

JRS Fibers for Life – JRS presents VITACEL® Citrus Fiber at the FI Europe



ome and find our JRS expert team at Europe's leading F&B event in Paris and build a sustainable and innovative food future together with us. FI Europe is the place to discover F&B ingredients, alternatives and innovative solutions. Networking with experts, the hottest trends and being part of a big community is what you will find there. 1200 exhibitors and 20,000 attendees are expected and more than 135 countries represented. The program includes key note speakers which will present you the newest topics and facts. So visit one event and get to know thousands of F&B solutions.

As we at JRS constantly develop many outstanding innovative and cost reducing products and recipes to fulfill the needs of your customers, we - your JRS Food and Nutrition Team of Experts - will be there for you and introduce you to our valuable product lines and present you how we support our clients all the way from the raw ingredient to fascinating, delicious and innovative F&B products. Get in touch with us and visit our booth 6G10.

JRS' VITACEL® Citrus Fiber - a valuable co-product

At this point, we would like to introduce our VITACEL® Citrus Fiber with its outstanding multifunctional potential. JRS Food Ingredients implements its green philosophy by functionalizing plant-based resources based on an entire utilization concept. For pectin production the company uses citrus peel, originally leftovers from the fruit

juice industry, adding value to a by-product, which would otherwise be disposed of. Now, the partially depectinized citrus peel is transformed into multifunctional dietary fiber - our VITACEL® Citrus Fiber. (see figure 1)

Enrichment with citrus fiber meets the need for healthy food alternatives and also technological advantages such as neutral sensory, easy machinability and the ability to retain water. The fiber can be integrated in dairy products, meat products, vegan and vegetarian alternatives, bakery goods, culinary sauces and even beverages.

VITACEL® Citrus Fiber is an off-white powder with neutral sensory. Obtained from citrus peel, it is 100 % natural and produced in a state-of-the-art production facility, extremely efficient in terms of water and energy consumption, located right next to JRS Silvateam Ingredients' pectin factory in Rende, Southern Italy.

The particularly pronounced abilities to bind water and support emulsion stability are key functional features of VITACEL® Citrus Fiber that set it apart from other plant-based fibers. Activation of the fiber by kinetic energy enhances its ability to absorb water. Viscosity and form stability, mouthfeel and other sensory characteristics in foods and beverages are improved. The dietary fiber consists of soluble and insoluble fibers. By the formation of a three dimensional network of those fibers, VITACEL® Citrus Fiber shows hydrophilic and hydrophobic behavior and thus supports the stability of oil in water emulsions.

Further, VITACEL® Citrus Fiber has a high intestinal tolerability and a positive impact on

health, e.g. many metabolic processes.

As more and more customers are looking for healthy wheat alternatives or choose diets free of gluten, products made with VITACEL® Citrus Fiber will find their way onto the health food market. Using it enables you to develop new, authentic and mouthwatering gluten-free product alternatives and meet those needs as well.

One of the health benefits of our citrus fiber is that it has the potential to lower cholesterol levels by increasing the viscosity of the chyme. Based on similar principles, it positively affects the glycemic index of foods and so blood glucose metabolism - another great advantage looking at constantly rising numbers of people suffering from diabetes.

VITACEL® Citrus Fiber is allergen-free, halal and kosher. Being able to claim this also supports consumer-friendliness and therefore is highly appreciated.

VITACEL® Citrus Fiber adds health and nutritional value and also technological advantages such as easy handling due to cold processability, an improved texture and a good mouthfeel to your products. This helps you fulfill the needs and requests of even your most demanding clients.

Above all this you'll notice a high efficiency resulting in an excellent cost versus use ratio.

Getting to know JRS' VITACEL® Citrus Fiber is an ideal feature to contribute to consumer health and also to produce delicious food products with reliable technological features for authentic texture and form stability.

As one of the world's leading manufacturers of dietary fiber concentrates, JRS supports modern

