



Health, Nutrition and Care

2024 Product brochure

dsm-firmenich 

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Products – Customized solutions – Expert services

PRODUCTS WITH PURPOSE

Fat-soluble vitamins

Quali®-A / Vitamin A (Retinol) – liquid**

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Vitamin A Acetate 1.5 MIU/g Stabilized with tocopherol. Oily solution, based on peanut oil. Contains min 1,500,000 IU Vit. A/g, min. 516 mg/g of Vit. A Acetate equivalent to 450 mg/g of retinol	●	●			5	04 1884 6.294	●			●	●			●	●
Vitamin A Palmitate 1.0 MIU/g Stabilized with tocopherol. Oily solution, based on peanut oil. Contains min 1,000,000 IU Vit. A/g, min. 550 mg/g of Vit. A Palmitate equivalent to 300 mg/g of retinol	●	●			5	04 3140 0.294	●			●	●			●	●
Vitamin A Palmitate/M 1.0 MIU/g Stabilized with tocopherol. Oily solution, based on medium chain triglycerides. Contains min 1,000,000 IU Vit. A/g, min. 550 mg/g of Vit. A Palmitate equivalent to 300 mg/g of retinol	●	●			5	50 0853 0.294	●			●	●			●	●
Vitamin A Palmitate 1.0 MIU/g Stabilized with BHA/BHT. Oily solution, based on peanut oil. Contains min 1,000,000 IU Vit. A/g, min. 550 mg/g of Vit. A Palmitate equivalent to 300 mg/g of retinol	●	●			5	04 2060 3.294	●			●	●			●	●
Vitamin A Palmitate 1.7 MIU/g Stabilized with BHA/BHT. Oily liquid. Contains min 1,700,000 IU Vit. A palmitate/g, min. 934 mg/g of Vit. A Palmitate equivalent to 510 mg/g of retinol	●	●	●		5 20	04 2401 3.294 04 2401 3.336	●		●	●	●			●	●
Vitamin A Palmitate 1.7 MIU/g Stabilized with tocopherol. Oily liquid. Contains min 1,700,000 IU Vit. A/g, min. 934 mg/g of Vit. A Palmitate equivalent to 510 mg/g of retinol	●	●			5 20	04 1857 9.294 04 1857 9.336	●			●	●	●	●	●	●
Vitamin A Palmitate 1.7 MIU/g Without stabilizers. Oily liquid. Contains min 1,700,000 IU Vit. A/g, min. 934 mg/g of Vit. A Palmitate equivalent to 510 mg/g of retinol	●	●	●	●	5 20 190	04 2400 5.294 04 2400 5.336 04 2400 5.420	●		●	●	●	●		●	●
Retinyl Palmitate 1.7 MIU/g Ph*** API with specific service package for pharma registered applications. Without stabilizers. Oily liquid. 510 mg Retinol Equivalents/g	●	●	●	●	5 20	50 1626 2.294 50 1626 2.336	●		●						●
Vitamin A Palmitate 1.0 MIU/g and Vitamin D3 100,000 IU/g Stabilized with tocopherol. Oily solution (corn oil). Contains min 1,000,000 IU Vit. A and 100,000 IU Vit. D3/g, min. 550 mg/g of Vit. A Palmitate equivalent to 300 mg/g of retinol and 2500 mg Vit. D3	●	●			5	50 1155 8.294	●			●	●			●	●
Vitamin A Water-miscible Type 100 Stabilized with BHA/BHT. Contains min 1,000,000 IU Vit. A/g, min. 550 mg/g of Vit. A Palmitate equivalent to 300 mg/g of retinol		●			6 L	04 2131 6.126	●			●					●
Vitamin A + D3 Water-miscible Type 100/20 Stabilized with BHA/BHT. 0.5 mg cholecalciferol/g and 30 mg Retinol Equivalents/g		●			6 L	50 1156 6.126	●			●					●

**US FDA 2018 label: 1 IU vitamin A = 0.3 mcg retinol activity equivalents (RAE).

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Quali®-A / Vitamin A (Retinol) – powder**

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Dry Vitamin A Acetate 500 AF Beadlet™, tablet grade. Based on starch. Without antioxidants. Contains min 500,000 IU Vit. A/g, min. 172 mg/g of Vit. A Acetate equivalent to 150 mg/g of retinol	●	●			5	50 1614 4.609		●	●					●	
					20	50 1614 4.641									
Dry Vitamin A Acetate 500 B Stabilized with BHT. Beadlet™, tablet grade. Based on bovine gelatin. Contains min 500,000 IU Vit. A/g, min. 172 mg/g of Vit. A Acetate equivalent to 150 mg/g of retinol			●		5	50 1227 9.609		●	●	●				●	
					20	50 1227 9.656									
Dry Vitamin A Acetate 325 CWS/A Stabilized with tocopherol. Beadlet, Beadlet™, cold water dispersible. Based on gum acacia. Contains min 325,000 IU Vit. A/g, min. 112 mg/g of Vit. A Acetate equivalent to 97.5 mg/g of retinol	●	●			5	50 1033 0.304		●	●					●	
					20	50 1033 0.341 (Origin: Switzerland)									
					5	50 1352 6.304									
					20	50 1352 6.341 (Origin: USA)									
Dry Vitamin A Acetate 325 N Stabilized with tocopherol. Powder, spray dried. Based on starch. Contains min 325,000 IU Vit. A/g, min. 112 mg/g of Vit. A Acetate equivalent to 97.5 mg/g of retinol. Does not contain a flow agent, e.g. silicon dioxide.	●	●			20	50 1638 0.341		●	●					●	
Dry Vitamin A Palmitate, Type 250 CWS Stabilized with BHA, BHT Beadlet™, cold water dispersible. Contains min 250,000 IU Vit. A/g, min. 86 mg/g of Vit. A Acetate equivalent to 75 mg/g of retinol					25	04 2993 7.368		●						●	
Dry Vitamin A Palmitate, Type 250 CWS/F Stabilized with tocopherol. Beadlet™, cold water dispersible. Based on fish gelatin. Contains min 250,000 IU Vit. A/g, min. 137.5 mg/g of Vit. A Palmitate equivalent to 75 mg/g of retinol	●	●	●		25	04 2187 1.368		●	●	●				●	
Dry Vitamin A Palmitate 250 S/N Stabilized with BHT. Powder, spray dried. Starch-based. Contains min 250,000 IU Vit. A/g, min. 137 mg/g of Vit. A Palmitate equivalent to 75 mg/g of retinol	●	●			20	50 1255 4.341 (Origin: France)		●	●	●			●	●	
Retinyl Palmitate 250 CWS / F Ph Containing 237,500 – 287,500 IU/g of vitamin A (min. 137.5 mg/g of vitamin A palmitate equivalent to 75 mg/g of retinol) finely dispersed in a cornstarch-coated matrix of gelatin and sucrose, all-rac- α -tocopherol is added as an antioxidant and silicon dioxide as a processing aid.	●	●	●		25	50 1754 5.368		●	●						
Dry Vitamin A Palmitate 250 S/N-B Stabilized with BHT and sodium ascorbate. Beadlet™, cold water dispersible. Starch-based. Contains min 250 000 IU Vit. A/g, min. 137 mg/g of Vit. A Palmitate equivalent to 75 mg/g of retinol	●	●			5	50 0381 4.304		●	●					●	
					25	50 0381 4.606									

US FDA 2018 label: 1 IU vitamin A = 0.3 mcg retinol activity equivalents (RAE); *Product formulations which utilise Actilease® beadlet technology. Actilease® combines easy handling, bioavailability, and stability of the active.

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Additional information | Vitamin A (Retinol)

Role:

Vitamin A is necessary for vision, growth and tissue differentiation. It helps protect the cell membrane structure and is important for keeping the skin, eyes, and inner linings of the body healthy and resistant to infection. Vitamin A is also responsible for hair health and the maintenance and growth of glands.

Food sources:

Liver, kidney, eggs, milk, butter, margarine, fish and fish liver oil.

Health benefits & solutions:

Improve your gut health, Optimize your immunity, Upgrade your vision, Essentials for early life, Essentials for healthy aging, Essentials for kids & teens, Essentials for life, Essentials for women, Essentials for vegetarians & vegans, Nourish your beauty.

EU Claims:

- *Vitamin A contributes to normal iron metabolism.*
- *Vitamin A contributes to the maintenance of normal mucous membranes.*
- *Vitamin A contributes to the maintenance of normal skin.*
- *Vitamin A contributes to the maintenance of normal vision.*
- *Vitamin A contributes to the normal function of the immune system.*
- *Vitamin A has a role in the process of cell specialisation.*



Quali®-D / Vitamin D3 (Cholecalciferol) – liquid^{1**}

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Vitamin D3 1.0 MIU/g Stabilized with tocopherol. Oily solution (medium chain triglycerides). Contains 0.90-1.10 MIU Vit. D3/g, 22.5-27.5 mg/g	●	●	●	●	5	50 1157 4.294	●		●	●	●	●		●	(●)

**US FDA 2018 label: 1 IU vitamin D = 0.025 mcg vitamin D.

Quali®-D / Vitamin D3 (Cholecalciferol) – powder^{**}

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Vitamin D3 Crystalline 40,000,000 IU Vit. D3/g, 1,000,000 µg cholecalciferol/g	●	●			250 g	50 0927 8.258 (Origin: France)		●						●	(●)
					250 g	50 1629 9.258 (Origin: Switzerland)									
Vitamin D3 Crystalline Ph API with specific service package for pharma registered applications. 40,000,000 IU Vit. D3/g, 1,000,000 µg cholecalciferol/g	●	●	●	●	250 g	50 1626 3.258 (Origin: France)		●	●						(●)
Dry Vitamin D3, Type 100 CWS Stabilized with tocopherol. Beadlet ^{***} , cold water dispersible. 100,000 IU Vit. D3/g. Contains min 100,000 IU Vit. D/g, min. 2.5 mg/g	●	●			5	50 1201 5.304		●							(●)
					25	50 1201 5.368									
Dry Vitamin D3 100 CWS Ph API with specific service package for pharma registered applications	●	●	●	●	5	50 1647 3.304		●	●						(●)
					25	50 1647 3.368									
Dry Vitamin D3 100 CWS/AM Stabilized with tocopherol. Beadlet ^{***} , Based on gum acacia. Contains min 100,000 IU Vit. D3/g, min. 2.5 mg/g	●	●			25	50 1147 7.368		●	●		●				(●)
Dry Vitamin D3 100 N Stabilized with tocopherol. Spray dried. Starch based. Contains min 100,000 IU Vit. D3/g, min. 2.5 mg/g. Does not contain a flow agent, e.g. silicon dioxide.	●	●			20	50 1637 1.341		●			●	●			
Dry Vitamin D3 100 SD/S Stabilized with tocopherol. Spray dried, cold water dispersible. Starch-based/allergen free. Contains min 100,000 IU Vit. D3/g, min. 2.5 mg/g	●	●			5	50 1095 0.304		●			●	●		●	(●)
					20	50 1095 0.341									
Dry Vitamin D3 100 SD/S Stabilized with tocopherol. Spray dried, cold water dispersible. Starch-based/allergen free. Contains min 100,000 IU Vit. D3/g, min. 2.5 mg/g	●	●			20	50 1640 6.341		●	●		●	●		●	(●)
Dry Vitamin D3 100 SD/S Ph API with specific service package for pharma registered applications. Stabilized with tocopherol. Spray dried, cold water dispersible. Starch-based/allergen free. Contains min 100,000 IU Vit. D3/g, min. 2.5 mg/g	●	●	●	●	5	50 1621 2.304		●	●						(●)
					20	50 1621 2.341									

US FDA 2018 label: 1 IU vitamin D = 0.025 mcg vitamin D. (•) Regional differences. *Product formulations which utilise Actilease® beadlet technology. Actilease® combines easy handling, bioavailability, and stability of the active.

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Additional information | Vitamin D3 (Cholecalciferol)

Role:

Vitamin D3 helps the body maintain and utilize the calcium and phosphorus needed to build strong bones and teeth. A deficiency of Vitamin D can result in rickets, a disease in which the bones become bent or twisted. It helps calcium to reduce the risk of osteoporosis. Vitamin D3 contributes to the normal function of the immune system and healthy inflammatory response and to the maintenance of normal muscle function.

Food sources:

Liver, fortified milk, fish liver oil and other fatty substances. A precursor in the skin is converted to vitamin D3 by sunlight.

Health benefits & solutions:

Enhance your mobility, Guard your heart, Optimize your immunity, Essentials for early life, Essentials for healthy aging, Essentials for kids & teens, Essentials for life, Essentials for women, Essentials for vegetarians, Nourish your beauty, Power your performance.

