PRODUCTS WITH PURPOSE

Enzymes
**Tolerase® G & Tolerase® L / Digestive enzymes**

<table>
<thead>
<tr>
<th>Product and Description</th>
<th>Certifications</th>
<th>Pack Size (kg)</th>
<th>Product Code</th>
<th>Form</th>
<th>Main Application</th>
<th>Specific Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerase® G</td>
<td>Kosher ● ●</td>
<td>5</td>
<td>50 1688 3.304</td>
<td>Liquid ●</td>
<td>Pharma Reg. OTC/Rx* ● ● ●</td>
<td>Dietary Supplements ● ● ●</td>
</tr>
<tr>
<td>Prolyl oligopeptidase. Micro granulated powder, 580,000 PPI/g</td>
<td></td>
<td></td>
<td></td>
<td>Powder ●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tolerase® L</td>
<td>Kosher ● ●</td>
<td>5</td>
<td>50 1654 9.304</td>
<td>Liquid ●</td>
<td>Pharma Reg. OTC/Rx* ● ● ●</td>
<td>Medical Nutrition ● ● ●</td>
</tr>
<tr>
<td>Acid lactase. Micro granulated powder, 100,000 ALU/g</td>
<td></td>
<td></td>
<td></td>
<td>Powder ●</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION | Digestive enzymes (Tolerase® G & Tolerase® L)**

**ROLE:**
Tolerase® G is a micro granulated food enzyme preparation containing prolyl oligopeptidase. Some humans may lack enzymes which can fully digest proline-rich peptides, such as in gluten. Tolerase® G has been proven to degrade proline-rich gluten epitopes. It addresses the needs of consumers who want to reduce their dietary gluten exposure.

Tolerase® L is a micro-granulated food enzyme preparation containing acid lactase. Lactase is needed to digest lactose, which is the main carbohydrate source of dairy products. Since many adults don’t produce enough lactase, lactose is not properly digested in the small intestine but fermented by the microbial flora in the large intestine. The resulting by-products cause diarrhea, abdominal cramps, flatulence and nausea. The use of lactase can prevent these unpleasant side-effects of consuming dairy products. Acid lactase works especially well at low pH, making it particularly suitable to digest lactose in the stomach.

**HEALTH BENEFITS & SOLUTIONS:**
Improve your gut health.

**EU CLAIMS:**
- Lactase enzyme improves lactose digestion in individuals who have difficulty digesting lactose.
ADDITIONAL INFORMATION | Labeling

KOSHER AND HALAL CERTIFICATION
Typically our products have Kosher (OU) and the main Halal certifiers (IFANCA, HFCE, MUI). We occasionally use other certification organization as well, but these are typically for special cases or back-up. Information about the other available certificates may be available upon request.

SPECIFIC PRODUCT INFORMATION
Product Data Sheets and Safety Data Sheets are available for all products listed in this catalogue. They contain information on product description and identification, specification and stability and storage conditions.

Some of the listed products are used either as vitamins (nutrients / Active Pharmaceutical Ingredients / excipients) or as food additives for technological purposes; some of them serve both purposes and are authorized in most countries. However, there are local regulations according to which their use may be restricted. It is therefore advisable to consult the corresponding regulation.

For further information on our products (local availability and prices), please contact the DSM Nutritional Products’ office nearest to you or one of the addresses listed on the back cover.

RSPO CERTIFICATION
DSM made a commitment in 2013 to source all palm oil and palm oil derivatives in a sustainable manner by either using GreenPalm certificates under “Book & Claim” scheme or Mass Balance certification.
With our broad service offerings, customers get an integrated partner, from concept to consumer.

**PRODUCTS**
- Active pharmaceutical ingredients (APIs)
- Carotenoids
- Digestive enzymes
- Human milk oligosaccharides (HMOs)
- Hydrocolloids
- Nutraceuticals
- Nutritional lipids
- Probiotics and prebiotics
- Vitamins

**CUSTOMIZED SOLUTIONS**
- Coloration solutions
- Market-ready solutions
- Personalized nutrition solutions
- Premix solutions
- Shelf-life solutions

**EXPERT SERVICES**
- Application and technical services
- Innovation and R&D services
- Insights and marketing services
- Regulatory and quality services
- Scientific services

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