

GELITA

UPTODATE

The Newsletter for GELITA Customers

#43

Product innovation:
**Supple and
strong!**

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Dear reader,

Together we are even stronger: that's the motto of the cooperation between Winkler and Dünnebier Süßwarenmaschinen (WDS), Hänsel Processing and GELITA. The three companies are currently in the process of revolutionizing the production of fruit gums: Their jointly developed Fast Forward Process (FFP) technology makes it possible to produce the gums in silicone instead of starch molds. Completely without contamination and much faster than before. Nobody else has elaborated and tested a process in as detailed a fashion as the three companies.

A strong performance is also provided by GELITA's two collagen peptides FORTIBONE® and TENDOFORTE®. Several studies have proven its positive effect on tendons, ligaments and bones. Athletes in particular benefit from the enormous effects. FORTIBONE® and TENDOFORTE® correspondingly offer manufacturers of sports nutrition outstanding potential. Another plus for FORTIBONE®: The collagen peptide received the "Fi South America Innovation Award 2018" in the category "Most Innovative Functional Ingredient", and was named "Ingredient of the Year" in the category "Healthy Ageing" at the NutraIngredients Awards 2018. The most recent success came at the end of November with the prize for "Best Functional Ingredient of the Year". The award ceremony took place at the "Food Matters Life" trade fair in London.

They look simply amazing: cakes with a mirror-finish glaze. Thanks to GELITA® leaf gelatine, these sweet works of art can be created in no time at all. Which cakes in which countries are a delight for those with a sweet tooth? You will also find the answer to this question in this issue of uptodate.

We wish you a lot of fun reading – and a strong new year!

Michael Teppner

Global VP Marketing & Communication
GELITA AG



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LICHTDRUCK 2.0

Innovation

Strong sports
nutrition



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Music to the ears
in Nashville



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CSR Report

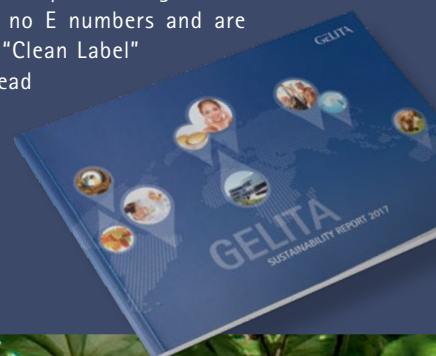
Sustainably successful

For GELITA, sustainability is more than just a buzzword, it is the basis of our company's success. After all, success would be unthinkable without clean air, clear water and healthy flora and fauna, as our new Sustainability Report shows.

Our production processes always aim to impact as little as possible on nature and to constantly minimize our ecological footprint. To achieve this, we use the most modern manufacturing equipment. However, sustainability has another aspect for us, as our long company history shows: GELITA has been committed to its core values for more than 140 years. As a family-owned company, we have consistently invested in long-term partnerships, whether with customers, suppliers or our own employees. And, last but not least, we manufacture sustainable products:

Our natural proteins are pure, allergen-free foodstuffs that carry no E numbers and are therefore suitable for "Clean Label" products. You can read all about what GELITA is doing in the area of sustainability in the new report:

www.gelita.com/en/gelita-csr




"Fast Forward Process is a world's first"

GELITA has developed the Fast Forward Process (FFP) technology together with Winkler und Dünnebier Süßwarenmaschinen (WDS) and Hänsel Processing. This revolutionary process makes it possible to produce fruit gums with reusable silicone molds instead of starch molds, reducing production time from 24 hours to just 40 minutes. We conducted an interview with Holger Brack, Head of Technical Centre/Application Development at WDS and Frank Temme, Managing Partner at Hänsel Processing, about constructive cooperation and the market potential of fruit gums.

Frank Temme

started working 32 years ago in the technical field at Hänsel Processing and, in his own words, „learned to walk in the company“. He has been managing partner at Hänsel Processing since 2009.



"Each of us brings a very high level of expertise from his own field."

