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Quality Characteristics of Low-Fat Pork Sausages with Paprika Powder

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Objectives

This study was performed to evaluate the quality characteristics of low-fat pork sausage (LFPS, < 3%) containing paprika powder (PP) to partially replace with sodium nitrite (NaNO₂).

Materials and Methods

LFPSs were prepared commercially with or without NaNO₂ (37.5 ppm) and paprika powder (0.05~0.1): Control (CTL-37.5 ppm, NaNO₂), Reference (REF-150 ppm, NaNO₂), TRT1-37.5 ppm, NaNO₂ +0.05% PP; TRT2-37.5 ppm+0.1% PP). After the sausages were cooked by boiling (75°C/30 min) or smoking (72°C), physicochemical and textural properties were measured. Sensory evaluation was performed with 7 semi-trained panels with 8 point- hedonic test. Experimental design of this study is 1-way analysis of variance (ANOVA) with 3 replications.

Results

The addition of PP into sausage mixture increased redness values (a*) similar to those of REF. Boiled sausages with 37.5 ppm NaNO₂ and 0.05% PP (TRT 1), and smoked sausages with 37.5 ppm NaNO₂ with both 0.05 and 0.1% were most similar to those with REF. However, the physicochemical and textural properties of LFPS were not different with the addition of PP. TRT1 in boiling sausage and TRT2 in smoked sausage showed highest in overall sensory evaluation.

Conclusion

Thus, the addition of PP into the sausage mixture increased redness values and sensory evaluation, regardless of cooking method, and might be useful to partially replace with NaNO₂.