



Response to the Correspondence Regarding “The Effect of Bread with and without Cumin on Glycemic Index, Glycemic Load, and Glycemic Response in Healthy People”

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LETTER TO EDITOR

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Dear editor,

We appreciate the interest shown by the authors in our recent article, “The Effect of Bread with and without Cumin on Glycemic Index, Glycemic Load, and Glycemic Response in Healthy Individuals (Khodaie *et al.*, 2025a).” We value the opportunity to clarify the methodological aspects of our research in response to the points raised (Khodaie *et al.*, 2025b).

Regarding the concerns pertaining to carbohydrate dosing, we would like to emphasize that the experimental design employed an identical flour base for both bread formulations, with a controlled substitution of 2% wheat flour with 2% cumin powder in the test bread. While the input formulation was consistent, we acknowledge the discrepancy in the analyzed carbohydrate content per 100g of the final baked products.

It is important to note that these analytical results - specifically the observed variations in carbohydrate and energy profiles - were initially unexpected. In light of this, our research team proactively conducted the chemical analyses in triplicate within the same laboratory. The results

demonstrated high reproducibility and consistent patterns across all three series of measurements. At present, the precise mechanisms leading to this compositional divergence during fermentation and baking remain unclear. A comprehensive review of current literature suggests that such observations are not widely documented, and we encourage future investigations to explore the potential biochemical interactions between cumin constituents and bread matrix components during thermal processing.

Concerning our study design and the methodology for calculating the Glycemic Index (GI), we wish to affirm that our protocol was rigorously aligned with established scientific standards. Specifically, our methodology adhered to the guidelines outlined by Brouns *et al.* and utilized the methodological framework successfully implemented by Jarrar *et al.* (Brouns *et al.*, 2005, Jarrar *et al.*, 2019). We remain committed to the transparency of our data and believe that this study provides a foundational contribution to the clinical understanding of the

metabolic effects of cumin-enriched bread. We trust that this clarification addresses the concerns raised and serves to enhance the interpretation of our findings within the broader context of cardiometabolic health.

Sincerely

Mohammad Kamalinejad

References

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