Frank Temme

Mr Brack, Mr Temme, before we get to the actual subject, please explain to our readers what your companies do.

Holger Brack:

Winkler und Dünnebier is a mechanical engineering company, specializing in casting and dosing confectionery. Our plants shape chocolates, hard and soft caramels, fondants, jelly products and fruit gums. We are pretty much the only company in the world in this sector to manufacture large-scale production equipment for almost all types of confectionery.

Frank Temme:

Hänsel Processing has been manufacturing machines for the production of confectionery since 1911, confectionery which is normally cooked. Our export share is 95 percent and we have plants on every continent.

What can the new FFP manufacturing process do?

Frank Temme:

FFP technology sets a gelatine-containing mass in a short period of time, something that hasn't been done before. The fruit gums cast in silicone molds can be removed after around 40 minutes, as opposed to the classic mogul technique, which sometimes takes several days. Additionally, the products can be manufactured without additives or contamination.

Holger Brack:

Using the mogul technique, the mass is poured into pre-stamped starch powder. These stamps allow you to make different shapes very easily.

The main disadvantage of the mogul technique, however, is contamination. The molding starch removes moisture from the fruit mass, meaning water-soluble ingredients also enter the starch. If the fruit mass is enriched with additives, these substances can also be found in the next product. That means the production isn't clean.

Frank Temme:

Another issue is the heat sensitivity of the additives. To ensure the additives are not damaged, they can only be added after the cooking process and need to be cooled again as quickly as possible. FFP was also developed to deal with this issue.

Which market trends does FFP address?

Frank Temme:

FFP primarily targets so-called fortified gums – products containing additives. These can be vitamins, omega 3 fatty acids or calcium, for example. Over-the-counter products, those that can be purchased without a prescription, like biotin and melatonin, are also relevant. These food supplements are available as fruit gums today in many parts of the world.

Holger Brack:

"The profit margins for fortified fruit gums are very attractive"

Holger Brack

Our eating habits support the trend towards enriched fruit gums. We don't have the time to cook for ourselves any more. Convenience food is fashionable. The nutrients, vitamins and minerals we need for a balanced diet have to be supplemented. In Europe, the focus will be on natural extracts initially. Ginger and honey are currently in vogue. So too are echinacea or olive leaf extract for lowering blood pressure, and ribwort plantain for respiratory illnesses and coughing are also frequently in demand. A lot is happening in this area. We need to be prepared for these products and be able to meet the technical requirements to manufacture them.

Are fortified gums also relevant for the pharmaceutical industry?

Holger Brack:

Many pharmaceutical companies are in the process of developing fruit gums containing

over-the-counter drugs. However, it is not quite so straightforward because fruit gums are a product often eaten in mass and there is therefore a risk of excessive amounts of the supplements being ingested. In the USA, simple instructions on the packaging are sufficient. This would never be allowed in Europe. The plan here is to produce Made-in-Packs, where the enriched fruit gums are

It sounds like there is enormous potential there.

Frank Temme:

There has been an increase in the volume of fruit gums on the market in the last two to three years. After all, every confectionary manufacturer is looking for new products to offer. Success in the fruit gum sector is based on innovation, diversity and cost awareness.



Holger Brack

has been working for WDS since 1999. After studying food technology, he worked as a project manager in product development at Storck and as head of confectionary development at Zentis. At WDS, the food engineer is head of the Technical Center and Application Development.

filled directly into blister packaging and sealed, a process which is customary in the pharmaceutical field. We expect this to be approved for the market.





Hänsel Processing has optimized the JellyStar® jelly cooking plant for Fast Forward.

Why are fruit gums so attractive for manufacturers?

Holger Brack:

There is hardly any other product in the confectionery sector that is growing as strongly as fruit gums. Their high acceptance makes them the ideal platform for additives. The price for such products is attractive and the profit margin is high.

"We can offer customers an all-inclusive line with the best of three worlds."

Frank Temme

It is therefore attractive for the well-known confectionery and pharmaceutical companies to establish a new production facility. In addition, there are new companies that are launching completely new products. With FFP, we have also reduced the barriers to entry for small-volume business, as the investment costs are lower compared to mogul plants. This makes the business more easily scalable.

