Postbiotics

A postbiotic is a preparation of inanimate microorganisms and/or their components that confers a health benefit on the host.

COMPONENTS OF A POSTBIOTIC:

- Postbiotics may contain intact inanimate microbial cells...
- and/or microbial cell fragments/structures...
- with or without metabolites/endproducts

Postbiotic Definition Explained:

Postbiotic is derived from “biotic”, relating to living organisms, and “post”, meaning after (life).

Preparation recognizes that the specific formulation, including microbial biomass, matrices, and inactivation methods, may play a role in the beneficial effect.

Inanimate recognizes that the terms ‘dead’ or ‘inactive’, may suggest an inert material, rather than a material capable of conferring a health benefit.

Components recognizes that health effects may be mediated by a variety of different cell parts or metabolites.

Postbiotics may contain intact inanimate microbial cells...

Cell walls, membranes, exopolysaccharides, cell-wall anchored proteins, pili, etc.

Organic acids, peptides, secreted proteins, enzymes, bacteriocins, etc.

POSTBIOTIC:

✓ Derived from microorganisms, but a postbiotic does not have to be derived from a probiotic
✓ A deliberate process to terminate cell viability must be applied. The final postbiotic must contain inactivated microbial cells and/or metabolites or cell components
✓ Viable cells are absent or negligible in final product
✓ Evidence of a health benefit in the target host
✓ Assessment of safety of the postbiotic preparation for the intended use

NOT POSTBIOTIC:

✗ Viruses, including bacteriophages
✗ Vaccines
✗ Filtrates without cell components
✗ Purified microbial components (e.g., proteins, peptides, exopolysaccharides)
✗ Purified microbial metabolites (e.g., organic acids)


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