

# Probiotics selection guide

for food and beverage applications



Unique – Healthy – Simple – Consumer Appeal – Brand Enhancing

## Your daily challenge

- Offer tangible health benefits with scientific documentation that meets regulatory demands.
- Develop products that differentiate
- Capture latest trends in health and nutrition
- Revitalise product lines entering mature stages in the market
- Allow for the addition of ingredients without compromising taste and texture
- Expedite innovative new products to market

Danisco offers one of the most extensive and well documented lines of probiotic cultures available to the food and beverage industries. Our premium probiotic range, called HOWARU<sup>®</sup>, contains only probiotics with proven benefits for human health. These probiotics benefits are backed by multiple human clinical studies published in leading journals. Within this range:

- HOWARU<sup>®</sup> Dophilus and HOWARU<sup>®</sup> Bifido have proven digestive health benefits
- HOWARU<sup>®</sup> Bifido and HOWARU<sup>®</sup> Rhamnosus have been selected for their immune-modulating benefits
- HOWARU<sup>®</sup> Protect has proven respiratory health benefits

We also offer YO-MIX<sup>™</sup> brand cultures which contain content claim strains including *Lactobacillus acidophilus*, *Lactobacillus paracasei* and *Bifidobacterium lactis*.

Select from our single probiotic strains or our carefully designed formulations to create unique dairy or food products. Choose our freeze-dried (powder or pellet) or frozen (pellet) formats for direct incorporation into the food matrix. You decide!

**HOWARU<sup>®</sup>**  
premium probiotics

**DANISCO**  
First you add knowledge...

## Product Selection Guide

| Product name   | Species name      | Claim positioning  | Package size<br>Freeze-dried format*      | Recommended<br>daily intake                                 |  |
|--|-------------------|--|---|---|--|
| <b>HOWARU® single strain and blends – Milled standardised powder – Delivers consistent cell count per gram</b>       |                   |  |   |   |  |
| HOWARU® Premium Probiotic product range  | HOWARU® Dophilus  | <i>Lactobacillus acidophilus</i> NCFM  | Digestive health                          | 40 DCU (1248156)<br>100 DCU (1261267)<br>1000 DCU (1245350) | 1 billion (1x10e9)                       |
|  | HOWARU® Bifido    | <i>Bifidobacterium lactis</i> HN019  | Immune health<br>Digestive health         | 40 DCU (1261264)<br>500 DCU (1254610)                       | 5 billion (5x10e9)<br>1 billion (1x10e9) |
|  | HOWARU® Rhamnosus | <i>Lactobacillus rhamnosus</i> HN001   | Immune health                             | 40 DCU (1250491)<br>500 DCU (1254611)                       | 5 billion (5x10e9)                       |
|  | HOWARU® Protect   | <i>Bifidobacterium lactis</i> Bi-07 and<br><i>Lactobacillus acidophilus</i> NCFM | Respiratory health                        | 1000 DCU (1252265)  | 10 billion (10x10e9)                     |
| <b>HOWARU® single strain and blends – Non-milled pellet (NM) – delivers quick solubility for liquid applications</b> |                   |  |   |   |  |
| HOWARU® Premium Probiotic product range  | HOWARU® Dophilus  | <i>Lactobacillus acidophilus</i> NCFM  | Digestive health                          | 100 DCU (1260134)<br>1000 DCU (1264640)                     | 1 billion (1x10e9)                       |
|  | HOWARU® Bifido    | <i>Bifidobacterium lactis</i> HN019  | Immune health<br>Digestive health         | 100 DCU (1260115)<br>1000 DCU (1264643)                     | 5 billion (5x10e9)<br>1 billion (1x10e9) |
|  | HOWARU® Protect   | <i>Bifidobacterium lactis</i> Bi-07 and<br><i>Lactobacillus acidophilus</i> NCFM | Respiratory health                        | 2500 DCU (1260143)  | 10 billion (10x10e9)                     |
| <b>YO-MIX™ single strain – Milled standardised powder</b>  |                   |  |   |   |  |
| Content claim product range  | L. acidophilus    | <i>Lactobacillus acidophilus</i>   | Contains <i>Lactobacillus acidophilus</i> | 50 DCU (1261268)  | N.A.                                     |
|  | B. lactis         | <i>Bifidobacterium lactis</i>  | Contains <i>Bifidobacterium lactis</i>    | 50 DCU (1261271)  |  |
|  | L. paracasei      | <i>Lactobacillus paracasei</i>   | Contains <i>Lactobacillus paracasei</i>   | 50 DCU (1261967)<br>NMVersion -<br>750 DCU (1264467)        |  |

