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Peer Review

Review of: "Food-Contact-Surface and Product-Test *Listeria monocytogenes* Positivity in U.S. Ready-to-Eat Meat and Poultry Establishments: Concurrent, Cumulative, and Temporally Separated Associations in USDA-FSIS Sampling Data, 2015-2025"

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This manuscript presents a novel and well-designed approach that combines vitreous endosperm enrichment to increase macular pigment content with controlled scalding-induced gelatinization to improve steamed corn cake quality. One of the strengths of the study is that it links raw material fractionation, starch structural changes, batter rheology, pigment retention, and final product quality within a single experimental framework. The use of multiple complementary analytical techniques (RVA, DSC, XRD, CLSM, rheology, texture analysis, and image analysis) provides a comprehensive evaluation of the process and helps explain how moderate gelatinization influences product performance. Overall, the study makes a useful contribution to the development of nutrient-enriched corn-based staple foods.

What I found most interesting is that the optimal treatment (G30) did not correspond to the highest rheological strength. In contrast, G30 exhibited the lowest viscoelastic moduli while producing the highest specific volume, improved pore structure, and superior texture. This observation highlights an important point that may extend beyond this specific product system: maximizing batter rigidity is not necessarily beneficial for gas expansion and final product quality. Rather, an optimal balance between structural stability and extensibility appears to govern product performance. I believe this structure-

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function relationship is the most impactful finding of the study and deserves even greater emphasis in the Discussion and Conclusion sections.

1. The manuscript currently discusses pigment enrichment, starch structural changes, batter rheology, and product quality somewhat separately. However, the most novel finding is the identification of an optimal low-gelatinization state that simultaneously improves gas retention, texture, and pigment retention. Highlighting this integrated structure-function relationship would strengthen the impact of the manuscript.

2. The revised explanation is much improved. However, this finding is somewhat counterintuitive because stronger gel systems are often assumed to provide better structural support. Additional discussion of why a weaker but still elastic network promotes gas expansion more effectively would increase the mechanistic value of the study.

3. A figure linking scalding intensity → gelatinization degree → starch structure → batter rheology → gas cell development → final product quality would help readers visualize the overall process and improve accessibility.

4. The manuscript successfully identifies a processing window that balances quality and pigment retention. A brief discussion of how this principle may be applied to other cereal-based steamed products would broaden the significance of the work.

Declarations

Potential competing interests: No potential competing interests to declare.