How did the cooperation with GELITA come about?

Holger Brack:

GELITA and WDS already pursued the idea of starch-free confectionery production 20 years

ago. At that time, products with additives were not an issue at all. It was all about clean, simple production, but the processes were not yet good enough. But we kept at it. When we were ready and realized a few years ago that we needed expertise in the area of cooking, we took Hänsel Processing on board. Since then we have been working intensively on the project and have made enormous progress.

Frank Temme:

We had already worked previously with GELITA on individual projects for our fruit gum production machines, after all, GELITA is the market leader in this area of gelatine.

What form did the cooperation take?

Holger Brack:

We met several times a year, conducted trials and analyzed the results. GELITA took care of the formula and structural formation, Hänsel the cooking process, and WDS the molding. We have gradually optimized every step and created pilot installations which have enabled us to gain insights into large-scale processes. With this, we can present our customers with a complete concept.

What do you appreciate about the cooperation with GELITA?

Frank Temme:

We have a very trusting relationship with GELITA and WDS, which is reflected in the close teamwork.

Holger Brack:

We have known each other for many years, which simplifies work and communication. Our cooperation is goal-oriented and the division of tasks is optimal.

To what extent do customers benefit from the cooperation?

Holger Brack:

Our concept is a world first. We think in broad terms, also because we were able to incorporate the experience of three different com-

panies into the project. And we've put everything that is commonplace under the microscope. This approach gives us a head start over competitors who, while working on similar processes, do not elaborate them in many respects in as much detail as we do. We considered the formula, design, molding process, temperature resistance, cooking process, firmness, absence of sugar, and halal versions, and tested how the fruit gum reacts after three or six months. All these questions are complex and reflect exactly what a confectionery company basically queries.



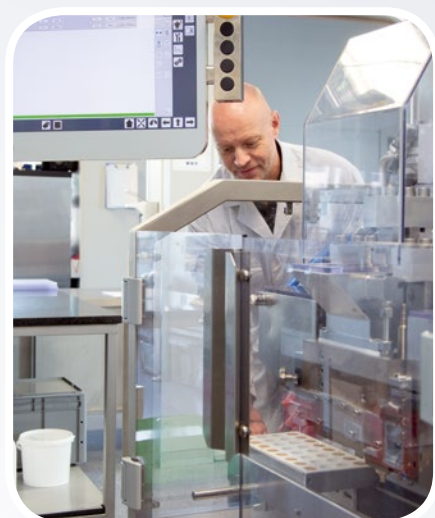
Frank Temme:

With the combination of WDS, GELITA and Hänsel Processing, three companies have joined forces, each with a very high level of

"We are able to test all the process steps in detail on a pilot scale."

Holger Brack

competence in its field and whose experience has flowed into the FFP technology. This enables us to offer our customers a complete line with the best of the three



Holger Brack demonstrates the FFP technology in the WDS Technikum in Rengsdorf, Germany. Product development trials can also be conducted at Hänsel Processing in Hanover, Germany.

areas. Furthermore, WDS in Rengsdorf and Hänsel Processing in Hanover have each set up facilities with which we can conduct product development trials with customers.



FAST FORWARD PROCESS
Starch-free gelatine gummy production



The challenge with FFP: The required rapid gelling and high flexibility of textures cannot be achieved with standard formulations, gelatines and processes.

FAST FORWARD PROCESS (FFP)

GELITA, Hänsel and WDS have revolutionized fruit gum production. Your advantages at a glance:

Starch-free production

- Implementation of starch-free fruit gum and OTC products
- Reduction in material handling to a fraction of the classic process
- Avoidance of dust, residues or impurities due to the use of starch.

Minimization of production costs

- Replacement of tens of thousands of starch boxes with several hundred reusable silicone molds
- Saving of production space
- Lower energy and personnel costs

Reduction in production time

- Production within 40 minutes instead of 24 hours
- No drying time or long cooling procedures

Simplified implementation of additives

- Gentle handling of additives when enriching the fruit gum products
- Easy processing of collagen peptides, vitamins, minerals, APIs etc.