EU health claims:

- *Vitamin D contributes to normal absorption/utilisation of calcium and phosphorus.*
- *Vitamin D contributes to normal blood calcium levels.*
- *Vitamin D contributes to the maintenance of normal bones.*
- *Vitamin D contributes to the maintenance of normal muscle function.*
- *Vitamin D contributes to the maintenance of normal teeth.*
- *Vitamin D contributes to the normal function of the immune system.*
- *Vitamin D has a role in the process of cell division.*
- *Vitamin D is needed for normal growth and development of bone in children.*
- *Calcium and vitamin D help to reduce the loss of bone mineral in post-menopausal women. Low bone mineral density is a risk factor for osteoporotic bone fractures.*
- *Vitamin D helps to reduce the risk of falling associated with postural instability and muscle weakness. Falling is a risk factor for bone fractures among men and women 60 years of age and older.*



Quali®-E / Vitamin E (dl-α-Tocopherol, dl-α-Tocopheryl Acetate) – liquid**

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
dl-α-Tocopherol Content of all-rac-α-tocopherol acc. to USP: 97.0–102.0%	●	●	●	●	5	04 1027 6.294	●		●	●	●	●	●	●	
					20	04 1027 6.336									
					50	04 1027 6.396									
dl-α-Tocopheryl Acetate Content of all-rac-α-tocopheryl acetate acc. to USP: 96.5–102.0%	●	●	●	●	5	04 2008 5.301	●		●	●	●	●	●	●	
					20	04 2008 5.331									
					190	04 2008 5.422									
					900	04 2008 5.476									
dl-α-Tocopheryl Acetate Ph API with specific service package for pharma registered applications. 1000 IU Vitamin E/g	●	●	●	●	5	50 1626 0.301	●		●	●	●	●	●	●	
					20	50 1626 0.331									
					190	50 1626 0.422									

**1 mg dl α-tocopherol acetate = 1IU = 0.67 mg α-tocopherol equivalent (FAO/WHO) = 0.45 mg vitamin E as d α-tocopherol (US FDA); 1 mg dl α-tocopherol = 1.1IU = 0.74 mg α-tocopherol equivalent (FAO/WHO) = 0.5 mg vitamin E as d α-tocopherol (US FDA); 1 mg d α-tocopherol acetate = 1.36 IU = 0.91 mg α-tocopherol equivalent (FAO/WHO) = 0.91 mg vitamin E as d α-tocopherol (US FDA); 1 mg d α-tocopherol = 1.49 IU = 1 mg α-tocopherol equivalent (FAO/WHO) = 1 mg vitamin E as d α-tocopherol (US FDA).

Quali®-E / Vitamin E (dl-α-Tocopherol, dl-α-Tocopheryl Acetate) – powder**

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Dry Vitamin E 15% CC Spray dried, cold water dispersible. Starch-based. Crystal clear. Contains min. 15% all-rac-α-tocopheryl acetate	●	●			15	50 0128 5.281		●		●				●	
Dry Vitamin E 50% CWS/S Spray dried, cold water dispersible. Starch-based. Contains min. 50% all-rac-α-tocopheryl acetate	●	●			20	50 0112 9.341 (Origin: Switzerland)		●		●	●	●	●	●	
					20	50 1274 0.341 (Origin: France)									
Dry Vitamin E 50% CWS/S Ph Spray dried, cold water dispersible. Contains min. 50% all-rac-α-tocopheryl acetate	●	●	●	●	20	50 1657 7.341		●	●					●	
Dry Vitamin E 50%, Type SD Spray dried. Contains min. 50% all-rac-α-tocopheryl acetate					15	50 1407 7.281		●		●					
Dry Vitamin E 50% N Spray dried. Starch based. Contains min 50% all-rac-α-tocopheryl acetate. Does not contain a flow agent, e.g. silicon dioxide	●	●			20	50 1635 2.341		●		●	●	●		●	
Dry Vitamin E Acetate 50% Type SD Spray dried. Contains min. 50% all-rac-α-tocopheryl acetate					50***	04 8855 0.395		●		●					
Dry Vitamin E 75 HP Beadlet,**** high potency. Contains min. 74% all-rac-α-tocopheryl acetate	●	●			20	04 8356 7.341		●		●					
					50***	04 8356 7.402									

**1 mg dl α-tocopherol acetate = 1IU = 0.67 mg α-tocopherol equivalent (FAO/WHO) = 0.45 mg vitamin E as d α-tocopherol (US FDA); 1 mg dl α-tocopherol = 1.1IU = 0.74 mg α-tocopherol equivalent (FAO/WHO) = 0.5 mg vitamin E as d α-tocopherol (US FDA); 1 mg d α-tocopherol acetate = 1.36 IU = 0.91 mg α-tocopherol equivalent (FAO/WHO) = 0.91 mg vitamin E as d α-tocopherol (US FDA); 1 mg d α-tocopherol = 1.49 IU = 1 mg α-tocopherol equivalent (FAO/WHO) = 1 mg vitamin E as d α-tocopherol (US FDA);

Only for North America; *Product formulations which utilise Actilease® beadlet technology. Actilease® combines easy handling, bioavailability, and stability of the active.



Quali®-E / Vitamin E (d-α-Tocopheryl Acetate and d-α-Tocopherol) – Naturally sourced**

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
d-α-Tocopheryl Acetate Content of RRR-α-tocopheryl acetate acc. to USP: 96.0–102.0%	●	●			20 190	04 8657 4.178 04 8657 4.422	●			●	●				●
Natural Vitamin E SF Oil. α-tocopherol from non-GM sunflower. Contains min. 900 IU/g natural RRR-α-tocopherol, min. 604 mg/g RRR-α-tocopherol	●	●			18 190	50 1557 4.044 50 1557 4.422	●			●	●				●
Dry Natural Vitamin E SF Powder. Starch based. Contains min. 450 IU/g natural RRR-α-tocopherol, contains min. 302 mg/g RRR-α-tocopherol	●	●			20	50 1608 8.341		●		●	●				●
Dry Vitamin E 700 NS Spray dried, cold water dispersible. Starch-based. Contains min. 700 IU Vit. E/g, contains min. 515 mg/g RRR-α-tocopheryl acetate	●	●			20	50 1189 2.341		●		●	●				●
Dry Vitamin E Acetate 950 NS Beadlet,**** High potency. Contains min. 940 IU Vit. E/g, contains min. 692 mg/g RRR-α-tocopheryl acetate	●	●			5 20 50****	04 8688 4.304 04 8688 4.341 04 8688 4.402		●		●	●				

**1 mg dl α-tocopherol acetate = 1IU = 0.67 mg α-tocopherol equivalent (FAO/WHO) = 0.45 mg vitamin E as d α-tocopherol (US FDA); 1 mg dl α-tocopherol = 1.1IU = 0.74 mg α-tocopherol equivalent (FAO/WHO) = 0.5 mg vitamin E as d α-tocopherol (US FDA); 1 mg d α-tocopherol acetate = 1.36 IU = 0.91 mg α-tocopherol equivalent (FAO/WHO) = 0.91 mg vitamin E as d α-tocopherol (US FDA); 1 mg d α-tocopherol = 1.49 IU = 1 mg α-tocopherol equivalent (FAO/WHO) = 1 mg vitamin E as d α-tocopherol (US FDA);
 ****Only for North America; ****Product formulations which utilise Actilease® beadlet technology. Actilease® combines easy handling, bioavailability, and stability of the active.

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Quali®-E / Mixed Tocopherols – Naturally sourced

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Mixed Tocopherols 95 Oily liquid. Tocopherol rich extract (E306*), contains a mixture of minimum 95% of RRR-tocopherols (RRR-alpha-, RRR-beta-, RRR-gamma- and RRR-delta-tocopherol)	●	●	●	●	20 190	50 0289 3.178 50 0289 3.422	●			●	●				●
Mixed Tocopherols 70 IP Oily liquid. Non-GM source. Tocopherol rich extract (E306*), contains a mixture of minimum 70% of RRR-tocopherols (alpha-, beta-, gamma- and delta- tocopherol)	●	●	●	●	18 190	50 1557 3.044 50 1557 3.422	●			●	●				●
Dry Mixed Tocopherols 30% IP Powder. Starch based. Non-GM source. Contains a mixture of minimum 30% of RRR-tocopherols (RRR-alpha-,RRR-beta-,RRR-gamma- and RRR-delta-tocopherol)	●	●	●	●	20	50 1572 1.341		●			●				●

Additional information

Role:

Vitamin E helps protect cell membranes. It also helps maintain the immune system, prolong the life of red blood cells, maintain a healthy circulatory system and facilitate the body’s full utilization of vitamin A. Vitamin E is found in many body tissues – it is especially abundant in adipose tissue, liver, and muscle – and is important for their health and proper functioning. Vitamin E is an antioxidant and is considered to play a role in neutralizing free radicals. These highly reactive molecules are found in the body as a result of normal body processes and from external factors such as environmental pollution. Oxidative damage caused by these reactive molecules is considered to contribute to aging and age-related chronic diseases, such as cataracts, heart disease and cancer.

Food sources:

Nuts, seeds, oil, green leafy vegetables and some fruit.

Health benefits & solutions:

Empower your mind, Enhance your mobility, Guard your heart, Optimize your immunity, Essentials for early life, Essentials for healthy aging, Essentials for kids & teens, Essentials for life, Essentials for men, Essentials for women, Nourish your beauty, Power your performance.

EU health claims:

- *Vitamin E contributes to the protection of cells from oxidative stress.*



Quali®-K / Vitamin K1 (Phylloquinone)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Vitamin K1 Oily liquid	●	●	●	●	0.1 1	04 3501 5.246 04 3501 5.264	●		●	●		●	●		●
Vitamin K1 API* Oily liquid	●	●	●**		1	50 1322 4.264	●		●						●
Dry Vitamin K1 1% N Spray dried. Starch based. Contains min 1% Vit K1 Does not contain a flow agent, e.g. silicon dioxide.	●	●			20	50 1636 7.341		●		●	●	●	●		●
Dry Vitamin K1 5% SD Spray-dried. Based on acacia. 50 mg Vitamin K1/g	●	●	●		1* 20**	04 3492 2.268 04 3492 2.341		●	●	●	●	●	●	●	●

**US DMF only

Additional information

Role:

Vitamin K1 is essential for the clotting of blood; it is involved in the regulation of calcium within bones and helps maintain bone density. In a healthy person, bacteria in the intestine normally provide a substantial amount of this vitamin. A deficiency may occur in newborns and in people consuming antibacterial agents over a prolonged period. These people are frequently given vitamin K1 under a doctor's care. Vitamin K1 can maintain bone health.

Food sources:

Green leafy vegetables, soy beans, broccoli, green cabbage.

Health benefits & solutions:

Enhance your mobility, Essentials for kids & teens, Essentials for life, Essentials for women.

EU health claims:

- *Vitamin K contributes to normal blood clotting.*
- *Vitamin K contributes to the maintenance of normal bones.*



Your end-to-end partner

Products – Customized solutions – Expert services

PRODUCTS WITH PURPOSE

Water-soluble vitamins

Quali®-B / Vitamin B1 (Thiamine)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Thiamine Hydrochloride	●	●			20	04 1303 8.341		●		●	●	●	●		●
Thiamine Hydrochloride Ph API with specific service package for pharma registered applications	●	●	●	●	20	50 1625 7.341		●	●						●
Thiamine Mononitrate	●	●	●	●	20	04 1894 3.341		●	●	●	●	●		●	
ROCOAT® Thiamine Mononitrate 33 1/3% Coated	●	●			5 50**	04 2947 3.304 04 2947 3.402		●	●	●	●				●

**Only for North America.

Additional information

Role:

Thiamine is required to help the body use its major source of energy, carbohydrates, to the fullest extent. Thiamine is also essential for proper muscle coordination, the maintenance of peripheral nerve tissue and for normal growth.

Food sources:

Milk, meat, fish, whole grains, legumes, yeast, nuts and seeds.

Health benefits & solutions:

Empower your mind, Enhance your mobility, Guard your heart, Essentials for early life, Essentials for healthy aging, Essentials for kids & teens, Essentials for life, Power your performance.

EU health claims:

- *Thiamine contributes to normal energy-yielding metabolism.*
- *Thiamine contributes to normal functioning of the nervous system.*
- *Thiamine contributes to normal psychological function.*
- *Thiamine contributes to the normal function of the heart.*



Quali®-B / Vitamin B2 (Riboflavin)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Riboflavin Universal	●	●		●	10	04 7040 6.231		●	●	●	●	●	●	●	●
Riboflavin Universal Fine Powder	●	●			2x2.5 5	50 0861 1.186 50 0861 1.304		●		●	●	●	●	●	●
Riboflavin 5'-Phosphate Sodium	●	●			1 5 25	04 2141 3.608 04 2141 3.605 04 2141 3.672		●		●	●		●		●
Riboflavin 5'-Phosphate Ph API with specific service package for pharma registered applications	●	●	●	●	1 5	50 1626 1.608 50 1626 1.605		●	●						●
Riboflavin Tablet Grade	●	●			10	04 7029 5.231		●		●					●
ROCOAT® Riboflavin 33 1/3% Coated	●	●			5 50**	04 2946 5.304 04 2946 5.402		●		●	●				●

**Only for North America.

Additional information

Role:

Riboflavin is important in helping the body transform proteins, fats and carbohydrates into energy. It helps maintain healthy skin and eyes and is also necessary for building and maintaining body tissues. It is also involved in the production of red blood cells, which are responsible for transporting oxygen throughout the body and it plays a role in the function of the nervous system.

Food sources:

Milk, green leafy vegetables, meat, fish, whole grains, cheese and eggs.

