

GELITA

UPTO DATE

The Newsletter for GELITA Customers

#40

Product innovations

NOVOTEC[®]
effect

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Dear reader,

New plants and new products show: GELITA is on a growth course. This year alone, we are investing 56 million euros in our plants. The lion's share is being channeled into expanding our capacities. We are now ideally positioned for the rapidly growing collagen peptide market, and are able to supply our usual premium GELITA quality at any time.

Speaking of quality: Were you aware that work safety plays an important role in product quality? Why this is the case, and how our customers benefit from our

high demands on work safety is explained by German Heil, Global VP Manufacturing in an interview.

Hard to believe: BODYBALANCE® and regular strength training get your body back in shape – without (!) even changing eating habits. Nonetheless, we don't recommend that our customers take this aspect into account in their communication strategy, and explain why in the article on focus groups.

Our NOVOTEC® family has grown to three products within a very short time. NOVOTEC® CL800, NOVOTEC® CR800, and NOVOTEC® CB800 cool, lubricate, separate, clean and protect environmentally friendlier than previous agents. And best of all: The innovative protein products are even easy on a company's budgets.

Grow with GELITA! With this in mind, we wish you a successful summer.

Michael Teppner,

Global VP Marketing & Communication
GELITA AG



uptodate spoke to German Heil,
Global VP Manufacturing

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Interview

Interview with German Heil, Global VP Manufacturing

"Our great advantage is that we can serve customers all over the world"

With 20 production sites on all continents, GELITA reaches practically every market. German Heil, Global VP Manufacturing, explains in an interview how customers benefit from the investments made by the global player, how they benefit from GELITA's high standards in terms of occupational safety, and why communication in production now works even better.

Mr Heil, you have been with GELITA since August 2016. What was the first thing you noticed about production?

I was impressed by the broad production spectrum. GELITA has the

know-how to manufacture everything from foodstuffs to pharmaceuticals and medical products, and is therefore able to serve a wide spectrum of customers and standards. Just as extraordinary is the

strong vertical integration, from the raw material to the finished product. Last but not least, the company culture and the employees' vast experience were important reasons for my move to GELITA.

"Our entire experience is accumulated in our products"

What are your priorities in the area of production?

Work safety is our first priority. This doesn't just mean that our employees go home as healthy as when they arrived for work, but also that the processes are safe. Stably running and certified processes are the prerequisite for the high quality that GELITA stands for. Equally important for us is the issue of operational excellence. By this we mean our goal of providing optimal service to our customers and the greatest possible effectiveness and efficiency of our own processes.

else on the market. Many studies confirm the performance of our collagen peptides, for example. It is precisely because we cover the entire production chain and invest continually that we are able to offer products of such high quality. Our entire experience is accumulated in our products.

"Large customers see us as a strong partner because we meet all standards worldwide"

recently introduced so-called drumbeat meetings for the regions West, East and Europe. In these fortnightly, minutely-structured web conferences, we analyze the daily operations and focus on the respective top ten priorities. Talking to each other 26 times a year is somewhat different to being in contact with each other just once a year. The colleagues get to know each other better and experience a lot more about the company and the markets. They know, for example, whether a raw material shortage in Mexico might affect the US. Or how commodity prices are changing around the world. Previously untapped knowledge is activated in this way.

"Individualization offers major benefits to the customer"

What role does digitization play for GELITA?

We are looking into this topic intensively. To know exactly what significance digitalization can mean for us, we have examined what technology leaders are doing, exchanged experience with other companies, and visited independent institutions. In the course of this, we have come to the conclusion that digitization can help us increase our competitiveness. This comes about by managing or reducing complexity, and by using selected digital technologies. As a next step, we will elaborate a plan taking into consideration the megatrends that are important for us. We will define the business-cases, enhanced by digital information, that will generate added value for GELITA. Our strategy should be in place by the end of November.

What does the Internet of Things mean for the customer?

An increasing number of companies sees the Internet of Things as an opportunity to generate additional sales with new products or services. It allows greater variety and small volume orders at reasonable prices. The industry also speaks of mass production in a batch size of one. Taken to the extreme, this means: A single product can be produced



What subject is of most concern to you at present?

One focus is on our global manufacturing footprint. When is the right time to expand capacity? How do we adapt our plant and technology landscape to market conditions? The construction of new plants and the introduction of new technology require a long lead-time and high financial commitment. This year alone, GELITA is investing over 56 million euros in new facilities worldwide.

How do our customers benefit from these investments?

GELITA manufactures products in a variety and quality that aren't available anywhere

What influence do your customers have on production?

