Probiotic Stabilization Technology Reduces Over-formulation Needs in Functional Foods and Dietary Supplements

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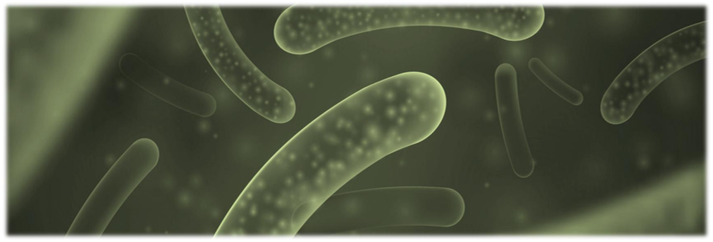
OBJECTIVE

Demonstrate the use of ABN's probiotic stabilization technology to:

1) significantly reduce over-formulation requirements in functional food and dietary supplement products
2) better meet industry labeling best practices for achieving the stated end-of-shelf-life CFU count

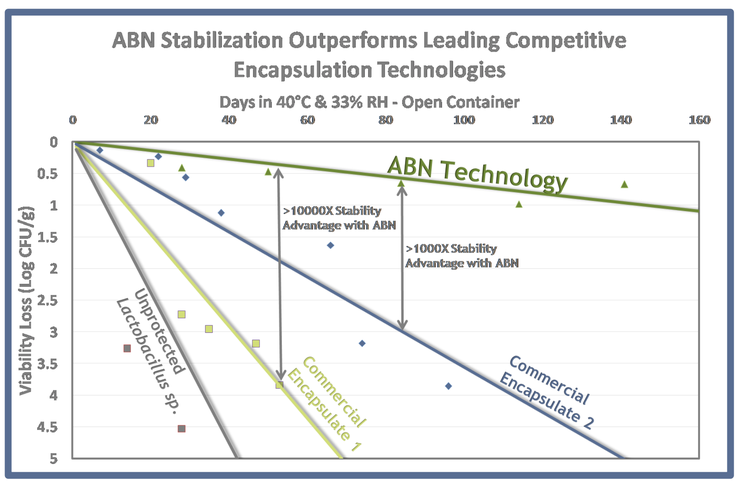


ABN TECHNOLOGY ATTRIBUTES

METHODS

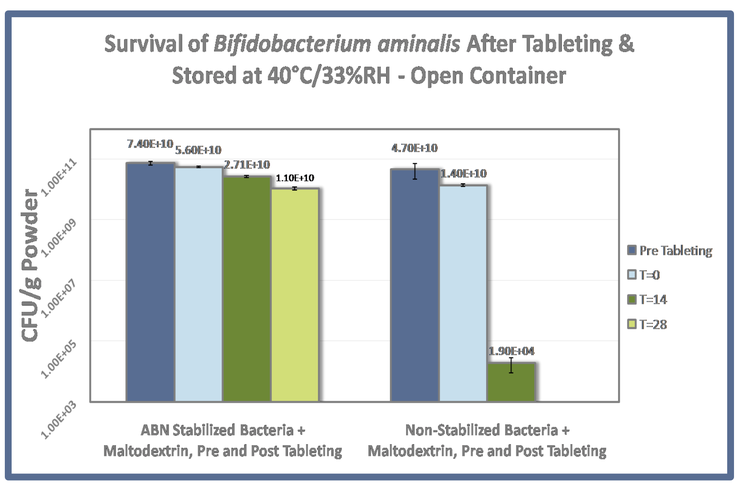
Probiotic bacteria were stabilized using Advanced BioNutrition's proprietary formulations comprising GRAS and/or CODEX 72 ingredients utilizing typical commercial probiotic process operations. The samples were applied in an array of model product types and the probiotic-enriched functional foods and supplement product forms were tested under accelerated or typical shelf-storage conditions with probiotic viability monitored over time.

RESULTS AND CONCLUSIONS



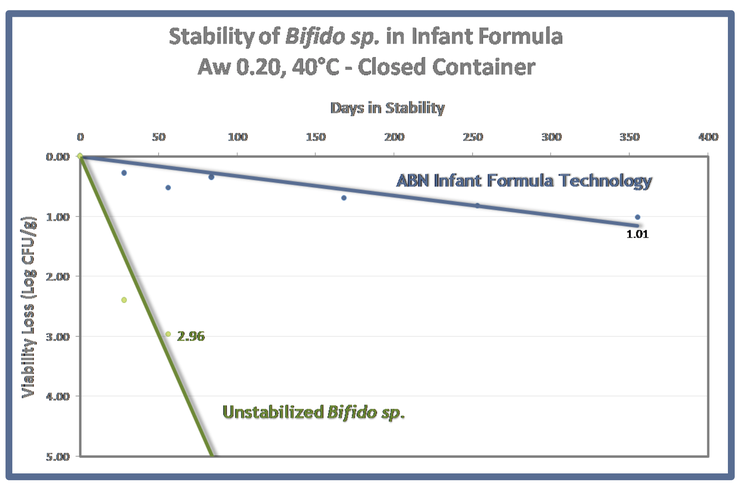
Dietary Supplement

When exposed to accelerated storage conditions, ABN stabilized *Lactobacillus sp*. achieved an advantage of 1000X and 10,000X advantage over two commercial products.



Tableting Supplements

Stabilizing *Bifidobacterium sp* bacteria increases cell survival >2X through tableting mechanical and heat stress and further enables increased viability of the tableted product > 6 logs after 30 days in accelerated open tube storage conditions.



Infant Formula

Stabilized *Bifidobacterium* sp. applied in infant formula (Aw = 0.20) and incubated at 40°C demonstrated > 1000X survival at 2 months compared to an unstabilized control and enabled storage up to 1 year with 1 log cfu/g loss.

The CRN and IPA Labeling Recommendation 1B reads: "The labeled quantity of probiotics should reflect the quantity of live microorganisms at the end of the stated shelf life, not at the time of manufacture."
The above results demonstrate the advantage of using ABN stabilization technologies to reduce the amount of probiotic over-formulation required to achieve the labeled viable cell count specified at the end of product shelf-life leading to opportunities for economic savings and increased consumer product confidence.

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