\*Limited range of HOWARU® premium probiotics offered in a frozen format

1 DCU = 100 billion cells (1x10e11 cfu)

CFU = colony forming unit

## Suggested inoculation level for probiotic cultures in different applications

| Product name                             | Suggested dosage*<br>(CFU/serving) | Fermented milk and yogurt<br>300-500 Gal.<br>1000-2000 l. | Orange juice<br>300-500 Gal.<br>1000-2000 l. | Cheese<br>300-500 Gal.<br>1000-2000 l. | Chocolate<br>(DCU/kg) | Ice cream<br>(DCU/kg mix) | Fluid milk<br>300-500 Gal.<br>1000-2000 l. | Aseptic beverage            |
|--|------------------------------------|---|--|--|-----------------------|---------------------------|--|-----------------------------|
| <b>HOWARU® single strains and blends</b> |                                    |   |  |  |                       |                           |  |                             |
| HOWARU® Dophilus or HOWARU® Bifido       | 1 billion (1x10e9)                 | 200 DCU   | N.A.   | 100 DCU                                | 2.5 DCU               | 5 DCU                     | 100 DCU                                    | HOWARU®<br>Sprinkle sachets |
| HOWARU® Bifido                           | 5 billion (5x10e9)                 | 1000 DCU  | 5000 DCU                                     | 500 DCU                                | 5 DCU                 | 10 DCU                    | 500 DCU                                    |                             |
| HOWARU® Rhamnosus                        | 5 billion (5x10e9)                 | 1000 DCU  | N.A.   | 500 DCU                                | 5 DCU                 | 10 DCU                    | 500 DCU                                    |                             |
| HOWARU® Protect                          | 10 billion (10x10e9)               | 2000 DCU  | N.A.   | 1000 DCU                               | 25 DCU                | 50 DCU                    | 1000 DCU                                   |                             |
| <b>YO-MIX™ single strains</b>            |                                    |   |  |  |                       |                           |  |                             |
| L. acidophilus                           | 1x10e6 - 1x10e7                    | 50 DCU  | N.A.   | 50 DCU                                 | 50 DCU                | 50 DCU                    | 50 DCU                                     | —                           |
| B. lactis                                | 1x10e6 - 1x10e7                    | 50 DCU  | 50 DCU                                       | 50 DCU                                 | 50 DCU                | 50 DCU                    | 50 DCU                                     |                             |
| L. paracasei                             | 1x10e6 - 1x10e7                    | 50 DCU  | 50 DCU                                       | 50 DCU                                 | 50 DCU                | 50 DCU                    | 50 DCU                                     |                             |
| Serving size                             |                                    | 100 to 150 g  | 150 to 300 ml                                | 10 to 30 g                             | 20 to 40 g            | 40 to 80 g                | 150 to 300 ml                              |                             |

\* Final inoculation rate may vary as a result of processing conditions, formulation or shelf-life requirements. Danisco offers application support

Shipping available worldwide

Support documentation: Halal and Kosher Certification,  
ISO 9001, HACCP, MSDS, Product description

Danisco  
Telephone +33 1 56 60 47 00  
Telefax +33 1 56 60 47 02  
bioactives@danisco.com • www.danisco.com/health

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