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Targeted, consistent action of polyols on gut microbiota composition and metabolites

Utilizing specific sugar alcohols, this technology selectively promotes beneficial gut bacteria for use in low-calorie, consumer-friendly food, beverage, and supplement applications.

Researchers at Purdue University have developed a novel technology regarding the compositions and methods for promoting the growth of beneficial gut microbiota through the use of specific combinations of polyols, such as sugar alcohols that are widely used as food additives. While polyols are commonly known for their roles as low-calorie, non-carcinogenic sweeteners, this innovation focuses on their prebiotic-like effects, particularly their capacity to selectively increase beneficial bacterial populations in the human colon. The formulations may include additional fibers and are tailored for different market consumer groups for a variety of products.

Technology Validation:

The average relative abundance of Anaerostipes was approximately 1.3% in initial inoculum, and following the fermentation of several sugar alcohols it increased an average of 10.8%. The polyols, except erythritol, generally promoted Blautia as was shown in the above pooled effect,

Advantages:

-Selective promotion of beneficial gut bacteria

-Consumer-friendly formulation

-Low-calorie and non-cariogenic

Applications:

-Foods and beverages

-Probiotic and prebiotic supplements

-OTC digestive health products

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Category

Biotechnology & Life Sciences/Bioprocessing & Biomanufacturing

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Intellectual Property:

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