MORE INFORMATION:

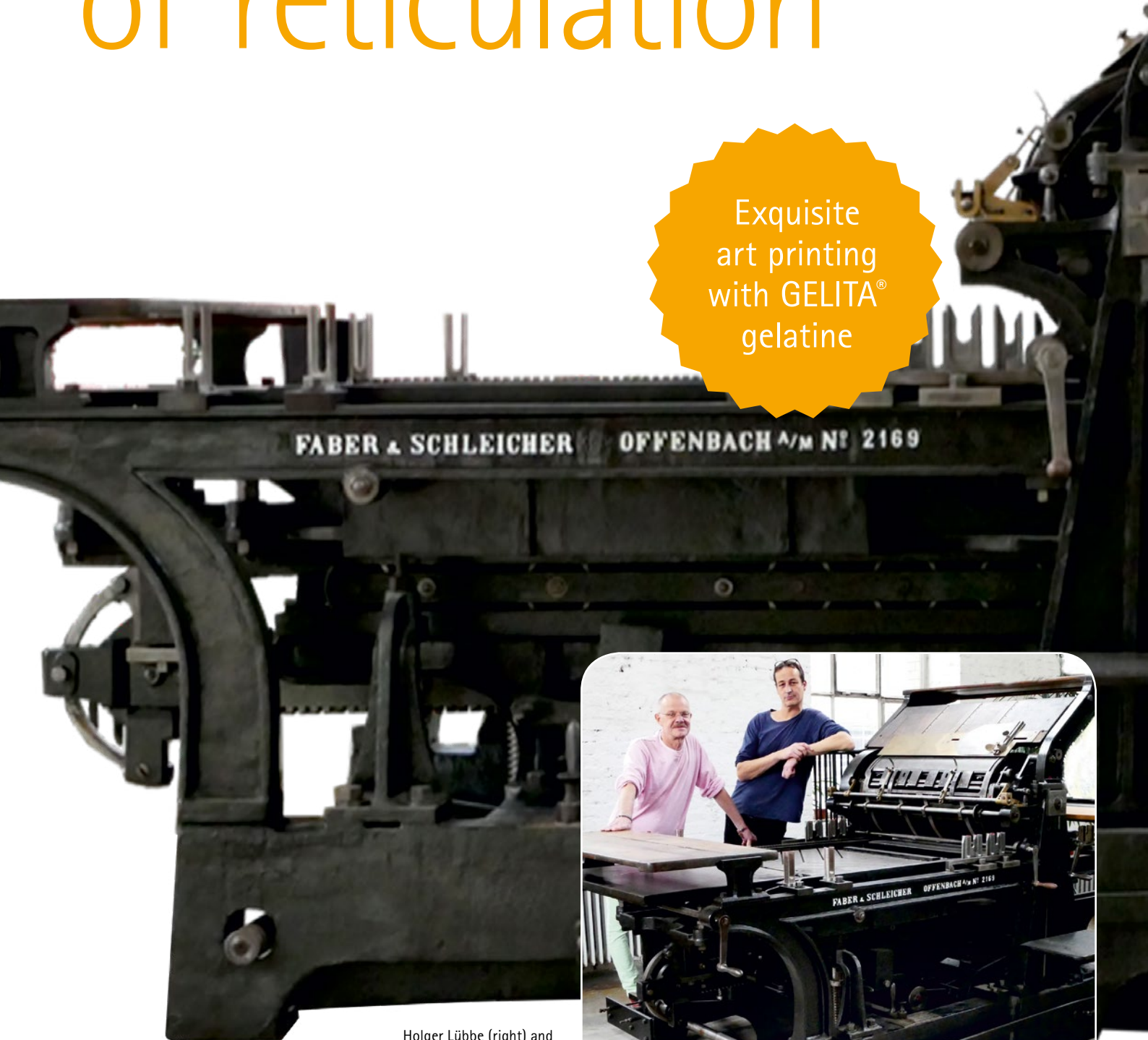
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Clean production: FFP makes it possible to pour fruit gums into reusable silicone molds instead of starch molds. The products can therefore be produced without contamination.