Many customers demand standards like halal, kosher, FSSC 22000, or certification according to the DIN ISO standards 9001, 13485, 14001 or 50001. In addition, customers operating on a global scale expect us to also be present worldwide and to grow with them.

GELITA produces in 20 locations throughout the world. How does the communication with each other take place?

All the plant manager and managers meet twice a year at large meetings. We have

just as efficiently as a serial product. Such individualization offers customers significant added value.

"We want to focus more frequently on acting instead of reacting"

What challenge do you see in the future?

Quality standards are continuing to rise and volatility in the commodity markets will increase. We want to focus more frequently on acting instead of reacting, and anticipate developments earlier than before with good models, which digitization could help us with. Another issue for GELITA is the demographic change over the next decade. Our employees

worldwide have been loyal to our company for a very long time. Although we plan successions very early on, it is still a challenge to pass on the know-how of long-term employees to the next generation.

What particularly appeals to you in your role as head of production?

Production is a very dynamic work area that offers a lot of leeway and makes success directly visible. I also enjoy dealing with people.

How do you unwind after your workday?

I run a lot, and play tennis badly, but passionately. I like to spend time reading philosophy and am a fan of the Roman philosopher Seneca. I also find cooking very relaxing.



In addition, my family keeps me grounded, I'm married and have two children aged 16 and 18.

German Heil

has been Global VP Manufacturing at GELITA since August 2016. Heil, who studied mechanical engineering specializing in process engineering and business administration, previously worked at Unilever for 19 years, as well as CSM and Corbion.



Separate and
cool with
NOVOTEC® CR800



Clean and
protect with
NOVOTEC® CB800



Cool and
lubricate with
NOVOTEC® CL800

NOVOTEC® CL800



NOVOTEC® CR800

NOVOTEC® proteins revolutionize industrial applications

Cleaning, lubricating, separating – a whole host of industrial and household processes can be made more environmentally friendly and efficient with proteins. Ever more technical applications benefit from the "NOVOTEC® effect".

■ Rhein-Neckar-Verkehr GmbH and DB Regio AG Schleswig-Holstein have already switched: Instead of alkaline or acidic detergents, they now use protein-based agents to clean their rail vehicles. There is a special effect behind it. "It occurs when surfaces treated with special proteins come into contact with water, when they are cleaned or cooled, for example", explains Dr Matthias Reihmann, Head of Global Product Management Photo / Technical at GELITA. "Among other things, the principle is relevant for cleaning processes, metal processing, or aluminum die casting", says Reihmann.

The NOVOTEC® effect

Scientists at GELITA have found that functional proteins attach themselves firmly to surfaces such as metal or glass, and combine to form stable, resistant films. As soon as water hits the film surface, the proteins attract the water molecules and a closed hydrophilic protective layer results. At GELITA, this phenomenon is known as the "NOVOTEC® effect". It can not only be used to protect surfaces, but also improve separating, lubricating and cooling production steps. So far, the experts at GELITA have developed protein additives for three areas of application: NOVOTEC® CB800 for detergents with a self-cleaning effect, NOVOTEC® CL800 for non-oil cooling lubricants, and NOVOTEC® CR800 for mold release agents without waxes.

Economical and environmentally friendly cleaning

The microscopically thin protective film, which is formed by the interaction of the proteins, makes surfaces largely dirt-repellent. Dirt particles can't stick and are simply washed away by contact with water. This self-cleaning effect considerably extends cleaning intervals. DB Regio AG Schleswig-Holstein, for example, was able to prolong its cleaning cycles from two days to two weeks. The impact on the environment and the use of resources were significantly reduced.

Cooling and lubricating more effectively

Functional proteins can replace mineral oil or synthetic lubricants in cooling lubricants in metalworking. By absorbing water, they cool much more efficiently than oil-based products. In addition, the protein film protects the surface during processing without leaving behind the usual residues. This results in clean workpieces – with less surface wear and up to 40% less consumption of cooling lubricants. The environment and em-

ployees also benefit: NOVOTEC® proteins are free of allergens and do not cause skin irritation. Any fumes occurring are also harmless.

Separating quickly and cleanly

The proteins can replace mineral oils or waxes in mold release agents in aluminum die-castings. Although the latter serve for separation, their water-repellent properties reduce cooling, which increases the cycle time. "Collagen proteins are hydrophilic and thus accelerate cooling after the casting process. They then ensure the separation of the workpiece and the mold", Reihmann explains. This leads to shorter cycle times as well as savings in water, waste water and additives.