Health Benefits & Solutions:

Empower your mind, Guard your heart, Improve your gut health, Optimize your immunity, Upgrade your vision, Essentials for early life, Essentials for kids & teens, Essentials for life, Essentials for women, Nourish your beauty, Power your performance.

EU health claims:

- Riboflavin contributes to normal energy-yielding metabolism.
- Riboflavin contributes to normal functioning of the nervous system.
- Riboflavin contributes to the maintenance of normal mucous membranes.
- Riboflavin contributes to the maintenance of normal red blood cells.
- Riboflavin contributes to the maintenance of normal skin.
- Riboflavin contributes to the maintenance of normal vision.
- Riboflavin contributes to the normal metabolism of iron.
- Riboflavin contributes to the protection of cells from oxidative stress.
- Riboflavin contributes to the reduction of tiredness and fatigue.



Quali®-B / Vitamin B3 (Niacin /Niacinamide)**

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Niacinamide	●	●	●	●	20	04 8784 8.340		●	●	●	●	●	●	●	
					20***	04 8784 8.202									
Niacin	●	●			20 bag in box	50 1083 7.340							●	●	
					500 big bag	50 1083 7.429									
Niacinamide Ph			●	●	20	50 1629 1.340		●	●						
Niacinamide FCC	●	●			25	50 1601.1366		●		●	●	●	●	●	
					25***	50 1601.1603									
ROCOAT® Niacinamide 33 1/3% Coated	●	●			5	04 2944 9.304		●		●	●			●	
					50****	04 2944 9.402									

US FDA 2018 label: 1 mg niacin = 1 mg niacin equivalents (NE); *Only for China; ****Only for North America.

Additional information

Role:

Essential for the metabolism of carbohydrates, fats, and proteins. Niacin also plays a role in other metabolic processes in the body, including cellular metabolism, nervous system function, cardiovascular health, skin health, and digestive health. It is involved in the conversion of food to energy.

Food sources:

Meat, fish, whole grains, whole wheat and legumes.

Health Benefits & Solutions:

Empower your mind, Improve your gut health, Essentials for life, Nourish your beauty, Power your performance.

EU health claims:

- *Niacin contributes to normal energy-yielding metabolism.*
- *Niacin contributes to normal functioning of the nervous system.*
- *Niacin contributes to normal psychological function.*
- *Niacin contributes to the maintenance of normal mucous membranes.*
- *Niacin contributes to the maintenance of normal skin.*
- *Niacin contributes to the reduction of tiredness and fatigue.*

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmench Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Quali®-B / Vitamin B5 (Panthenol, Pantothenate)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Calcium D-Pantothenate Spray-dried	●	●	●	●	25	04 1267 8.366		●	●	●	●	●	●	●	●
D-Panthenol Liquid	●	●			20	04 1385 2.331	●			●	●				●
D-Panthenol Ph API with specific service package for pharma registered applications. Liquid	●	●	●	●	20	50 1625 8.331	●		●						●

Additional information

Role:

Pantothenic acid is essential for the formation of certain neurotransmitter function and hormones. It is also required for metabolism of proteins, fats and carbohydrates.

Food sources:

Yeast, liver, kidney, eggs, peanut products, mushrooms and sunflower seeds.

Health benefits & solutions:

Empower your mind, Essentials for life, Essentials for women, Power your performance.

EU health claims:

- Pantothenic acid contributes to normal energy-yielding metabolism.
- Pantothenic acid contributes to normal synthesis and metabolism of steroid hormones, vitamin D and some neurotransmitters.
- Pantothenic acid contributes to the reduction of tiredness and fatigue.
- Pantothenic acid contributes to normal mental performance.

*DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Quali®-B / Vitamin B6 (Pyridoxine)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Pyridoxine Hydrochloride	●	●			20	04 1160 4.340 (Origin: Germany)		●		●		●			●
Pyridoxine Hydrochloride Ph API with specific service package for pharma registered applications.	●	●	●	●	20	50 1646 0.340 (Origin: Germany)		●	●						●
ROCOAT® Pyridoxine Hydrochloride 33 1/3% Coated	●	●	●	●	5 50**	04 2945 7.304 04 2945 7.402		●	●	●	●				●

**Only for North America.

Additional information

Role:

Pyridoxine is necessary for energy metabolism, the metabolism of amino acids and the building blocks of proteins. It also helps the nervous system to function properly and is essential to a healthy immune system. Vitamin B6, along with folate and vitamin B12, is essential to heart health. It is involved in the synthesis of hemoglobin, the protein responsible for carrying oxygen in red blood cells.

Food sources:

Liver, salmon, walnuts, peanuts, wheat germ, bananas, carrots, peas, potatoes, beef, lamb and pork.

Health benefits & solutions:

Empower your mind, Enhance your mobility, Guard your heart, Optimize your immunity, Upgrade your vision, Essentials for healthy aging, Essentials for life, Essentials for vegetarians & vegans, Nourish your beauty, Power your performance.

EU health claims:

- Vitamin B6 contributes to normal cysteine synthesis.
- Vitamin B6 contributes to normal energy-yielding metabolism.
- Vitamin B6 contributes to normal functioning of the nervous system.
- Vitamin B6 contributes to normal homocysteine metabolism.
- Vitamin B6 contributes to normal protein and glycogen metabolism.
- Vitamin B6 contributes to normal psychological function.
- Vitamin B6 contributes to normal red blood cell formation.
- Vitamin B6 contributes to the normal function of the immune system.
- Vitamin B6 contributes to the reduction of tiredness and fatigue.
- Vitamin B6 contributes to the regulation of hormonal activity.



Quali®-Biotin / Vitamin B7 (Biotin, Vitamin B8, Vitamin H)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg.*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
D-Biotin	●	●			0.05	50 1165 5.240		●	●**	●	●	●	●	●	
					1 pouch	50 1165 5.268									
					25	50 1165 5.372									
D-Biotin Ph API with specific service package for pharma registered applications.	●	●			0.05	50 1626 4.240		●	●						●
					1 pouch	50 1626 4.268									
					25	50 1626 4.372									
Bitrit-1® Type A	●	●			10	50 1651 8.190		●		●					●
					50	50 1651 8.395									

**Future applicability for pharma registered products in limited markets only.

Additional information

Role:

Biotin is necessary for synthesizing fatty acids and involved in the metabolism of carbohydrates, fats and proteins. It also helps in the maintenance of the nervous system, skin, regulation gene expression and blood sugar.

Food sources:

Yeast, liver, eggs, beef and pork.

Health benefits & solutions:

Empower your mind, Improve your gut health, Essentials for early life, Essentials for kids & teens, Essentials for life, Nourish your beauty, Power your performance.

EU health claims:

- Biotin contributes to normal energy-yielding metabolism.
- Biotin contributes to normal functioning of the nervous system.
- Biotin contributes to normal macronutrient metabolism.
- Biotin contributes to normal psychological function.
- Biotin contributes to the maintenance of normal hair.
- Biotin contributes to the maintenance of normal mucous membranes.
- Biotin contributes to the maintenance of normal skin.

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Quali®-B / Vitamin B9 (Folate, Folic Acid)**

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Folic Acid	●	●			1 25	04 1782 3.268 04 1782 3.372		●		●	●	●	●	●	●
Folic Acid Food Grade	●	●			1 25	50 0435 7.268 50 0435 7.372		●			●			●	●
Folic Acid Ph API with specific service package for pharma registered applications.	●	●	●	●	1 25	50 1625 9.268 50 1625 9.372		●	●						●
Metafolin® (Calcium L-methylfolate)***	●	●			0.1 1	50 1557 1.074 50 1557 1.270		●		●	●	●			●

US FDA 2018 label: 1 mcg folic acid = 0.6 mcg dietary folate equivalents (DFE); *Metafolin® is a registered trademark of Merck KGaA, Darmstadt, Germany.

Additional information

Role:

Folate is required for the formation of red blood cells, certain body proteins and genetic materials for the cell nucleus. It also helps to prevent macrocytic anaemia, a disease in which the blood cells grow larger than normal and have a shorter lifespan. Pregnant women and those anticipating pregnancy should increase their consumption of folic acid to 400 mcg to prevent birth defects, such as neural tube defects and spina bifida. Emerging science suggests it may play an important role in reducing risk of cardiovascular disease, dementia and certain cancers.

Food sources:

Folate, the natural form of Vitamin B9 is found in liver, legumes, peanuts, green leafy vegetables, orange juice and strawberries.

Health benefits & solutions:

Empower your mind, Enhance your mobility, Guard your heart, Optimize your immunity, Essentials for early life, Essentials for kids & teens, Essentials for healthy aging, Essentials for life, Essentials for women, Nourish your beauty, Power your performance.

EU health claims:

- Folate contributes to maternal tissue growth during pregnancy.
- Folate contributes to normal amino acid synthesis.
- Folate contributes to normal blood formation.
- Folate contributes to normal homocysteine metabolism.
- Folate contributes to normal psychological function.
- Folate contributes to the normal function of the immune system.
- Folate contributes to the reduction of tiredness and fatigue.
- Folate has a role in the process of cell division.
- Supplemental folic acid intake increases maternal folate status.
- Low maternal folate status is a risk factor in the development of neural tube defects in the developing foetus.



Quali®-B / Vitamin B12 (Cyanocobalamin)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Vitamin B12 Crystalline	●	●			0.01	04 2915 5.234									
	●	●			0.1	04 2915 5.252		●	●	●	●		●		
	●	●			1	04 2915 5.264								●	
Vitamin B12 Crystalline Ph	●		●	●	0.1	50 1630 0.252		●	●					●	
Vitamin B12 1% SD Spray dried powder form	●	●			5	50 1251 1.304		●	●	●	●			●	
	●	●			20	50 1251 1.341		●	●	●	●			●	
Vitamin B12 0.1% WS	●	●			20	50 1640 2.341		●		●	●			●	
Vitamin B12 0.1% WS Spray dried powder form	●	●			5	04 2909 0.304		●	●	●	●	●		●	
	●	●			5	04 2909 0.304		●	●	●	●	●		●	
Vitamin B12 Crystalline Food Grade Fermentation food grade	●	●			1	50 1642 0.264		●		●			●	●	

Additional information

Role:

Along with folate, Vitamin B12 is necessary for the formation of DNA and the production of healthy red blood cells. It also helps maintain the nervous system and is essential to maintaining mental function. The lack of Vitamin B12 in the body causes pernicious anemia. Vitamin B12, along with B6 and folate, is essential to heart health.

Food sources:

Kidney, liver, shellfish, sardines, salmon, herring, egg yolks and nutritional yeast spread.

Health benefits & solutions:

Empower your mind, Enhance your mobility, Guard your heart, Optimize your immunity, Upgrade your vision, Essentials for kids & teens, Essentials for healthy aging, Essentials for life, Essentials for men, Essentials for women, Essentials for vegetarians & vegans, Nourish your beauty, Power your performance.

EU health claims:

- Vitamin B12 contributes to normal energy-yielding metabolism.
- Vitamin B12 contributes to normal functioning of the nervous system.
- Vitamin B12 contributes to normal homocysteine metabolism.
- Vitamin B12 contributes to normal psychological function.
- Vitamin B12 contributes to normal red blood cell formation.
- Vitamin B12 contributes to the reduction of tiredness and fatigue.
- Vitamin B12 has a role in the process of cell division.
- Vitamin B12 contributes to the normal function of the immune system.



Quali®-C / Vitamin C (L-Ascorbic Acid, Ascorbate)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx**	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Ascorbic Acid	●	●			25	04 0805 0.366		●	●	●	●	●	●	●	
					25	04 0805 0.368									
					500	04 0805 0.429									
Ascorbic Acid Ph API with specific service package for pharma registered applications			●	●	25	50 1625 5.366		●						●	
Ascorbic Acid Fine Powder	●	●	●	●	25	04 2246 0.366		●	●	●	●	●	●	●	
					25	04 2246 0.368									
Ascorbic Acid Ultra Fine Powder	●	●	●	●	20	50 0976 6.341		●	●	●				●	
Ascorbic Acid Fine Granular	●	●	●	●	25	04 0809 3.366		●	●	●				●	
Ascorbic Acid 90% Granulation	●	●			25	50 0757 7.368		●		●				●	
Ascorbic Acid 95% Granulation	●	●			25	50 0774 7.368		●	●	●				●	
Ascorbic Acid 97% Granulation	●	●			25	50 1032 2.368		●	●	●				●	
Coated Ascorbic Acid, Type EC 97.5% ascorbic acid content. Ethyl cellulose coating	●	●			25	04 2511 7.368		●	●	●				●	
Coated Ascorbic Acid, Type FC 94% ascorbic acid content. Fat coating	●	●			25	04 4080 9.368		●		●		●		●	
Calcium Ascorbate	●	●	●	●	25	04 1944 3.368		●	●	●				●	
Sodium Ascorbate Crystalline	●	●			25	04 0817 4.606		●		●	●	●	●	●	
Sodium Ascorbate Ph API with specific service package for pharma registered applications.			●	●	25	50 1625 6.606		●	●					●	
Sodium Ascorbate 99% TG	●	●			20	50 0142 0.341		●		●				●	
Ascorbyl Palmitate	●	●			5	04 1859 5.304		●	●	●	●	●	●	●	
					25	04 1859 5.368									
RONOXAN® A Ascorbyl Palmitate, dl- α -Tocopherol, Lecithin	●	●			1	04 4253 4.270	●			●				●	

**Future applicability for pharma registered products in limited markets only.

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmench Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Additional information | Vitamin C (L-Ascorbic Acid, Ascorbate)

Role:

Vitamin C aids the body in the production of collagen, a substance that provides support to muscles, vascular tissues, bones and cartilage. Vitamin C aids in the absorption of iron and also contributes to the health of teeth and gums. It is one of the most important water-soluble antioxidants in the body. Vitamin C is considered to enhance the immune response and play a protective role against cardiovascular disease, cataracts and certain types of cancer.