The rescuers of reticulation

Exquisite
art printing
with GELITA®
gelatine



Holger Lübke (right) and
Wolfgang Blauert want
to give collotype printing
a new future.



Holger Lübke and Wolfgang Blauert have a dream: they want to revive collotype printing. To this day, no printing process can match the accuracy of detail and durability of the technology invented 150 years ago.

“Collotype printing was developed to replicate photos,” says Lübke, and continues: “This queen of reproduction technology offers the highest level of sharpness and enormous contrast. In addition, collotype is the most durable process when it comes to light and color fastness.” In its heyday around 1900, when primarily postcards, certificates and art reproductions were produced with collotype printing, there were around 2,000 workshops worldwide. Today there are still two traditional companies in Kyoto and Beijing, a museum workshop in Leipzig – and Offizin Darmstadt, the workshop that Lübke and Blauert founded in 2015. Their pride and joy at Offizin in Darmstadt: an old collotype printing machine from 1880, which was loaned to the enthusiasts. “We financed the move of the five-ton “iron lady” by crowd funding,” says Lübke.



Perfect collotype prints from the Hochzeitsturm in Darmstadt

Light printing works with oil-based printing ink on uncoated paper. A warm mixture of gelatine and potassium dichromate is poured onto a glass plate as a printing template. After drying, a half-tone nega-



An important component of collotype printing: GELITA® LICHTDRUCK gelatines

tive is applied and exposed. The light tanning process changes the structure of the gelatine where light is exposed. Afterwards, the light-sensitive mixture is washed out at the other places and so-called reticulation forms, resulting in a relief-like, fine surface structure.

Their resolution is five to ten times higher than that of the most modern printing machine. Before printing, a water-glycerine mixture is applied, which causes the gelatine to swell. The harder parts of the gelatine absorb less moisture than the softer parts. This results in differently thick layers of ink, which are transferred to paper at high pressure. “It used to be a problem to get hold of suitable gelatine, let alone consistent quality. There wasn’t always electricity either, so the plates were placed in the sun for the exposure,” says Lübke. Today, just one phone call to GELITA suffices and the company supplies the correct LICHTDRUCK gelatine with the desired properties. But the cooperation goes one step further. “With GELITA, we want to find an alternative to hardening the gelatine with potassium dichromate and try out new techniques.”

Lichtdruck 2.0

“How would you go about collotype printing today?” is the question that drives Lübke. With the “Lichtdruck 2.0” project, Offizin Darmstadt is trying to set new standards for the collotype printing technique and thus create the basis for the future of the process. Many old cultural treasures have already been digitized. This data can be used to produce negatives for collotype printing and thus faithfully reproduce the cultural treasures. “In the long term, we want to establish new workshops, train others, and revive the process for facsimile production, long-term archiving, and the production of art prints.” In order to preserve collotype printing as a cultural heritage, Offizin Darmstadt, together with other collotype printing enthusiasts, plans to submit an application to UNESCO for recognition as an “Intangible Cultural Heritage in Need of Urgent Safeguarding”. Their hope is that at some point collotype printing will be so widespread that it can once again be removed from the UNESCO list.

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Music to the ears

The GELITA Symposium took place in October in the heart of Nashville, Tennessee, USA. The two-day event with high-level speakers provided inspiration for new opportunities in the global, dynamic health and nutrition market – and attracted the interest of nearly 80 participants from 12 countries.

Nashville, known for its unique music scene, provided the perfect setting for this year's theme: "The Sounds of Health and Nutrition. Listen to what matters". Franz-Josef Konert, CEO of GELITA, presented the company's strategy for growth and set the tone and rapid pace of the event. After all, keeping pace with the rapidly changing global markets can be challenging.