Ecologically and economically advantageous

Customers who already use the NOVOTEC® products appreciate their ecological as well as their economic advantages, according to Reihmann. "Compared to conventional solutions, our products offer significant process and cost advantages. And since they are extracted from natural collagen, industrial processes can be made more environmentally and health-friendly with their help", he concludes. Companies can benefit from the NOVOTEC® effect simply by using one of the NOVOTEC® additives.

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High quality
restoration with
gelatin!

Clear advantage

Schilbach. The name resonates with musicians and violin makers all over the world. Alexis Schilbach restores instruments, which sometimes command prices in the millions. His brother Benjamin develops and distributes products for violin making. Among them is a glue that is better than anything that was previously on the market thanks to the special technical gelatin made by GELITA.

Before Alexis Schilbach starts restoring a violin in his studio on Lake Geneva, he develops a concept. "If the top of the violin is cracked, for example, I consider how I can close it by using different clamps or brackets, and how I want to glue it. It's about removing the tension in the wood that may have caused the damage", the master of violin-making explains. Only then does the

The crack must then remain in the clamped position for 24 hours before the work is continued. Further repair steps include lacquering, filling and re-touching the cracked area. The biggest challenge is making sure the crack is no longer visible. What may sound simple is exceedingly time-consuming. Restoring a severely damaged instrument can take one to two years.



Schilbach restores violins and distributes products for violin makers.



manual work begin. Schilbach first cleans the damaged area with distilled water, then he applies as many clamps for however long is necessary until his concept is successful. "In the next step of the procedure, I allow hydrogen peroxide and ammonia to penetrate into the crack. The radical oxygen produced by the mixture bleaches discolorations, removes dirt, and opens the microstructures of the wood. I have to neutralize this reaction at the right moment with distilled water. This process increases the adhesive power", says Schilbach, adding: "Good gluing needs wood-to-wood contact". It takes place under a heat lamp so the glue remains liquid for longer, which leaves more time for the correct positioning of the clamps.

A glue that does what it says.

Because the quality of the glue he had used previously was no longer able to meet his demands, Benjamin Schilbach turned to Dr Christoph Simon of GELITA. Simon promptly sent various samples of special technical gelatin to Switzerland for testing. "As a result, we quickly found the gelatin the violin maker needs", says the design and product manager.

The glue must have excellent adhesive properties, but must not become brittle. Another import-

ant aspect of the restoration is clarity, since the color of the wood mustn't be altered. Benjamin Schilbach offers two different glues in his online shop. "The 'LUT Universal' is particularly suitable for the construction of new violins.

The even clearer glue "Restauration Extra" is perfect for restoration purposes." Another advantage for customers: Schilbach uses airtight resealable containers with a measuring spoon enclosed, which makes handling much easier. "Until now, glue was only available in a bag. That was impractical and bad for storage life."

Customers really appreciate the new quality. Violin makers from Japan, Canada, Europe and the US are ordering the products from the online shop.



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Exploiting market p

Companies typically deal with the needs of their direct customers. GELITA is going one decisive step further: The company is investigating how its customers' target groups assess new innovative concepts – thus providing the marketing experts at its direct customers with important information for their strategy.

The focus of the study was on "fitness and figure". The positive effect of the highly specialized collagen peptide BODYBALANCE® on muscle building and fat reduction had already been proven in several randomized, placebo-controlled double-blind studies. "In addition to this, we want to understand end users' needs and motivations, and to examine how they react to BODYBALANCE®. To this end, extensive focus groups interviews were conducted. Among other things, we asked what they know about proteins and how great their interest is in BODYBALANCE®", says Dr Stephan Hausmanns, VP Health and Nutrition at GELITA.

The 24 moderated discussions were conducted with a total of over 240 participants in Germany, the UK and the US. "We were not only concerned with a good mix within the groups, but also in covering representative countries as far as possible", Hausmanns explains. Germany represents Europe, Florida was chosen because many older sports enthusiasts live there, and the UK, because these results can be transferred to Australia and the Scandinavian countries. The study focused on three consumer types: Physically active 25 to 35-year-olds who already take protein products, approx. 40 to 55-year-olds who train occasionally, and approx. 60 to 80-year-olds suffering from age-related muscular atrophy. As many women as men were represented in each of several groups with eight to ten participants.