Food sources:

Citrus fruits, potatoes, broccoli, sweet peppers, kale, cabbage, cauliflower, tomatoes, strawberries and acerola.

Health benefits & solutions:

Empower your mind, Enhance your mobility, Guard your heart, Optimize your immunity, Essentials for early life, Essentials for healthy aging Essentials for kids & teens, Essentials for life, Essentials for women, Essentials for vegetarians, Nourish your beauty, Power your performance.

EU health claims:

- *Vitamin C contributes to normal collagen formation for the normal function of blood vessels.*
- *Vitamin C contributes to normal collagen formation for the normal function of bones.*
- *Vitamin C contributes to normal collagen formation for the normal function of cartilage.*
- *Vitamin C contributes to normal collagen formation for the normal function of gums.*
- *Vitamin C contributes to normal collagen formation for the normal function of skin.*
- *Vitamin C contributes to normal collagen formation for the normal function of teeth.*
- *Vitamin C contributes to normal energy-yielding metabolism.*
- *Vitamin C contributes to normal functioning of the nervous system.*
- *Vitamin C contributes to normal psychological function.*
- *Vitamin C contributes to the normal function of the immune system.*
- *Vitamin C contributes to the protection of cells from oxidative stress.*
- *Vitamin C contributes to the reduction of tiredness and fatigue.*
- *Vitamin C contributes to the regeneration of the reduced form of vitamin E.*
- *Vitamin C increases iron absorption.*



Your end-to-end partner

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PRODUCTS WITH PURPOSE

Nutritional lipids

life'sDHA™ (Vegetarian Omega-3 Long Chain Polyunsaturated Fatty Acids)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application							
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian			
DHASCO™-B Nutritional oil from microalgae containing min. 38% DHA (380 mg/g)	●	●			9	50 1598 6.043													
					18	50 1598 6.044	●									●	●		
					200	50 1598 6.046													
DHASCO™-B Powder Spray dried powder consisting of DHA derived from microalgae in a matrix of dried glucose syrup and sodium caseinate, min. 11% (110 mg) DHA per g	●	●			5	50 1637 3.304		●									●	●	
life'sDHA™ S10-P200 Cold water dispersible. Free-flowing powder derived from microalgae containing 10% DHA (100 mg/g)	●	●			12.5	50 1372 0.148		●		●	●						●	●	
life'sDHA™ S17-P100 Not cold water dispersible. Free-flowing powder derived from microalgae containing 17% DHA (170 mg/g)	●	●			12.5	50 1371 2.148		●		●							●	●	
life'sDHA™ 100 mg Vegetarian Capsules DHA-S oil in a 300 mg (10 oval) carrageenan vegetarian capsule providing 100 mg DHA		●			8,000 capsules	50 1373 9.035	●			●							●	●	
life'sDHA™ 200 mg Vegetarian Capsules DHA-S oil in a 600 mg (14 oval) carrageenan vegetarian capsule providing 200 mg DHA		●			8,000 capsules	50 1374 7.035	●			●							●	●	
life'sDHA™ S35-O300 Nutritional oil derived from algae containing min. 35% DHA (350mg/g); frozen storage	●	●			1	50 1375 5.264											●	●	
					5	50 1375 5.294	●												
					23	50 1375 5.037													
					180	50 1375 5.418				●									
life'sDHA™ S35-O300DS Nutritional oil derived from algae containing min. 35% DHA (350mg/g); Ambient storage	●	●			23	50 1643 4.037	●			●								●	●
					180	50 1643 4.418													
life'sDHA™ S40-O400 Nutritional oil derived from algae containing min. 40% DHA (400mg/g); frozen storage	●	●			1	50 1509 0.264												●	●
					5	50 1509 0.294	●												
					23	50 1509 0.037													
					180	50 1509 0.418				●									
life'sDHA™ S40-O400DS Nutritional oil derived from algae containing min. 40% DHA (400mg/g); ambient storage	●	●			23	50 1643 5.037	●			●								●	●
					180	50 1643 5.418													
life'sDHA™ SF55-O200DS Nutritional oil (clear orange) derived from algae containing min. 55% DHA (550mg/g); vegan certified	●	●			23	50 1646 6.037	●			●								●	●
					180	50 1646 6.418													

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Additional information | *life'sDHA*™ (omega-3 oils)

Role:

DHA, an omega-3 fatty acid, is a major structural fat in the brain and eyes. It accounts for up to 97% of the omega-3 fats in the brain and up to 93% of the omega-3 fats in the eye. A growing body of research continues to support the important role that DHA plays for both mother and baby. DHA is important for optimal infant brain, eye and nervous system development. Has been shown to support healthy pregnancy and cardiovascular health. DHA also supports brain function in adults.

Food sources:

The primary dietary source of DHA is fatty fish. Dietary sources for infants include breast milk and DHA-/ARA-fortified infant formula. Unfortunately, women of childbearing age who consume a typical Western diet are at risk for low stores of DHA.

Health benefits & solutions:

Empower your mind, Guard your heart, Upgrade your vision, Essentials for early life, Essentials for healthy aging, Essentials for kids & teens, Essentials for men, Essentials for vegetarians & vegans, Power your performance.

EU health claims:

- *DHA contributes to maintenance of normal brain function.*
- *DHA contributes to the maintenance of normal blood triglyceride levels.*
- *DHA contributes to the maintenance of normal vision.*
- *DHA intake contributes to the normal visual development of infants up to 12 months of age.*
- *DHA maternal intake contributes to the normal brain development of the foetus and breastfed infants.*
- *DHA maternal intake contributes to the normal development of the eye of the foetus and breastfed infants.*



life's™ OMEGA (Vegetarian Omega-3 Long Chain Polyunsaturated Fatty Acids)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	
life's™ OMEGA 45 Nutritional oil from microalgae providing min. 400 mg/g DHA + EPA	●	●			1	50 1369 0.264	●			●	●				●	●	
					5	50 1369 0.294											
					23	50 1369 0.037											
					180	50 1369 0.418											
life's™ OMEGA 60 Nutritional oil from microalgae providing min. 550mg/g Total Omega-3; Frozen storage	●	●			1	50 1529 5.264	●				●				●	●	
					5	50 1529 5.294											
					23	50 1529 5.037											
					180	50 1529 5.418											
life's™ OMEGA 60-DS Nutritional oil from microalgae providing min. 550mg/g Total Omega-3; ambient storage	●	●			23	50 1643 3.037	●								●	●	
					180	50 1643 3.418											
life's™ OMEGA O33-P100 Powder Microencapsulated powder based on bovine gelatin (not vegetarian), min. 300mg DHA + EPA and min. 330mg total Omega-3 per g					10	50 1719 3.322		●		●	●				●		
life's™ OMEGA O1035DS Nutritional oil from microalgae providing min. 515 mg/g Total Omega-3 ambient storage, GLOBAL, vegan certified		●			190	50 1779 8.420	●			●					●	●	
life's™ OMEGA O1030DS** Nutritional oil from microalgae providing min. 510 mg/g Total Omega-3 ambient storage, vegan certified		●			190	50 1650 5.420	●			●					●	●	
life's™ OMEGA 300 mg Vegetarian Capsules life's™ OMEGA oil in a 790 mg (14 oval) carrageenan vegetarian capsule providing min. 300 mg DHA + EPA per capsule		●			6000 capsules	50 1501 0.034	●			●					●	●	

**Only for North America

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Additional information | *life's™* OMEGA (omega-3 oils)

Role:

These oils, produced from microalgae, contain eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Recent research has shown these compounds to have triglyceride lowering activity, which may be helpful in reducing the risk of cardiovascular diseases.

Food sources:

The primary dietary source of DHA and EPA is fatty fish.

Health benefits & solutions:

Empower your mind, Enhance your mobility, Guard your heart, Optimize your immunity, Upgrade your vision, Essentials for healthy aging, Essentials for vegetarians & vegans, Nourish your beauty, Power your performance.

EU health claims:

- *DHA and EPA contribute to the maintenance of normal blood pressure.*
- *DHA and EPA contribute to the maintenance of normal blood triglyceride levels.*
- *EPA and DHA contribute to the normal function of the heart.*

US qualified health claims:

- *Supportive, but not conclusive, research shows that consumption of EPA and DHA omega-3 fatty acids may reduce the risk of coronary heart disease. One serving of [Name of the food] provides [] gram of EPA and DHA omega-3 fatty acids [See nutrition information for total fat, saturated fat, and cholesterol content].*

Note: Dietary supplements may declare the amount of EPA and DHA per serving in "Supplement Facts", instead of making the declaration in the claim. Claim is available in a total of six variations.



life's™ GLA (Vegetarian Omega-6 Long Chain Polyunsaturated Fatty Acids)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	
life's™GLA '10' n-6 Oil Refined Evening Primrose Oil. Minimum 9% γ-linolenic acid (GLA)		●			185	04 2239 8.223	●				●					●	●
life's™GLA '25' n-6 Oil Refined Storage Oil. Minimum 23% γ-linolenic acid (GLA)		●			25 185	50 0854 9.372 50 0854 9.223	●				●					●	●

life's™ ARA (Vegetarian Omega-6 Long Chain Polyunsaturated Fatty Acids)

ARASCO® Nutritional oil from fungi containing min. 38% ARA (380 mg/g)	●	●			9 18 200	50 1500 2.043 50 1500 2.044 50 1500 2.046	●						●				●	●
ARASCO™ Powder Spray dried powder consisting of ARA derived from fungi in a matrix of dried glucose syrup and sodium caseinate, min. 11% (110 mg) ARA per g	●	●			5	50 1637 4.304		●					●				●	●
life's™ARA '12' n-6 ARA Powder Spray dried powder consisting of ARA derived from fungi in a matrix of fish gelatin, sucrose and corn starch, min. 12% (120 mg) ARA per g		●			5	50 0324 5.304		●					●				●	●

life's™ DHA+ARA (Vegetarian Omega-3 and Omega-6 Long Chain Polyunsaturated Fatty Acids)

Formulaid®-B (2:1 ARA:DHA) From fungi and microalgae, containing 2 parts ARASCO® and 1 part DHASCO®-B	●	●			9 18 200	50 1559 0.043 50 1559 0.044 50 1559 0.046	●						●				●	●
Formulaid®-B (1:1 ARA:DHA) From fungi and microalgae, containing 1 part ARASCO® and 1 part DHASCO®-B	●	●			9 18 200	50 1591 9.043 50 1591 9.044 50 1591 9.046	●						●				●	●

*DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Additional information | *life's™ GLA* (omega-6 oils)

Role:

life's™ GLA is a rich source of gamma linolenic acid (GLA). As suggested in recent research, GLA may be helpful for its potential anti-inflammatory effects and its role in skin health, particularly in conditions such as atopic eczema and psoriasis. Involved in the restoration of the natural moisture barrier of the skin.

Food sources:

Sunflower seed oil (AL), safflower oil (AL), evening primrose oil (GLA) or borage oil (GLA).

Health benefits & solutions:

Nourish your beauty.



Additional information | *life's™ ARA* (omega-6 oils)

Role:

ARA (arachidonic acid), a long-chain omega-6 fatty acid, is the principal omega-6 in the brain and is abundant in other cells throughout the body. It is also a precursor to a group of hormone-like substances called eicosanoids that play a role in immunity, blood clotting and other vital functions in the body. Like DHA, ARA occurs naturally in breast milk and is important to infant development.

Food sources:

Dietary sources for infants include breast milk and DHA-/ARA-fortified infant formula. Most women receive adequate amounts of ARA by eating foods that are plentiful in the Western diet, such as meat, eggs and milk.

