

CODEx ALIMENTARIUS COMMISSION



Food and Agriculture
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World Health
Organization

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEx COMMITTEE ON FOOD ADDITIVES

Fifty-sixth Session

REPORT OF THE WORKING GROUP ON THE DEVELOPMENT OF A GUIDELINE FOR THE CONDUCT OF FOOD SAFETY ASSESSMENT OF CELL CULTURE MEDIA COMPONENTS USED IN THE PRODUCTION OF CELL-BASED FOODS

(Comments of Kenya, Malaysia, Republic of Korea and Good Food Institutes (GFI))

Kenya

Comment: Kenya notes the improvement done on this work and look forward to the discussions on the subject matter.

Malaysia

Malaysia supports the new work proposal on the development of guidelines for the safety assessment of cell culture media components used in the production of cell-based foods. In view of the increasing demand for cell-based foods, such guidelines would serve as a useful reference for regulators in developing national regulatory frameworks.

Malaysia is of the view that the exclusion of scaffolds from the current scope on the basis that most commercial producers currently focus on non-structured products and generally use conventional scaffolding materials, may result in a regulatory gap. Emerging research highlights the use of novel biomaterials, including decellularized plant-based scaffolds, hydrogels, and bioactive peptide-functionalized matrices, in the development of cell-based foods. The FAO/WHO (2023) report on “Food Safety Aspects of Cell-Based Food” has also identified scaffold materials as a potential source of chemical and allergenic hazards. Deferring the consideration of scaffolds may therefore limit the relevance of the guideline over time.

In this regard, Malaysia considers that a comprehensive food safety assessment should cover the entire production process of cell-based foods, not limited to cell culture media components. Malaysia would appreciate guidance from Codex on how this matter could be appropriately addressed within the Codex framework.

Republic of Korea

The Republic of Korea supports the development of a guideline for the conduct of food safety assessment of cell culture media components used in the production of cell-based foods. We believe it is meaningful to begin addressing this cell-based task and collaborating with each CODEX member.

Good Food Institute (GFI)**(CAC Observer¹)**

The Good Food Institute (GFI)² welcomes the Codex Alimentarius Commission's (CAC) continued interest in new food sources and production systems (NFPS), including cell-based food production. As regulatory approvals for cell-based food products internationally continue, the proposed new work to develop a guideline for the conduct of food safety assessment of cell culture media components used in the production of cell-based foods, as refined by the electronic working group chaired by Singapore and co-chaired by China, the Republic of Korea, and Saudi Arabia, presents an opportunity for future alignment. Through this intervention, GFI respectfully offers additional context about the cell-based food industry to the Committee as it considers this new work.

As Codex considers guidance for this emerging sector, it will be important to ensure that any future guidelines can accommodate ongoing technological development. Companies continue to optimize the formulations and substances used in cell culture media, a time-consuming effort for both industry and regulators. To support continued innovation, it will be important that any guidelines developed remain flexible and non-exhaustive throughout the drafting process, while continuing to prioritize consumer safety.

Ensuring such flexibility will be especially critical as the cell-based food sector continues to expand across borders and regulatory jurisdictions. While international trade in cell-based foods is still emerging, the sector is already global in scope. As of 2025, 142 companies across 32 countries were primarily dedicated to the development of cell-based animal products, with several seeking regulatory approval in jurisdictions beyond those in which they are headquartered.³ Flexibility is critical to ensure that differences in approved product formulations or methodologies across jurisdictions do not create unnecessary challenges for future trade as the sector develops.

This new work proposal for guidance on the safety assessment of cell culture media components may support consistent and accessible regulatory approaches, enabling a wider range of countries to evaluate these products without needing to develop entirely new regulatory frameworks. Such guidance may also support consumer protection in regions where the cell-based food sector is emerging but where regulatory requirements are not yet fully established. Any such guidance must evolve and keep pace with innovation in order to be a useful reference for either national regulation or international trade.

We thank the members of the electronic working group for their time spent refining this proposal. In particular, we support cross-referencing existing Codex guidance on antimicrobial resistance (AMR), rather than introducing new or inconsistent guidance on this issue. AMR is a concern that affects multiple sectors and is not unique to cell-based food production. In practice, the use of antimicrobials in the production of cell-based foods is currently limited primarily to upstream cell line development, and any residues are expected to be minimal or absent in the final product.

To ensure that the proposed work remains practical and informed by existing expertise, CCFA should incorporate the substantial body of work that has already been developed in this area. Specifically, GFI Asia Pacific, in partnership with Vireo Advisors and the Future Ready Food Safety Hub and with support from the Singapore Food Agency, has developed the Safety Assessed Media Ingredient (SAMI) Framework,⁴ which is intended to support the development of a harmonized international approach to safety assessments of media components used in cell-based meat production. Additional resources that could inform this work include the FAO and WHO

¹ See <https://www.fao.org/fao-who-codexalimentarius/about-codex/observers/detail/en/c/168889/>.

² The Good Food Institute (GFI) is a nonprofit civil society organization that supports the advancement of the plant-based, cultivated, and fermentation-enabled protein sectors for their potential to meet global health and food security goals. We are funded by philanthropy and only accept industry funding for open-access research and to cover the costs of events and conferences. We are a global network of organizations operating in the United States, Brazil, Europe, India, Israel, Japan, and the Asia-Pacific region. Please contact codex@gfi.org with any inquiries.

³ Good Food Institute, [Alternative protein company database](#). We note that these figures may not fully capture the amount of companies involved in the cell-based meat space. Startups often do not become public until they move beyond the research and development phase, and some private companies opt not to be included in public industry lists like this one.

⁴ Ong, K., Kukk, K., Powell, D., Chen, W. N., Goh, S., & Shatkin, J. A. (2025). Development of a Safety-Assessed Media Ingredient (SAMI) Framework for Streamlined Safety Assessment of Cultivated Meat and Seafood Products. Preprints. <https://doi.org/10.20944/preprints202503.0374.v1>

publications on cell-based foods,⁵ as well as publicly available safety assessments conducted by authorities such as FSANZ⁶ and the U.S. FDA.⁷

⁵ [Regulatory frameworks for cell-based foods and precision fermentation-derived products](#) (FAO 2026); [Cell-based food and precision fermentation - products, safety, and the future role](#) (FAO 2023); ([Food safety aspects of cell-based food](#) (FAO & WHO, 2023); [Cell-based food in the context of the Near East region](#) (FAO & WHO, 2023).

⁶ <https://consultations.foodstandards.gov.au/>

⁷ <https://www.fda.gov/food/food-ingredients-packaging/human-food-made-cultured-animal-cells>