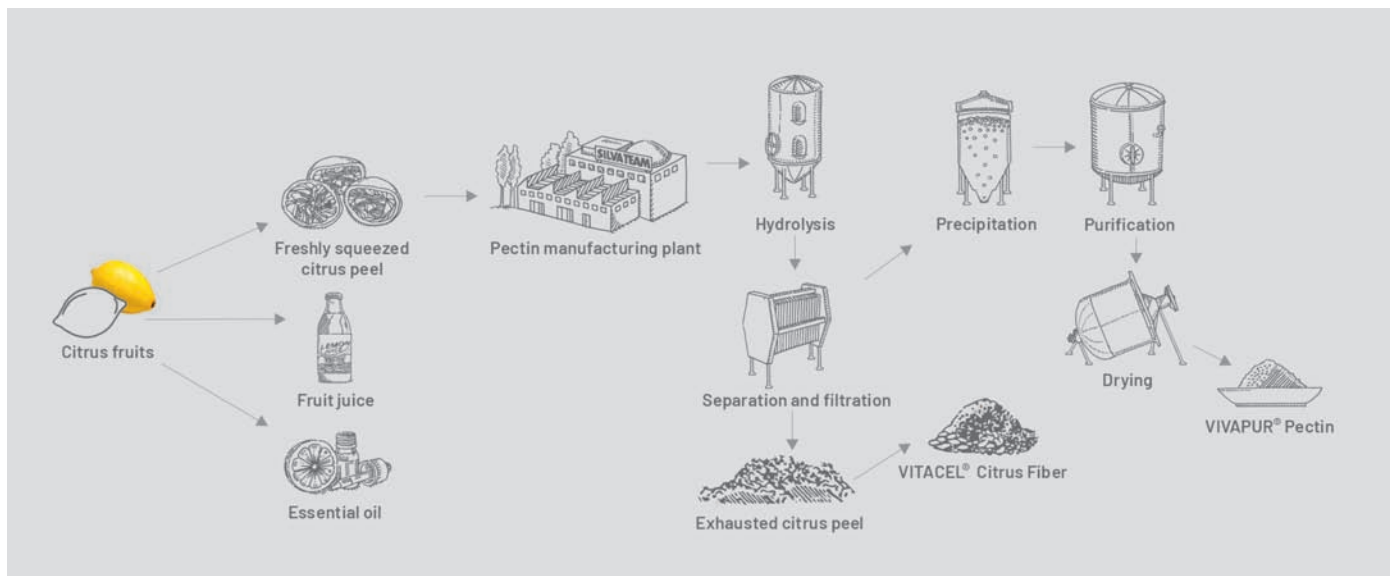


Figure 1: Citrus Fiber

food industries with a functional and modular toolbox for innovative recipe ideas – assisted by the proven JRS Application and Technology Services. Enjoy recipe ideas for delicious baking goods, meat and dairy products as well as for beverages. A global manufacturing network of 21 specialized food-certified production sites ensures the provision of highest quality products, supplies and customer proximity - healthy, tasty, natural, sustainable and safe.

Our JRS Food Business Unit is a competence center for modern nutrition and stands for a consumer- and health-oriented, practical and economical implementation of the innovative JRS plant fiber technology within the globally active JRS family company group.

By using our toolbox every need of modern consumers can be met

This toolbox is based on two pillars: VITACEL® Dietary Fibers such as cereal fibers, fruit fibers, vegetable fibers and fiber compounds and VIVAPUR® Functional Ingredients such as alginates, pectins, state of the art colloidal systems, tara gum products and more. Our goal is to offer solutions for you and today's modern informed consumers.

Our products are nutritionally beneficial as they help to reduce fat and sugar and additionally enrich with healthy and needed fiber. The Institute of Medicine and the American Heart Association recommend a daily fiber intake of 30-38 g for men and 20-25 g for women – depending on age and health situation. This is to provide health benefits like lowering cholesterol levels, aiding digestion and having a positive impact on many more nutrition related and other diseases. Also all our fibers show high intestinal tolerability and are beneficial for weight control.

That way having fiber enriched or high fiber food in your product line meets one of the greatest health trends on the food market and of course adds real value to human nutrition.

By adding our fibers health claims like "source of fiber" (> 3 g/100 g) or "high in fiber" (> 6 g/100 g) can be used which will attract health orientated customers.

You can add vegetable and vegan products to your product range, develop diabetics' food or nutrition for the elderly - all gluten-, lactose- and GMO free if wished. Also the clean-label trend can be met which is evolving in the face of changing regulation, interest in degrees of processing, and

environmentally friendly consumers.

VIVAPUR® Functional Ingredients are the perfect assets for texturizing and stabilizing challenges. Particle stabilization and improving foam stability are just two good reasons to include our colloidal systems in your product.

Based on their unique properties, our cellulose derivatives are used in numerous applications. Their hot gelling properties improve frying stability of reformed products, while their surface activity helps stabilize emulsions.

Our various alginates provide gelling, thickening and film-forming properties for a number of food and non-food applications.

The range of applications that can benefit from our pectins is similarly widespread. Gelling and thickening properties help texturize yogurts, desserts as well as jams and fruit preparations. In acidified milk beverages pectins provide protein protection and improve viscosity in fruit beverages.

Our tara gum grades provide high viscosity, a good synergy with other hydrocolloids and are a cost-effective alternative to locust bean gum.

From single ingredients to tailor-made all-in-one texturizing and stabilizing systems, customer acceptance will be extremely high as

sensory and haptic properties are fully met.

Altogether, adding our products results in a synergistic combination of dietary values and the possibility to follow functional needs.

For more information and advice of our team of experts please do not hesitate to contact our food experts any time (food@jrs.de) or visit our booth 6G10 on FI Europe.



Fibers for Life.

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