood enhances flavor and aroma. The results support the potential for innovation in traditional products.

### **• Introduction**

Homemade sausages are traditional meat products obtained through grinding, seasoning, stuffing, and smoking. Smoking plays a key role in flavor development and shelf life, especially when using hardwoods like plum. Rosemary is often added for its strong antioxidant properties, enhancing stability and nutritional value. This study focuses on sausages made with pork and bacon, smoked with plum wood and enriched with rosemary, aiming to assess their physico-chemical and sensory characteristics.

### **• Material and method**

Two sausage types were analyzed: commercially smoked and homemade smoked with plum wood and rosemary. Pork and bacon were minced, mixed with a solution of salt, rosemary, paprika, and pepper, and left to macerate for two hours. The sausages were then stuffed into casings, smoked for 3–4 hours, and aired for 12–24 hours.

Sensory evaluation was performed by 12 panelists (aged 18–55) using a 5-point hedonic scale for appearance, color, consistency, smell, and taste. Physico-chemical analyses included dry matter, NaCl content, and ash content. A comparative analysis was made to evaluate the differences between commercially smoked and homemade sausages based on sensory and physico-chemical characteristics.

### **• Results and discussions**

The sensory analysis results for the two sausage types (commercially smoked and smoked with plum wood and rosemary) showed that commercially smoked sausages were most appreciated for appearance and smell, with average scores of 4.08 and 3.75, respectively. Consistency scored 3.33, while taste and color received 3.58 and 3.42, respectively. In contrast, the homemade sausages smoked with plum wood and rosemary were most appreciated for taste, with an average score of 4.66, followed by color and smell (4.58 each). Consistency scored 4.08, and appearance received the lowest score of 4.00. Physico-chemical analysis results for moisture content showed  $39.44 \pm 1.20\%$  for the rosemary-enriched sausages and  $56.00 \pm 2.00\%$  for the commercially smoked sausages. The NaCl content was  $2.32 \pm 0.33\%$  for the homemade sausages and  $1.83 \pm 0.22\%$  for the commercially smoked sausages. Ash content averaged  $1.72 \pm 0.49\%$  for the homemade sausages, while the commercial sausages had an average of  $1.30 \pm 0.10\%$ .

### **• Conclusions**

The sensory analysis revealed that sausages smoked with plum wood and rosemary were preferred for taste, color, and smell. Physico-chemically, these sausages had lower moisture content, higher NaCl, and higher ash compared to commercially smoked sausages. The addition of rosemary and plum wood smoking contributed to enhanced sensory characteristics and nutritional properties, making them a viable option for improving homemade sausage quality.

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