GAINING TRUST

For the first time, a clear divide is developing in the health industry market, explained Susan Isenberg, Global Chair of Edelman's Health Sector: Consumers all over the world have increasingly lost confidence in the pharmaceutical sector, while confidence in OTC products has remained largely unchanged. The participants learned how to communicate their scientific information more effectively and how to present their contents in different formats. Isenberg also highlighted how they can use testimonials to regain trust and credibility.

Tom Aarts, Managing Director Nutrition Business Advisors, reported on growth trends in sports nutrition and a renewed interest in proteins. What was once only of interest to sports enthusiasts is now also a topic for mainstream consumers. During a panel discussion with Hank Schultz, Deputy Director at NutraIngredients-USA, and Michael Teppner, Global VP of Marketing and Communication, GELITA, gripping questions were discussed such as: Who leads the market trends, consumers or the industry? Do trends such as "GMO-free" and "Clean Label" alter consumer's purchasing behavior, or is it just hype?

TOP RANK FOR GELATINE

Kirti Vatsa, Lead Procurement Analyst, Beroe Inc., pointed out that gelatine is the most widely used ingredient in the production of hard and soft capsules. Even the emergence of non-animal alternatives would not jeopardize gelatine's leading position. Gelatine owes its success to its simple and efficient use in capsule-

production and its high acceptance by consumers.

But there was also the opportunity for some fun at the symposium. The event offered the unique opportunity to record the song "This Thing Called Collagen" written specially for the symposium together with musicians in Nashville. At the end, 96% of the guests said they would recommend their colleagues to take part in GELITA's Symposium. They were completely satisfied with the wealth of information and new ideas. They also appreciated the opportunities to refresh or establish new contacts within the industry.



Watch highlights from the video at: www.gelita.com/en/gelita-events

GELITA sponsors animal welfare

Since August 2018, GELITA has been a new support member of the Tierwohl (animal welfare) initiative. Founded in 2015 and based in Bonn, Germany, the initiative financially supports farmers in implementing measures for the welfare of their livestock that go beyond legal standards. "As processors of animal by-products for the production of collagen proteins such as gelatine, collagen peptides and collagen, the topic of animal welfare plays an important role for us. Although the public debate is largely concerned with the production of meat, by-products must not be ignored. Animal-friendly and fair animal husbandry is an essential building block for the general acceptance of animal products. We are convinced that the Tierwohl initiative is pursuing the right approach here by approaching the issue in a targeted manner along the value creation chain, and including the retail trade on a broad basis," says Reinhard Zehetner, Global VP Quality and Regulatory Affairs at GELITA.



A magnificent final spurt



The conditions couldn't have been better: In late summer weather 1,413 participants lined up at the start of the sixth GELITA Trail Marathon in Heidelberg, Germany in mid-September. The best runners fought a gripping final. Moritz auf der Heide, the winner of the 42 kilometer route, was in second place when he started the climb to the Königsstuhl. A full two minutes separated the trail runner from Steffen Justus. On the hill, already, auf der Heide managed to reduce the gap to one and a half minutes – and then went on to overtake Justus on the downhill slope. In the women's event, Dioni Gorla won the day, putting an end to Aoife Quigly's winning series, who won the last three Trail Marathons.

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Strong products, strong athletes

Sport is healthy – but it also puts strain on tendons, ligaments and bones during intensive training and, in the worst case, leads to injuries. Proper sports nutrition can help maintain or even restore tissue structure health, as studies with GELITA's TENDOFORTE® and FORTIBONE® collagen peptides have shown.

Those who followed the Iron-man in Hawaii in October 2018 already know: the favorite Jan Frodeno had to cancel his participation because of a stress fracture on his hip. Such fatigue fractures are caused by excessive stress over an extended period of time. "The athletes train so hard that all the proteins go straight into the muscles. There is



practically nothing left for the bones," explains Dr Stephan Hausmanns, VP Health and Nutrition at GELITA. The result: cracks and fissures appear until the bone becomes so unstable that it breaks. Those most affected are cross-country skiers, gymnasts or footballers, i.e. athletes with an extremely high stress level in the lower limbs. These athletes can particularly benefit from FORTIBONE®.