Health benefits & solutions:

Essentials for early life



MEG-3® (Marine Omega-3 Long Chain Polyunsaturated Fatty Acids)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx**	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian
MEG-3® '30' n-3 Food Oil Triglycerides, min. 30% total Omega-3. Min. 25% DHA + EPA. Min. 9% EPA. Min. 12.5% DHA		●			25 190	50 1529 0.372 50 1529 0.420	●			●				●		
MEG-3® '30' n-3 INF Oil Triglycerides, min. 30% total Omega-3. Min. 23% DHA		●			25 190	50 1528 9.372 50 1528 9.420	●				●			●		
MEG-3® 1812 TG 3a Food Oil Steam deodorized triglycerides, min 160 mg EPA, 100 mg DHA and min 280 mg total Omega-3 per g		●			15.85 190	50 1516 1.152 50 1516 1.420	●		●					●		
MEG-3® 30% 8a Food Oil Triglycerides, min. 250 mg – max. 320 mg EPA+DHA, min. 300 mg total Omega-3 per g		●			15.85 190	50 1518 4.152 50 1518 4.420	●		●	●				●		
MEG-3® DHA Inf Food Oil Triglycerides, min 45 mg EPA, 220 mg DHA and min 280 mg total Omega-3 per g		●			18 190	50 1527 4.044 50 1527 4.420	●		●	●	●			●		
MEG-3® 30% B Powder Microencapsulated powder based on bovine gelatin, min. 150 mg – max. 220 mg EPA + DHA and min. 180 mg total Omega-3 per g					10	50 1622 8.332		●		●	●			●		
MEG-3® DHA rf Powder Microencapsulated powder based on fish gelatin, 132 mg DHA and min. 184 mg total Omega-3 per g		●			10	50 1631 5.322		●		●	●			●		
MEG-3® DHA B Powder Microencapsulated powder based on bovine gelatin, 132 mg DHA and min. 184 mg total Omega-3 per g					10	50 1622 7.322		●		●	●			●		
MEG-3® 26% H Powder Microencapsulated powder based on fish gelatin, min 144 mg – max 220 mg EPA+DHA and min 180 mg total Omega-3 per g		●			10	50 1624 4.322		●		●		●		●		
MEG-3® '10' n-3 INF Powder Beadlet powder consisting of DHA from fish in a corn starch coated matrix of fish gelatin and sucrose, min. 7% (70 mg) DHA per g		●			5	04 8039 8.304		●		●	●			●		
MEG-3® '10' n-3 INF Powder S/SD Spray dried powder consisting of DHA from fish in a matrix of modified food starch and sucrose, min. 7% (70 mg) DHA per g		●			5	50 0639 2.304		●		●	●			●		
MEG-3® '15' n-3 High DHA Powder S/SD Spray dried powder consisting of DHA from fish in a matrix of modified food starch and sucrose, min. 11% (110 mg) DHA per g		●			5	50 1163 9.304		●		●	●			●		

*DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local desm-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



MEG-3® (Marine Omega-3 Long Chain Polyunsaturated Fatty Acids) – Continued

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian
MEG-3® 1844EE Ethyl esters, min. 180mg EPA, 440mg DHA. 660mg total Omega-3 per g		●			190	50 1517 1.420	●			●					●	
MEG-3® 2718EE Ethyl esters, min. 270mg EPA, 180mg DHA. 500mg total Omega-3 per g		●			190	50 1520 1.420	●			●					●	
MEG-3® 2919EE Ethyl esters, min. 290mg EPA, 190mg DHA. 530mg total Omega-3 per g		●			190	50 1520 5.420	●			●					●	
MEG-3® 3025EE Ethyl esters, min. 300mg EPA, 250mg DHA. 600mg total Omega-3 per g		●			190	50 1520 9.420	●			●					●	
MEG-3® 3020EE Ethyl esters, min. 300mg EPA, 200mg DHA. 600mg total Omega-3 per g		●			190	50 1521 1.420	●			●					●	
MEG-3® 3223EE Ethyl esters, min. 320mg EPA, 230mg DHA. 665mg total Omega-3 per g		●			190	50 1528 4.420	●			●					●	
MEG-3® 3627EE Ethyl esters, min. 360mg EPA, 270mg DHA. 680mg total Omega-3 per g		●			190	50 1524 1.420	●			●					●	
MEG-3® 4618EE Ethyl esters, min. 460mg EPA, 180mg DHA. 700mg total Omega-3 per g		●			190	50 1525 2.420	●			●					●	
MEG-3® 5004EE Ethyl esters, min. 500mg EPA, 40mg DHA. 590mg total Omega-3 per g		●			190	50 1525 8.420	●			●					●	
MEG-3® Ultra High OMEGA EE Ethyl esters, min 480mg EPA, 230mg DHA, 740mg total Omega-3 per g		●			190	50 1634 8.420	●			●					●	
MEG-3® Ultra High DHA EE Ethyl esters, min 640mg DHA, 700mg total Omega-3 per g		●			190	50 1636 5.420	●			●					●	
MEG-3® Ultra High EPA EE Ethyl esters, min 710mg EPA, 730mg total Omega-3 per g		●			190	50 1636 6.420	●			●					●	
MEG-3® 1812rTG Triglycerides, min. 180mg EPA, 120mg DHA. 350mg total Omega-3 per g		●			190	50 1516 7.420	●			●					●	
MEG-3® 2718rTG Triglycerides, min. 270mg EPA, 180mg DHA. 500mg total Omega-3 per g		●			190	50 1520 7.420	●			●					●	
MEG-3® 3223rTG Triglycerides, min. 320 mg EPA, 230 mg DHA, 640 mg total Omega-3 per g		●			190	50 1643 1.420	●			●					●	
MEG-3® 1812 TG Oil Triglycerides, min. 160mg EPA, 100mg DHA. 300mg total Omega-3 per g		●			190	50 1516 5.420	●			●					●	
MEG-3® 30% TG Oil Triglycerides, min. 260mg EPA + DHA. 300mg total Omega-3 per g		●			190	50 1519 8.420	●			●					●	

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Additional information | MEG-3® (omega-3 oils)

Role:

MEG-3® contains eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Recent research has shown these compounds to have triglyceride lowering activity, which may be helpful in reducing the risk of cardiovascular diseases. Depending on the EPA/DHA ratio, various health claims may apply.

Food sources:

The primary dietary source of DHA and EPA is fatty fish.

Health benefits & solutions:

Empower your mind, Enhance your mobility, Guard your heart, Optimize your immunity, Upgrade your vision, Essentials for healthy aging, Essentials for vegetarians, Nourish your beauty, Power your performance.

EU health claims:

- DHA and EPA contribute to the maintenance of normal blood pressure.
- DHA and EPA contribute to the maintenance of normal blood triglyceride levels.
- DHA contributes to maintenance of normal brain function.
- DHA contributes to the maintenance of normal blood triglyceride levels.
- DHA contributes to the maintenance of normal vision.
- EPA and DHA contribute to the normal function of the heart.
- DHA intake contributes to the normal visual development of infants up to 12 months of age.
- DHA maternal intake contributes to the normal brain development of the foetus and breastfed infants.
- DHA maternal intake contributes to the normal development of the eye of the foetus and breastfed infants.

US qualified health claims:

- Supportive, but not conclusive, research shows that consumption of EPA and DHA omega-3 fatty acids may reduce the risk of coronary heart disease. One serving of [Name of the food] provides [] gram of EPA and DHA omega-3 fatty acids [See nutrition information for total fat, saturated fat, and cholesterol content].

Note: Dietary supplements may declare the amount of EPA and DHA per serving in “Supplement Facts”, instead of making the declaration in the claim. Claim is available in a total of six variations.



Your end-to-end partner

Products – Customized solutions – Expert services

PRODUCTS WITH PURPOSE

Nutraceuticals

All-Q® / Coenzyme Q10

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application					
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	
All-Q® (Coenzyme Q10) 10% CWS/S Beadlet,†† cold water dispersible. Starch-based	●	●			5	50 0416 0.304		●		●							●
					25	50 0416 0.368											

†† Product formulations which utilise Actilease® beadlet technology. Actilease® improves absorption and eases handling.

Additional information

Role:

Coenzyme Q10 (CoQ10) has antioxidant activity and is involved in energy metabolism in all cells in the body. Studies in individuals with cardiovascular disease, in particular those with heart failure and hypertension, report the most consistent improvement in symptoms when CoQ10 is taken as a supplement.

Food sources:

Beef, chicken, pork, herring, and trout; lesser amounts in some vegetables such as broccoli and cauliflower.

Health benefits & solutions:

Guard your heart, Essentials for healthy aging, Essentials for men, Power your performance.



Fabules® / Specialty emulsion for satiety – Naturally sourced

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian
Fabules® DE Fine powder, 33% functional lipid content	●	●			20	51 1400 0.341		●		●					●	●

Additional information

Role:

Fabules® is a patent-protected combination of palm and oat oil (both naturally occurring lipids) that is formulated in an emulsion. It's microstructure aids in early gut health and triggers an "appetite satisfied" signal to the brain, therefore helping people to manage their calorie intake. Fabules® can be incorporated in foods or marketed as a weight management supplement.

Health benefits & solutions:

Optimize your weight.



DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local desk - firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval

METAFOLIN® – The nature-identical predominant form of folate

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	
METAFOLIN®**	●	●			1 0.1	50 1557 1.270 50 1557 1.074		●		●						●	

**Metafolin® is a registered trademark of Merck KGaA, Darmstadt, Germany.

Additional information

Role:

There are primarily two forms of folate, folic acid and methylfolate. Metafolin® is identical to methylfolate. Folic Acid is the synthetic form found in many dietary supplements and fortified foods. After absorption, it must go through a series of enzymatic processes to convert to the active form, methylfolate (Metafolin®). Depending on the population, up to half of people have limited ability to convert folic acid to methylfolate (Metafolin®).

Methylfolate is one of the forms found naturally in foods. Since it is already in the active form, it does not need to be converted. Methylfolate is the form found in red blood cells. It is also more bioavailable and absorbed faster than folic acid. Additionally, unlike folic acid, Metafolin does not mask vitamin B12 deficiency and does not cause accumulation of unmetabolized folic acid in the body.

Food sources:

Dark green leafy vegetables (spinach, kale, broccoli, asparagus, brussel sprouts), legumes, whole grains, fruits/berries and their juices, eggs.

Health benefits & solutions:

Empower your mind, Guard your heart, Optimize your immunity, Essentials for early life.

Metafolin is more bioavailable absorbed faster and than folic acid.

EU health claims:

- Folate contributes to maternal tissue growth during pregnancy.
- Folate contributes to normal amino acid synthesis
- Folate contributes to normal blood formation
- Folate contributes to normal homocysteine metabolism
- Folate contributes to normal psychological function
- Folate contributes to the normal function of the immune system
- Folate contributes to the reduction of tiredness and fatigue
- Folate has a role in the process of cell division

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local desm-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



PeptoPro® / Dairy-based peptides – Naturally sourced

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	
PeptoPro® Powder	●	●			15	50 0714 3.201		●			●	●				●	●

Additional information

Role:

PeptoPro® is a highly hydrolyzed enzymatic digest of casein, manufactured utilizing a proprietary mix of enzymes to provide a high-quality source of peptides with excellent taste. High levels of di- and tripeptides, in combination with a low level of free amino acids, provide PeptoPro® with excellent nutritional value, instant solubility and low levels of bitterness. Human studies have proven that PeptoPro® plays an important role in sports applications, such as endurance, performance and muscle recovery. PeptoPro® qualifies as a superior protein source to cover daily needs of protein. An adequate amount of protein is important for muscle maintenance in older consumers.

Food sources:

Dairy.

Health benefits & solutions:

Enhance your mobility, Essentials for healthy aging, Power your performance.

EU health claims:

- Protein contributes to a growth in muscle mass.
- Protein contributes to the maintenance of muscle mass.



resVida® / High-purity trans-resveratrol

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application						
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian		
resVida® Crystalline powder, min. 99% trans-resveratrol	●	●			1	50 1439 5.268												
					5	50 1439 5.304		●		●	●							●
					20	50 1439 5.344												

Additional information

Role:

Resveratrol is a polyphenol produced by plants to protect them from environmental stress. It has antioxidant activity and is most known as the component in red wine that may confer heart health benefits in the French population, despite a high fat intake, i.e. the French Paradox. Recent studies demonstrate resveratrol mimics the effect of caloric restriction, the only known intervention to extend lifespan in mammals. Resveratrol has been shown to improve blood flow may improve cognitive function.

Food sources:

Wine, grapes, peanuts and berries.

Health benefits & solutions:

Empower your mind, Guard your heart, Optimize your immunity, Essentials for healthy aging.



geniVida® / High-purity genistein

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	
geniVida® Crystalline powder, minimum 98.5% genistein	●	●			1	50 1632 4.268		●		●							●
					5	50 1632 4.304											

Additional information

Role:

Genistein is an isoflavone found in soybeans, soy flour, soy milk, soy protein concentrate (water washed) and soy protein isolates, that has the ability to bind selectively to the estrogen alpha and beta receptors and modulate gene expression. geniVida® can aid in restoring the balance between the bone-building osteoblasts and the bone-dissolving osteoclasts and help to maintain healthy bone density in postmenopausal women. Genistein has also been clinically proven to reduce menopausal symptoms, including hot flashes.

Food sources:

Soybeans, soy flour, soy milk, soy protein concentrate (water washed), soy protein isolates, miso, tempeh, tofu and foods made with these ingredients.

Health benefits & solutions:

Enhance your mobility, Essentials for healthy aging, Essentials for women, Nourish your beauty.

*DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dsdm-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Your end-to-end partner

Products – Customized solutions – Expert services

PRODUCTS WITH PURPOSE

Carotenoids

CaroCare® / β-Carotene (Pro-Vitamin A) – Naturally sourced

Product and Description	Certifications				Pack Size (kg)	Product code	Form		Main Application			Specific Application					
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	Coloration
CaroCare® Nat. β-Carotene 1% CWS/M Powder, cold water dispersible. Based on medium chain triglycerides	●	●			5 20	50 1212 0.304 50 1212 0.341		●			●				●	●	Yellow
CaroCare® Nat. β-Carotene 10% CWS Star Beadlet,†† cold water dispersible. Starch-based	●	●			5 20	50 1093 4.341		●			●				●	●	Orange
CaroCare® Nat. β-Carotene 10% CWS/S Spray-granulated powder, cold water dispersible. Starch-based	●	●			10	50 1484 2.141		●			●				●	●	Yellow-Orange to Orange
CaroCare® Nat. β-Carotene 20% CWS/S-TG Spray-granulated powder, cold water dispersible. Starch-based	●	●			10	50 1484 4.141		●		●	●				●	●	Yellow-Orange to Orange
CaroCare® Nat. β-Carotene 30% S Fluid suspension	●	●			5	50 1480 8.302	●			●	●				●	●	Yellow
CaroCare® Nat. β-Carotene 30% OS Fluid suspension	●	●			5 200	50 1401 4.302 50 1401 4.400	●			●	●				●	●	Yellow

†† Product formulations which utilise Actilease® beadlet technology. Actilease® combines easy handling, bioavailability, and stability of the active.

Quali®-Carotene / β-Carotene (Pro-Vitamin A)

Product and Description	Certifications				Pack Size (kg)	Product code	Form		Main Application			Specific Application					
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	Coloration
β-Carotene Crystalline Ph API with specific service package for pharma registered applications	●	●			0.25	50 1434 4.258		●	●							●	
β-Carotene 1% CWS/M Powder, cold water dispersible. Based on medium chain triglycerides	●	●			5 25	50 1628 0.304 50 1628 0.368		●		●	●					●	Yellow
β-Carotene 3% CWS/M Powder, cold water dispersible. Based on medium chain triglycerides	●	●			5	50 0363 6.304		●			●					●	Yellow
β-Carotene 7% CWS Powder, cold water dispersible	●	●			10	04 8228 5.231		●			●						Yellow-Orange
β-Carotene 10% CWS Beadlet††, cold water dispersible	●	●			1 5 25	04 3482 5.268 04 3482 5.304 04 3482 5.368		●			●						Yellow-Orange to Orange
β-Carotene 10% CWS/S Beadlet††, cold water dispersible. Starch-based	●	●			5 20	04 8999 9.304 (Origin: Switzerland) 04 8999 9.314 (Origin: Switzerland)		●			●					●	Yellow-Orange to Orange
β-Carotene 10% CWS/S Spray-granulated powder, cold water dispersible. Starch-based	●	●			5	50 1576 7.304 (Origin: Spain)		●			●					●	Yellow-Orange to Orange

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Quali®-Carotene / β-Carotene (Pro-Vitamin A) – Continued

Product and Description	Certifications				Pack Size (kg)	Product code	Form		Main Application			Specific Application					
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	Coloration
BetaTab® 20% S Beadlet††, tablet grade. Starch-based	●	●			5 25	50 0400 4.304 50 0400 4.368		●		●						●	
BetaTab® 20% S Ph API with specific service package for pharma registered applications. Beadlet††, cold water dispersible	●	●			25	50 1435 2.368		●	●							●	
β-Carotene 15% LCS Powder, cold water dispersible	●	●			5 20	50 1577 6.304 50 1577 6.341		●		●	●					●	Low color saturation
β-Carotene 10% Emulsion Red Liquid emulsion	●	●			6	50 1253 8.147	●			●	●					●	Red
β-Carotene 10% EM Yellow Liquid emulsion	●	●			5	50 0242 7.301	●			●	●					●	Yellow
β-Carotene 5% EM K Liquid emulsion	●	●			5 25	50 1125 6.311 50 1125 6.356	●			●	●					●	Yellow
β-Carotene 2.5% Emulsion CC Liquid emulsion	●	●			6	50 1477 8.147	●			●						●	Yellow
β-Carotene 30% FS Fluid suspension	●	●			1 5 5	04 2723 3.266 04 2723 3.311 04 2723 3.294		●			●					●	Yellow
β-Carotene 30% FS Ph API with specific service package for pharma registered applications. Fluid suspension	●	●			5	50 1438 7.294	●		●							●	
β-Carotene 30% FS/SF Fluid suspension in sunflower oil	●	●			5	50 0023 8.311	●			●	●					●	Yellow
β-Carotene 22% HSS Fluid suspension, heat stable	●	●			20 ¹	04 6604 2.313	●			●	●					●	Yellow

†† Product formulations which utilise Actilease® beadlet technology. Actilease® combines easy handling, bioavailability, and stability of the active.

Additional information | β-Carotene

Role:

β-Carotene serves as an important source of vitamin A and is converted into vitamin A as the body needs it. The additional health promoting effects of β-Carotene may be due to its ability to act as an antioxidant when consumed at dietary intake levels.

Food sources:

Dark green leafy vegetables and dark yellow / orange fruits and vegetables.

Health benefits & solutions:

Improve your gut health, Optimize your immunity, Upgrade your vision, Essentials for kids & teens, Essentials for healthy aging, Essentials for Life, Essentials for vegetarians & vegans, Nourish your beauty.

EU health claims:

- Vitamin A contributes to normal iron metabolism.
- Vitamin A contributes to the maintenance of normal mucous membranes.
- Vitamin A contributes to the maintenance of normal skin.
- Vitamin A contributes to the maintenance of normal vision.
- Vitamin A contributes to the normal function of the immune system.
- Vitamin A has a role in the process of cell specialization.



Apocarotenal (8'-apo-β-Carotenal)

Product and Description	Certifications				Pack Size (kg)	Product code	Form		Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian
Apocarotenal 1% CWS/M Powder, cold water dispersible. Based on medium chain triglycerides	●	●			5	50 0631 7.304		●			●				●	Orange to Orange-Red
					25	50 0631 7.368										
Apocarotenal 10% WS/N Beadlet††	●	●			1	04 8737 6.268		●			●					Orange to Orange-Red
Apocarotenal 20% S Fluid suspension	●	●			1	04 8093 2.266	●				●				●	Yellow-Orange to Orange
					5	04 8093 2.311										
Carotenal Solution #2 2% 8'-apo-β-Carotenal	●	●			20	04 8227 7.313 (Origin: France)	●				●				●	Orange
					20 [†]	04 8227 7.199 (Origin: USA)										
Carotenal Solution #73 1.4% 8'-Apo-β-carotenal and 0.6% β-Carotene solution (70:30 ratio)		●			20	04 805 4 1.313 (Origin: France)	●								●	Yellow-Orange
					20 [†]	04 805 4 1.199										

†† Product formulations which utilise Actilease® beadlet technology. Actilease® combines easy handling, bioavailability, and stability of the active.

Additional information

Role:

Apocarotenal may be used in some regions as a food additive coloring properties.

Food sources:

Citrus fruits such as oranges and green leafy vegetables such as spinach.

*DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dsdm-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval

AstaSana™ / Astaxanthin

Product and Description	Certifications				Pack Size (kg)	Product code	Form		Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian
AstaSana™ 5% CWS/S-TG Beadlet††, cold water dispersible	●	●			5	50 1637 8		●		●			●		●	Violet

†† Product formulations which utilise Actilease® beadlet technology. Actilease® combines easy handling, bioavailability, and stability of the active.

Additional information

Role:

Astaxanthin has antioxidant properties. Its antioxidant protection can complement the performance of other antioxidants in dietary supplements, making it an ideal addition to eye, heart, skin and immune health formulations.

Food sources:

Astaxanthin is present in most red-coloured aquatic organisms, such as krills, algae (*Haematococcus pluvialis*), shrimps and yeast (*Phaffia rhodozyma*).

Health benefits & solutions:

Guard your heart, Enhance your mobility, Optimize your immunity, Upgrade your vision, Nourish your beauty.



Canthaxanthin

Product and Description	Certifications				Pack Size (kg)	Product code	Form		Main Application			Specific Application					
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	Coloration
Canthaxanthin 10% CWS/S Beadlet††, cold water dispersible. Starch-based	●	●			1	50 0525 6.268										●	Orange-Red to Red
					5	50 0525 6.304											
					20	50 0525 6.341											

†† Product formulations which utilise Actilease® beadlet technology. Actilease® combines easy handling, bioavailability, and stability of the active.

Additional information

Role:

Canthaxanthin is a widely distributed pigment in nature and may be used as a food additive with coloring properties in some regions.

Food sources:

Green algae, crustaceans, and bioaccumulates in fish.

FloraGLO® / Lutein – Naturally sourced

Product and Description	Certifications				Pack Size (kg)	Product code	Form		Main Application			Specific Application						
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	Coloration	
FloraGLO® Lutein 1% SD/S Powder, cold water dispersible. Starch-based	●	●			20	50 1514 9.341		●				●			●	●	●	Very low color saturation
FloraGLO® Lutein 5% CWS/S-TG Beadlet,†† tablet grade and cold water dispersible. Starch-based	●	●			5	50 1206 6.304												Yellow
					25	50 1206 6.368 (Origin: Switzerland)												
					5†	50 1206 6.605												
					25†	50 1206 6.606 (Origin: USA)												
FloraGLO® Lutein 10% CWS/S-TG Beadlet,†† tablet grade and cold water dispersible. Starch-based	●	●			5	50 1186 8.304												Yellow-Orange
					25	50 1186 8.368 (Origin: Switzerland)												
					5†	50 1186 8.605												
					25†	50 1186 8.606 (Origin: USA)												
FloraGLO® Lutein 10% SG-VG Spray-granulated powder, tablet grade and cold water dispersible. Starch-based	●	●			5	50 1595 3.304		●							●	●	●	Yellow to Yellow-Orange
FloraGLO® Lutein 20% SAF Fluid suspension in safflower oil	●	●			1	50 1187 6.264	●											
					5	50 1187 6.294												
					20	50 1187 6.331 (Origin: France)												
					1†	50 1187 6.263												
					5†	50 1187 6.694												
					20†	50 1187 6.335 (Origin: USA)												
FloraGLO® OPTISHARP® 5:1 24% FS Fluid suspension, with a lutein:zeaxanthin ratio of 5:1	●	●			5	50 1589 6.294	●											
					20	50 1589 6.311												
Macu-LZ™ 5/1 24% CWS/S-TG Beadlet,†† tablet grade and cold water dispersible. Starch-based Lutein:zeaxanthin isomers ratio of 5:1	●	●			0,050	50 1653 1.004		●										
					10	50 1653 1.141												
Macu-LZ™ 5/1 24% FS Fluid suspension, with a lutein:zeaxanthin isomers ratio of 5:1	●	●			1	50 1647 5.266	●											
					5	50 1647 5.302												

FloraGLO® and Macu-LZ™ are both trademarks of Kemin Industries, Inc. † Only for North America. †† Product formulations which utilise Actilease® beadlet technology. Actilease® combines easy handling, bioavailability, and stability of the active.

Additional information

Role:

Lutein and Zeaxanthin are natural yellow pigments found in cellular membranes, which cannot be produced by the body, but rather must be absorbed from the diet. These carotenoids absorb blue light and act as free radical scavengers *in vitro*. Lutein and Zeaxanthin are naturally found in maternal placenta and cord blood, as well as in colostrum and breast milk; they are structural components of the human eye and brain.

Food sources:

Dark green leafy vegetables such as cabbage (outside leaves), spinach, parsley, greens, and other vegetables such as watercress, peas, broccoli, lettuce, peppers, and other yellow/orange fruits.

Health benefits & solutions:

Empower your mind, Upgrade your vision, Essentials for early life, Essentials for kids & teens.



redivivo® / Lycopene

Product and Description	Certifications				Pack Size (kg)	Product code	Form		Main Application			Specific Application					
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	Coloration
redivivo® (Lycopene) 10% CWS/S-TG Beadlet, tablet grade and cold water dispersible. Starch-based	●	●			5	50 0379 2.304 (Origin Switzerland)											
					25	50 0379 2.368 (Origin Switzerland)		●		●	●					●	Orange-Red to Red
redivivo® (Lycopene) 10% FS Fluid suspension	●	●			5	50 0020 3.294	●			●	●					●	
redivivo® 10% CWS/S-TG Spray granulated powder, tablet grade and cold water dispersible. Starch-based	●	●			5	50 1598 1.304 (Origin Spain)		●		●	●					●	Orange-Red to Red

Additional information

Role:

Lycopene is the carotenoid responsible for the red color in tomatoes and is the most abundant carotenoid in human serum. With its antioxidant activity, lycopene helps to protect our bodies from free radicals, which can not only cause damage to body cells but also play a role in serious illnesses. Several epidemiological studies have associated lycopene with a reduced risk of prostate cancer and cardiovascular disease.

Food sources:

Tomato and a variety of red fruits and vegetables, such as watermelon, pink grapefruit and guava.

Health benefits & solutions:

Guard your heart, Essentials for healthy aging, Essentials for life, Essentials for men, Nourish your beauty.



OPTISHARP® / Zeaxanthin – Naturally sourced

Product and Description	Certifications				Pack Size (kg)	Product code	Form		Main Application			Specific Application					
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian	Coloration
OPTISHARP® Natural (Zeaxanthin) 5% CWS/S-TG Spray granulated powder, cold water dispersible. Starch-based	●	●			10	50 1579 9.141		●		●	●			●	●	●	
OPTISHARP® Natural (Zeaxanthin) 14% Safflower Oil Fluid suspension	●	●			1 25	50 1576 6.263 50 1576 6.298	●			●	●			●	●	●	

Additional information

Role:

Lutein and Zeaxanthin are natural yellow pigments found in cellular membranes, which cannot be produced by the body, but rather must be absorbed from the diet. These carotenoids absorb blue light and act as free radical scavengers *in vitro*. Lutein and Zeaxanthin are naturally found in maternal placenta and cord blood, as well as in colostrum and breast milk; they are structural components of the human eye and brain.

Food sources:

Dark green leafy vegetables such as spinach, turnip and collard greens, lettuce and kale, and other vegetables such as persimmons, corn and peppers, and yellow/orange fruits such as mandarine and tangerine.

Health benefits & solutions:

Empower your mind, Upgrade your vision, Essentials for healthy aging, Nourish your beauty.

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



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PRODUCTS WITH PURPOSE

Minerals

Copper Sulfate

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian	
Copper Sulfate SD 1.5% Cu An aqueous solution of mineral encapsulated with glucose syrup is atomized in a spray drier. Starch based. Contains min 1.5% Copper. Does not contain a flow agent, e.g. silicon dioxide.	●	●			20	50 1644 3.340		●		●	●	●	●		●	

Additional information

Role:

Copper is an essential nutrient for the body. Together with iron, it enables the body to form red blood cells. It helps maintain healthy bones, blood vessels, nerves, and immune function, and it contributes to iron absorption. Sufficient copper in the diet may help prevent cardiovascular disease and osteoporosis.

Food sources:

Found in highest amounts in protein foods like organ meats, shellfish, fish, nuts, and seeds as well as whole grains and chocolate.

Health benefits & solutions:

Empower your mind, Enhance your mobility, Guard your heart, Optimize your immunity, Nourish your beauty, Power your performance.

EU health claims:

- *Copper contributes to maintenance of normal connective tissues*
- *Copper contributes to normal energy-yielding metabolism*
- *Copper contributes to normal functioning of the nervous system*
- *Copper contributes to normal hair pigmentation*
- *Copper contributes to normal iron transport in the body*
- *Copper contributes to normal skin pigmentation*
- *Copper contributes to the normal function of the immune system*
- *Copper contributes to the protection of cells from oxidative stress*

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Ferrous Sulfate

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian	
Ferrous Sulfate SD 3% Fe An aqueous solution of mineral, stabilized with citric acid, encapsulated with glucose syrup is atomized in a spray drier. Starch based. Contains min 3% Iron. Does not contain a flow agent, e.g. silicon dioxide.	●	●			20	50 1644 4.340		●		●	●	●	●		●	

Additional information

Role:

Iron is a mineral that the body needs for growth and development. Your body uses iron to synthesize hemoglobin, a protein in red blood cells that carries oxygen from the lungs to all parts of the body, and myoglobin, a protein that provides oxygen to muscles. Your body also needs iron to synthesize some hormones.

Food sources:

Liver (but avoid this during pregnancy), red meat, beans, such as red kidney beans, edamame beans and chickpeas, nuts, dried fruit – such as dried apricots, fortified breakfast cereals, soy bean flour.

Health benefits & solutions:

Empower your mind, Optimize your immunity, Essentials for women, Essentials for vegetarians & vegans, Power your performance.

EU health claims:

- Iron contributes to normal cognitive function
- Iron contributes to normal energy-yielding metabolism
- Iron contributes to normal formation of red blood cells and haemoglobin
- Iron contributes to normal oxygen transport in the body
- Iron contributes to the normal function of the immune system
- Iron contributes to the reduction of tiredness and fatigue
- Iron has a role in the process of cell division

*DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local desm-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Potassium Iodide

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian	
Potassium Iodide SD 0.25% I An aqueous solution of mineral encapsulated with glucose syrup is atomized in a spray drier. Starch based. Contains min 0.25% Iodide. Does not contain a flow agent, e.g. silicon dioxide.	●	●			20	50 1644 5.340		●		●	●	●	●		●	

Additional information

Role:

Iodine helps the thyroid gland to make the hormone thyroxine. Thyroxine is important for the growth of bones and nerves, and how proteins, fats and carbohydrates are used in the body. Iodine is important before birth and in babies and young children. It is particularly important during pregnancy, when sufficient maternal intake is vital for healthy fetal and infant development. Iodine deficiency is the leading cause of goiter, which is the enlargement of the thyroid gland.

Food sources:

Beans, nuts, dairy foods, fish, seaweed and shellfish.

Health benefits & solutions:

Empower your mind, Essentials for early life, Nourish your beauty, Power your performance.

EU health claims:

- *Iodine contributes to normal cognitive function.*
- *Iodine contributes to normal energy-yielding metabolism.*
- *Iodine contributes to normal functioning of the nervous system.*
- *Iodine contributes to the maintenance of normal skin.*
- *Iodine contributes to the normal production of thyroid hormones and normal thyroid function.*

*DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local desm-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Manganese Sulfate

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian	
Manganese Sulfate SD 0.1% Mn An aqueous solution of mineral encapsulated with glucose syrup is atomized in a spray drier. Starch based. Contains min 0.1% Manganese. Does not contain a flow agent, e.g. silicon dioxide.	●	●			20	50 1644 6.340		●		●	●	●	●		●	

Additional information

Role:

Manganese helps the body form connective tissue, bones, blood clotting factors, and sex hormones. It also plays a role in fat and carbohydrate metabolism, calcium absorption, and blood sugar regulation. Manganese is also necessary for normal brain and nerve function.

Food sources:

Shellfish (mussels, oysters, clams), nuts (especially hazelnuts and pecans), brown rice, oatmeal, legumes (soybeans, kidney beans, chickpeas, lentils, peanuts), black tea, spinach.

Health benefits & solutions:

Enhance your Mobility, Guard your heart, Optimize your immunity, Power your performance.

EU health claims:

- Manganese contributes to normal energy-yielding metabolism.
- Manganese contributes to the maintenance of normal bones.
- Manganese contributes to the normal formation of connective tissue.
- Manganese contributes to the protection of cells from oxidative stress.

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Zinc Sulfate

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian	
Zinc Sulfate SD 3% Zn An aqueous solution of mineral encapsulated with glucose syrup is atomized in a spray drier. Starch based. Contains min 3% Zinc. Does not contain a flow agent, e.g. silicon dioxide.	●	●			20	50 1644 7.340		●		●	●	●	●		●	

Additional information

Role:

Zinc, a nutrient found throughout your body, helps your immune system and metabolism function. Zinc is also important to wound healing and your sense of taste and smell.

Food sources:

Oysters, but it's also plentiful in red meat and poultry. Other good sources are beans, nuts, crab, lobster, whole grains, breakfast cereals, and dairy products.

Health benefits & solutions:

Empower your mind, Enhance your mobility, Guard your heart, Optimize your immunity, Upgrade your vision, Essentials for men, Essentials for women, Nourish your beauty, Power your performance.

EU health claims:

- Zinc contributes to normal DNA synthesis.
- Zinc contributes to normal acid-base metabolism.
- Zinc contributes to normal carbohydrate metabolism.
- Zinc contributes to normal cognitive function.
- Zinc contributes to normal fertility and reproduction.
- Zinc contributes to normal macronutrient metabolism.
- Zinc contributes to normal metabolism of fatty acids.
- Zinc contributes to normal metabolism of vitamin A.
- Zinc contributes to normal protein synthesis.
- Zinc contributes to the maintenance of normal bones.
- Zinc contributes to the maintenance of normal hair.
- Zinc contributes to the maintenance of normal nails.
- Zinc contributes to the maintenance of normal skin.
- Zinc contributes to the maintenance of normal testosterone levels in the blood.
- Zinc contributes to the maintenance of normal vision.
- Zinc contributes to the normal function of the immune system.
- Zinc contributes to the protection of cells from oxidative stress.
- Zinc has a role in the process of cell division.

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local desk - firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Sodium Selenite

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application			
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Vegetarian
Dried Food Powder SD 0.02% Se An aqueous solution of mineral encapsulated with glucose syrup is atomized in a spray drier. Starch based. Contains min 0.02% Selenium. Does not contain a flow agent, e.g. silicon dioxide.	●	●			20	50 1771 3.340		●		●		●	●		●

Additional information

Role:

Selenium is an essential trace mineral that the body needs to stay healthy. It is important for the reproduction, thyroid gland function, plays a role in protecting DNA from damage and supporting DNA repair processes, muscle health and protecting the body from damage caused by free radicals and infection. Selenium also supports immune health.

Food sources:

The richest sources of selenium are animal derived foods such as organ and muscle meat, eggs and dairy products, although some plant-based foods such as Brazil nuts and grains also contain selenium.

Health benefits & solutions:

Empower your mind, Guard your heart, Optimize your immunity, Essentials for healthy aging, Essentials for men.

EU health claims:

- *Selenium contributes to normal spermatogenesis.*
- *Selenium contributes to the maintenance of normal hair.*
- *Selenium contributes to the maintenance of normal nails.*
- *Selenium contributes to the normal function of the immune system.*
- *Selenium contributes to the normal thyroid function.*
- *Selenium contributes to the protection of cells from oxidative stress.*

*DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



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PRODUCTS WITH PURPOSE

Ingredients for Pharmaceutical Use

Ingredients for Pharmaceutical Use (APIs and Excipients): Global portfolio (excluding China)

Product code	Product
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Vitamin A

50 1754 5	Retinyl Palmitate 250 CWS/F Ph
04 2401 3	Vitamin A Palmitate 1.7 MIU/g (BHA/BHT)
50 1626 2	Retinyl Palmitate 1.7 MIUg Ph
50 1227 9	Dry Vitamin A Acetate 500 B

Vitamin E

50 1657 7	Dry Vitamin E 50% CWS/S Ph
50 1626 0	dl- α -Tocopheryl Acetate Ph
50 1674 1	all-rac- α -Tocopherol Ph

Vitamin D

50 1621 2	Dry Vitamin D3 100 SD/S Ph
50 1647 3	Dry Vitamin D3 100 CWS Ph
50 1752 4	Vitamin D3 1.0 MIU/g Ph
50 1626 3	Vitamin D3 Crystalline Ph

Vitamin K1

04 3492 2	Dry Vitamin K1 5% SD
04 3501 5	Vitamin K 1
50 13224	Vitamin K1 API (US DMF only)

Vitamin B1

04 29473	ROCOAT Thiamine Mononitrate 33 1/3%
50 16257	Thiamine Hydrochloride Ph
04 18943	Thiamine Mononitrate

Product code	Product
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Vitamin B2

50 1626 1	Riboflavin 5'-Phosphate Ph
04 7040 6	Riboflavin Universal*
50 1775 4	Riboflavin Universal Ph**

Vitamin B3

04 8784 8	Niacinamide
50 1629 1	Niacinamide Ph (US DMF only)**

Vitamin B5

04 1267 8	Calcium D-Pantothenate*
50 1776 0	Calcium D-Pantothenate Ph**
50 1625 8	D-Panthenol Ph

Vitamin B6

04 2945 7	ROCOAT Pyridoxine Hydrochloride 33 1/3%
50 1646 0	Pyridoxine Hydrochloride Ph (origin Germany)

Vitamin B7

50 1626 4	D-Biotin Ph
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Vitamin B9

50 1625 9	Folic Acid Ph
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Vitamin B12

50 1251 1	Vitamin B12 1% SD
04 2909 0	Vitamin B12 0.1% WS
04 2915 5	Vitamin B12 Crystalline
50 1630 0	Vitamin B12 Crystalline Ph (US DMF)

Product code	Product
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Vitamin C

04 0809 3	Ascorbic Acid Fine Granular
50 1645 0	Ascorbic Acid Fine Powder Ph
50 1625 5	Ascorbic Acid Ph
04 1944 3	Calcium Ascorbate*
50 1775 7	Calcium Ascorbate Ph**
50 1625 6	Sodium Ascorbate Ph
50 0976 6	Ascorbic Acid Ultra Fine Powder
04 2511 7	Coated Ascorbic Acid, Type EC
5007747	Ascorbic Acid 95% Granulation*
50 1775 8	Ascorbic Acid 95% gran. Ph**

Beta-Carotene

5014344	β -Carotene Crystalline Ph
5014387	β -Carotene 30% FS Ph
5014352	BetaTab® 20% S Ph

Cannabinoid APIs

50 1714 2	BSPG Cannabidiol active pharmaceutical ingredient (CBD API)
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Lipid API Intermediates

Eicosapentaenoic Acid (EPA)	Customized concentrations and combinations to meet your needs. Contact your dsm-firmenich Account Manager for details.
Docosahexaenoic Acid (DHA)	

* To be replaced for pharmaceutical usage by respective pharma product code

** Pharma product code expected to be launched within 12 months period

Ingredients for Pharmaceutical Use (APIs and Excipients): China portfolio

Product code	Product
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Vitamin A

04 1727 0	Vitamin A Acetate 1.0MIU/g
04 2401 3	Vitamin A Palmitate 1.7 MIU/g (BHA/BHT)
50 1227 9	Dry Vitamin A Acetate 500 B