Small dose, big effect

"Studies in osteoporosis have shown that the GELITA collagen peptide FORTIBONE® not only promotes bone stability and

density and halts degradation, but even promotes bone formation. 180 women with reduced bone mass participated in the randomized, placebo-controlled double-blind study. The bone mineral density of the participants – who took five grams of FORTIBONE® a day over a period of twelve months – improved significantly. "FORTIBONE® particularly influences the so-called osteoblasts and osteoclasts, which are responsible for the metabolic processes in the bones. Athletes can also benefit from the enormous effect," says Hausmanns. In addition, a recent placebo-controlled observational study of 28 patients with various bone fractures showed that they healed faster and better when FORTIBONE® was administered. This study also supports the positive benefits of FORTIBONE® in athletes with fatigue fractures.

But strong and elastic tendons and ligaments are also important for anyone who enjoys sports. This is where TENDOFORTE® comes into play. The collagen peptides stimulate the body's own production of collagen. In this way they strengthen tendons and ligaments and promote joint stability. A study from Australia proves the effect of the collagen peptide. 20 athletes who suffered from chronic inflammation of the Achilles tendon and could therefore no longer train took part in a placebo-controlled crossover study by the Australian Institute of Sport (AIS). None of the subjects had responded to the traditional therapies. Ten of the athletes received five



grams of TENDOFORTE® per day over a period of six months and completed a specific training program; the other ten athletes received a placebo. The success was not long in coming: Within three months, six of the ten participants in the TENDOFORTE® group were able to resume their running training, and after six months the figure was as high as 80 percent.

But TENDOFORTE® can do even more, as a randomized, placebo-controlled double-blind study at the Institute of Sports and Sports Science at the University of Freiburg, Germany, shows. Here, too, athletes took five grams of TENDOFORTE® daily for six months. The 50 men and women who suffered from chronic ankle instability showed a marked improvement. The joint stability of all participants increased by 76 percent, foot sprains decreased by 62 percent, and other injuries by 35 percent.



New perspectives for manufacturers

What both collagen peptides have in common: As the studies illustrate, just a small dose is enough to achieve significant results. They are also non-allergenic and, importantly, easy to process in a variety of delivery forms. TENDOFORTE® and FORTIBONE® therefore offer enormous potential for manufacturers of sports food. In the future, they will be able to offer professional athletes and ambitious hobby athletes products with which they can specifically improve the health of their bones, ligaments, tendons and ankle joints.

www.gelita.com/en/products/collagen-peptides/tendoforte

www.gelita.com/en/products/collagen-peptides/fortibone

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Award for FORTIBONE®

FORTIBONE®, GELITA's bioactive collagen peptide won the "Fi South America Innovation Award 2018" in the category "Most Innovative Functional Ingredient". The award ceremony took place at the "Food Ingredients South America" fair in São Paulo/Brazil in August 2018. "We are very proud of this award, which honors our innovative strength and our efforts to scientifically prove the effectiveness of our products", says Claudia Yamana, Vice President of Sales and Marketing for Americas at GELITA. "FORTIBONE® is an innovative product tailored to meet the needs of customers in terms of healthy aging." The Fi Innovation Award is the highest award for Ingredients, Products and Dietary Supplements in South America. In June 2018, FORTIBONE® was already named "Ingredient of the Year" in the "Healthy Aging" category at the NutraIngredients Awards 2018. The latest success came at the end of November with the "Best Functional Ingredient of the Year" prize. The award ceremony took place at the "Food Matters Life" fair in London. The most recent success came at the end of November with the prize for "Best Functional Ingredient of the Year". The award ceremony took place at the "Food Matters Life" trade fair in London.