Natural Vitamin E

04 8657 4	D-alpha Tocopheryl Acetate
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Vitamin E

50 1657 7	Dry Vitamin E 50% CWS/S Ph
50 1626 0	dl- α -Tocopheryl Acetate Ph
50 1674 1	all-rac- α -Tocopherol Ph

Vitamin D

50 1647 3	Dry Vitamin D3 100 CWS Ph
50 1752 4	Vitamin D3 1.0 MIU/g Ph

Vitamin K1

04 3492 2	Dry Vitamin K1 5% SD
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Vitamin B1

04 29473	ROCOAT Thiamine Mononitrate 33 1/3%
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Product code	Product
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Vitamin B2

04 2946 5	Rocoat Riboflavin 33 1/3%
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Vitamin B3

04 2944 9	Rocoat Niacinamide 33 1/3 %
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Vitamin B5

04 1267 8	Calcium D-Pantothenate*
50 1776 0	Calcium D-Pantothenate Ph**

Vitamin B6

04 2945 7	ROCOAT Pyridoxine Hydrochloride 33 1/3%
50 1602 1	Pyridoxine Hydrochloride Ph (<i>origin: China</i>)

Vitamin B7

50 1273 2	Bitrit-1 Type A*
50 1728 9	Bitrit-1 Type A Ph**

Vitamin B9

50 1625 9	Folic Acid Ph
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Product code	Product
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Vitamin C

50 1590 1	VC Ascorbic Acid ChPh
50 1590 2	VC Ascorbic Acid inject
50 1608 3	VC Ascorbic Acid ChPh Special

Beta-Carotene

5014352	BetaTab® 20% S Ph
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Lipid API Intermediates

Eicosapentaenoic Acid (EPA)	Customized concentrations and combinations to meet your needs. Contact your dsm-firmenich Account Manager for details.
Docosahexaenoic Acid (DHA)	

* To be replaced for pharmaceutical usage by respective pharma product code

** Pharma product code expected to be launched within 12 months period

Your end-to-end partner

Products – Customized solutions – Expert services

PRODUCTS WITH PURPOSE

Hydrocolloids (pectin)

PECTNER™ / Pectin

Product and Description	Certifications			Pack Size (kg)	Product Code	Main Application			Specific Application				
	Kosher	Halal	DMF*			Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian
PECTNER™ APC102 HM	●	●		25	5018202366		●	●		●	●	●	●
PECTNER™ APC104 HM	●	●		25	5018203366		●	●		●	●	●	●
PECTNER™ APC105 HM	●	●		25	5018204366		●	●		●	●	●	●
PECTNER™ APC169B HM	●	●		25	5018205366		●	●				●	●
PECTNER™ APC210 LMA	●	●		25	5018206366		●	●		●	●	●	●

Additional information

Role:

Pectin is a soluble dietary fiber that occurs in fruit. Pectin supports gut health and can positively impact the gut microbiota. It has been shown to manage blood cholesterol, probably by trapping cholesterol precursors in the gut and preventing their reabsorption. Soluble fibers may also delay glucose absorption in the small intestine which aids glycemic control.

Consumer preferences are rapidly shifting (e.g., product formats, vegetarian, etc.). New product experiences can drive compliance and attract new consumer groups. To support this consumer shift, we offer a range of pectin ingredients. Leveraging our experience in taste, texture, and health, we have extensive know-how in bringing tailored functionalities – from gelling and texturizing, to usage in functional dietary supplements.

Relevant functionalities of pectin include:

- *Vegan friendly gelatin replacement*
- *Thermally and pH stable texturizing agent*
- *Recognized for emulsifying and stabilizing properties*
- *Low-calorie prebiotic/fiber with increasing evidence on health benefits*
- *Good flavor release*

Food Sources:

Pectin is derived from the peels of apples and citrus fruits (upcycling from juice production).

Health benefits & solutions:

Guard your heart, Improve your gut health, Essentials for vegetarians.

EU claims:

- *Pectins contribute to the maintenance of normal blood cholesterol levels.***
- *Consumption of pectins with a meal contributes to the reduction of the blood glucose rise after that meal.****

US FDA claim:

- *Approved as a dietary fiber.*

* In order to bear the claim, information shall be given to the consumer that the beneficial effect is obtained with a daily intake of 6 g of pectins.

** In order to bear the claim, information shall be given to the consumer that the beneficial effect is obtained by consuming 10 g of pectins as part of the meal.



Your end-to-end partner

Products – Customized solutions – Expert services

PRODUCTS WITH PURPOSE

Human Milk Oligosaccharides (HMOs)

Human Milk Oligosaccharides (HMOs)

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application				Specific Application				Shelf Life	Purity Level
	Kosher	Halal	DMF*	CEP			Amorphous Powder	Crystalline Powder	Pharma reg. OTC/Rx†	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegetarian		
GlyCare™ 2FL 9000	●	●			20	50 1655 2		●		●		●	●	●		●	5 years	At least 94%
GlyCare™ 2FL 9000 HA	●	●			20	50 1655 3		●		●		●	●	●		●	5 years	At least 94%
GlyCare™ 2FL 9000 S2	●	●			20	50 1660 9		●		●		●	●	●		●	5 years	At least 94%
GlyCare™ 2FL 9001	●	●			20	50 1783 8	●			●		●	●	●		●	5 years	At least 90%
GlyCare™ LNnT 9000	●	●			20	50 1656 1		●		●		●	●	●		●	5 years	At least 92%
GlyCare™ LNnT 9000 HA	●	●			20	50 1656 2		●		●		●	●	●		●	5 years	At least 92%
GlyCare™ LNnT 9000 S1	●	●			20	50 1661 1		●		●		●	●	●		●	5 years	At least 92%
GlyCare™ LNnT 9000 S2	●	●			20	50 1669 8		●		●		●	●	●		●	5 years	At least 92%
GlyCare™ 3SL 9001†	●	●			20	50 1656 7	●			●		●	●	●		●	5 years	At least 88%
GlyCare™ 3SL 9001 S1	●	●			20	50 1752 7	●			●		●	●	●		●	5 years	At least 88%
GlyCare™ 6SL 9001†	●	●			20	50 1657 0	●			●		●	●	●		●	5 years	At least 90%
GlyCare™ 6SL 9001 S1	●	●			20	50 1752 8	●			●		●	●	●		●	5 years	At least 90%
GlyCare™ 2FL/DFL 8001†	●	●			20	50 1656 0	●			●		●	●	●		●	5 years	At least 85%
GlyCare™ 2FL/DFL 8001 S1	●	●			20	50 1752 6	●			●		●	●	●		●	5 years	At least 85%
GlyCare™ LNT 8001†	●	●			20	50 1656 5	●			●		●	●	●		●	5 years	At least 70%
GlyCare™ LNT 8001 S1	●	●			20	50 1752 9	●			●		●	●	●		●	5 years	At least 70%
GlyCare™ 3FL 9001	●	●			20	50 1673 9	●			●		●	●	●		●	5 years	At least 90%

Available upon regional regulatory approval. † Available for Early Life Nutrition per January 1st 2023.

Additional information

Role:

HMOs are non-digestible carbohydrates naturally found in human breast milk forming the third largest solid component of human milk. There are over 200 HMO structures that have been identified, but most occur at tiny quantity and about a dozen contributing the bulk. HMOs have been shown to positively shape the microbiome and developing immune system in infants. Emerging evidence suggests that HMOs may have health benefits beyond infancy and may support gut health and the immune system throughout the lifespan.

Food Sources:

HMOs are naturally present at large amounts in breastmilk. Some HMOs can also be found in the milk of farmed animals (e.g. cow, goat, sheep, camel), but at comparably much smaller amounts.

Health Benefits & Solutions:

Improve your gut health, Optimize your immunity, Essentials for early life.

Valuable effects of HMOs include promoting growth of beneficial intestinal bacteria thereby generating short-chain fatty acids which are critical for gut health. HMOs also directly modulate immune responses and can selectively reduce binding of pathogenic bacteria and viruses to the gut epithelium protecting against infection.

HMOs may also play a role in brain and cognitive development.



DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval.

Your end-to-end partner

Products – Customized solutions – Expert services

PRODUCTS WITH PURPOSE

Biotics

Humiome® Vitamins

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application				
	Kosher	Halal	DMF+	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegan	Vegetarian
Humiome® B2 with MTT™	●				1	50 1755 0.268											
					5	50 1755 0.304		●		●				●			●
					25	50 1755 0.368											

MTT™ = Microbiome Targeted Technology; Product formulation utilizing MTT™. Combining easy handling, stability of the active and colon release.

Additional information

Role:

MTT™ is designed to facilitate that large amounts of Humiome® B2 reaches the colon (~90%) while small fractions of Vitamin B2 (riboflavin) are expected to get released in proximal intestines (~10%). Thus EC claims might still be applied. Humiome B2 with MTT™ ensures the delivery of the riboflavin into the ileocolonic where it can modulate microbiome positively and contribute to intestinal homeostasis and enhance the resilience on top of the conventional claims known for riboflavin.

Food sources:

Milk, green vegetables, meat, fish, whole grains, cheese and eggs.

Health benefits & solutions:

Empower your mind, Improve your gut health, Optimize your immunity, Upgrade your vision, Nourish your beauty, Power your performance.

Emerging science biotic benefits:

- Humiome® B2 supports the growth of beneficial bacteria in the human colon.
- Humiome® B2 supports beneficial bacteria in their gut environment.
- Humiome® B2 could increase their functionality and production of colonic-butyrate.
- Humiome® B2 supports the communication between gut microbiome.
- Humiome® B2 helps to protect the environment from oxidative stress.
- Humiome® B2 helps to have a stronger gut defence (gut wall integrity).
- Humiome® B2 helps to nourish your second brain, your gut.

EU Claims:

- Riboflavin contributes to normal energy-yielding metabolism.
- Riboflavin contributes to normal functioning of the nervous system.
- Riboflavin contributes to the maintenance of normal mucous membranes.
- Riboflavin contributes to the maintenance of normal red blood cells.
- Riboflavin contributes to the maintenance of normal skin.
- Riboflavin contributes to the maintenance of normal vision.
- Riboflavin contributes to the normal metabolism of iron.
- Riboflavin contributes to the protection of cells from oxidative stress.
- Riboflavin contributes to the reduction of tiredness and fatigue.

Role:

Riboflavin is important in helping the body transform proteins, fats and carbohydrates into energy. It helps maintain healthy skin and eyes and is also necessary for building and maintaining body tissues.

DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmench Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



Humiome® Postbiotics

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegan	Vegetarian
Humiome® Post LB	●	●			20	50 1819 4.340		●		●			●	●	●	●	

Additional information

Role:

Postbiotics are a preparation of inanimate microorganisms and/or their components that confers a health benefit on the host.

Health benefits & solutions:

Optimize your immunity, Improve your gut health.

Benefit Claims:

- Resolves the symptoms and reduces in duration of diarrhea significantly
- Helps regular bowel movement and digestive comfort
- Improves the symptoms of IBS
- Helps to regulate immunity
- Supports & improves digestive health



Humiome® Probiotics

Product and Description	Certifications				Pack Size (kg)	Product Code	Form		Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegan
Humiome® <i>L. rhamnosus</i> GG (ATCC 53103)	●	●			2x 2.5	50 1820 9.172		●		●			●	●	●	●

Additional information

Role:

Probiotics are live microorganisms that, when administered in adequate amounts, confer a health benefit on the host.

Health benefits & solutions:

Empower your mind, Improve your gut health, Optimize your immunity, Essentials for healthy aging.

Benefit Claims:

- May reduce the duration of acute diarrhea and enhance stool consistency in children and adults.
- May regulate the stool consistency (in elderly).
- May reduce the risk of developing respiratory infections (infants and children).
- Can promote cognitive health.



*DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local dem-firmtech Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval

Your end-to-end partner

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PRODUCTS WITH PURPOSE

Enzymes

Tolerase® G & Tolerase® L / Digestive enzymes

Product and Description	Certifications				Pack Size (kg)	Product Code	Form			Main Application			Specific Application				
	Kosher	Halal	DMF*	CEP			Liquid	Powder	Pharma Reg. OTC/Rx*	Dietary Supplements	Foods and Beverages	Early Life Nutrition	Medical Nutrition	Nutrition Improvement	Natural Source	Vegan	Vegetarian
Tolerase® G Prolyl oligopeptidase. Micro granulated powder, 580,000 PPI/g	●	●			5	50 1488 3.304		●		●							●
Tolerase® L Acid lactase. Micro granulated powder, 100,000 ALU/g	●	●			5	50 1454 9.304		●		●							●

Additional information

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 diarrhoea, 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.*

*DMF / Pharma registered OTC (Over the Counter) / Rx (Prescription) statuses must be checked with local desm-firmenich Regulatory Affairs team in your closest office. The applicability of the portfolio for pharmaceutical application is subject to local approval



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.

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Products – Customized solutions – Expert services

With our broad service offerings, customers get an integrated partner, from concept to consumer.

Products

- Nutritional lipids
- Digestive enzymes
- HMOs
- Vitamins
- Carotenoids
- Biotics
- Flavors
- Maskers & blockers
- Sugar reduction & enhancers

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
- Taste & sensorial services

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