FORTIBONE®
Collagen Matrix Stimulation

MADE BRILLIANTLY with GELITA® leaf gelatine

1. soak, 2. squeeze out, 3. dissolve – and the leaf gelatine is ready for use and the cake coated with a mirror finish. Simply boil 150 grams of water with 300 grams of sugar and 300 grams of glucose syrup in a pot. Dissolve 20 grams (12 leaves) of leaf gelatine in cold water. Squeeze out the gelatine and pour into the pot while stirring together with 200 grams of condensed milk. Finally, break 300 grams of white chocolate into pieces, add and dissolve. Cover and place in the fridge overnight. Before use, heat the glaze to 40° Celsius and stir in food coloring as desired. Allow to cool to 30 - 35° Celsius for glazing.

More information on leaf gelatine:
www.leafgelatine.com/en or
blog #AmazingGelatine



TRADE FAIRS

DATES:

Visit GELITA and experience innovative products for the megatrends of tomorrow. In 2019, we will exhibit, among others, at the following fairs:

Natural Product Expo West, Anaheim	5 - 9 March 2019
FIC, Shanghai	18 - 20 March 2019
Wellfood Ingredients, Sao Paulo	3 - 4 April 2019
SSE, Secaucus, New Jersey	9 - 10 April 2019
Vitafoods, Geneva	7 - 9 May 2019
FCE PHARMA, Sao Paulo	21 - 23 May 2019
IFT, New Orleans	02 - 05 June 2019
HNC, Shanghai	19 - 20 June 2019

Masthead

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Global perspective

How the world enjoys cake

Sweet or fresh & fruity, flat or a multi-level work of art, garnished with marzipan or cream: Countless variations of cake adorn coffee tables, sweeten coffee breaks, or crown banquets. The ancient Egyptians already appreciated honey-sweetened cake and even ascribed magical powers to it. In 200 B.C., cream pastries, sesame cake or tarts filled with grapes were eaten in Greece. 600 years later, the first confectioners' guild was founded in Rome. When sugar from sugar beets, cocoa and chocolate became available around 1800 and baking powder was invented a little later, there were hardly any limits to the imagination.

Today, gelatine makes for perfect glazes and wonderful fluffy fillings – with perfect texture and firmness, from delicate creamy to firm and ready to slice as desired. And then the work of art is not just a feast for the palate, but also for the eye. Gelatine also provides a wonderfully creamy mouthfeel – even with reduced-fat fillings. It also improves the shelf life and freeze-thaw stability of the products. But that's by no means all: Gelatine even makes waffles and biscuits crispier.



Asia

Flour, eggs, honey and sugar: the Japanese don't need any other ingredients for Kasutera. The Portuguese brought the cake with its brown crust to Nagasaki in the 16th century. With strawberries, whipped cream and icing, it transforms into the perfect strawberry cake. Just as popular: cheesecake. The Japanese also know it in a raw form or as a soufflé. In the raw version, cream cheese, whipped cream and gelatine are mixed and placed on a sponge cake base. Soufflé cheese cake is a Japanese original – and a challenge for the baker. The fluffy dream is prepared with egg white and baked in a hot water bath.



America

In the Brazilian state of Pernambuco, Bolo de rolo enchants sweet-toothed locals with thin sponge cake dough, which is traditionally spread with guava jam and rolled up. Typically US-American is apple pie, in which chopped apples are covered with either a shortcrust pastry top or a shortcrust lattice cover. Also popular: brownies. The Americans have even dedicated three holidays to them. They celebrate National Brownie Day on 8 December, National Blonde Brownie Day on 22 January, and National Have a Brownie Day on 10 February.



Europe

The Italians are fans of their Sicilian cheese cake, Cassata, or Milanese coffee cake. The famous Panettone, a delicious yeast dough cake that was originally baked at Christmas, has long been available all year round. A sweet-tasting must at every family celebration in France are Clafoutis. The classic with cherries is half cake, half pancake. Also very French: a flan pâtissier, a pudding cake. Topping the list of typical German cakes: Black Forest cake with dark chocolate dough, cherries and cream. Baker and master confectioner Siegfried Brenneis provided tips on how cream works particularly well with gelatine in the last issue of *update*.



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Improving Quality of Life