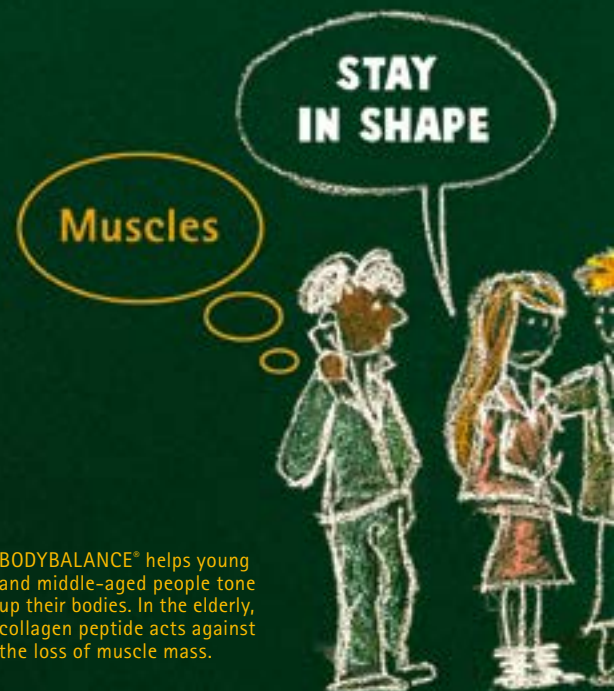
"The focus groups were led by psychologically-trained teams of experts. They created an atmosphere where everyone felt free to share their opinions. This enabled us to prevent only the dominant participants from speaking", explains Hausmanns.

Everyone wants to do something for their body

The evaluations show that there are no major gender-specific differences in motivation: Everyone wants to do something for their body. If you are young, you mainly want to have a fit body. This determined and ambitious fitness generation is convinced that society expects them to work on their appearance. For men and women aged between 40 and 55 years, it's all about staying attractive. Men struggle against a growing belly, women against obesity and the loss of a firm body. Although the slogan "50 is the new 40" has a positive association, it also exerts pressure. For this age group, it is difficult to find time for sport. Children, career and partner demand a lot of attention. In the group of 60 to 80-year-olds, by contrast, resignation tends to be the prevailing mood. They know about muscular atrophy, have tried numerous counter-measures, but nothing has really helped. They want to enjoy life, play with their grandchildren in a carefree way, and be able to cope with everyday life as long as possible.

Focus groups briefly explained:

In a focus group, six to ten participants discuss one topic under the guidance of a moderator. The goal is to gain insights into the participants' attitudes. The interaction between the group participants often reveals more detailed information than in individual interviews.



potential effectively

"We found out that hardly anyone knows anything about proteins", Hausmanns explains, adding: "It was a real eye-opening experience when we showed the participants an illustration of the tendons, muscles and ligaments of the human body and told them that collagen is an elementary building block. Their curiosity towards BODYBALANCE® was aroused at this point." Another result was surprising for GELITA, too: The participants didn't believe that they could get their body into shape by muscle training three times

a week and taking 15 grams of the collagen protein every day without (!) changing their eating habits. Even after they were repeatedly assured that they could eat as usual, they didn't change their opinion. "For this reason, we

encourage our customers not to emphasize this aspect in their communication, because it could be detrimental to the credibility of the product. It is sufficient to focus on supplementing a diet with BODYBALANCE® in conjunction with strength training", says Hausmanns.

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Would you like to know more about the results of the focus group and how you can get the most out of BODYBALANCE®'s market potential? GELITA is happy to assist you with your marketing concept.



A by-product that packs a punch

■ Gelatin production is an extremely efficient process – but who would have thought that even the residues from the treatment plant, where the waste water from production is purified, are still fertile? So fertile that they yield a highly effective fertilizer: Lime sludge is a liquid organic-mineral nitrogen phosphate fertilizer, which can either be applied pure or mixed with liquid manure.



The lime raises the pH of the soils, improves the metabolism, and makes the nutritious nitrogen available to the plant. In 2001, GELITA's lime sludge was certified with gold by the Gesellschaft für Qualitätssicherung Landbauliche Abfallverwertung mbH (association for quality assurance and waste utilization in agriculture). To ensure manufacturers are provided with an optimal product, GELITA approached them with a request for feedback and experience reports. This resulted in helpful recommendations for the use of this extremely productive residue.

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GELITA plays it safe!

In keeping with the motto "GO SAFE - work safety is our priority no. 1", GELITA launched a campaign this spring. Five eye-catching posters were developed to draw attention to the major accident hazards. They are on display in company premises all over the world.



56 million euros for the future



— This is the figure GELITA is investing this year alone in new state-of-the-art facilities. For example, GELITA is building a new plant near Sioux City, USA, which includes a new spray tower for the rapidly growing area of collagen peptides. The \$22 million project will create 21 new jobs. In the past two years, the company has already built one new spray tower in the Eberbach HQ and another in Mococa in Brazil. Three spray towers, three continents: GELITA is present wherever the raw materials and the customers are.

In the Netherlands, the company has expanded its capacity for edible gelatin, and in Germany its hydrocolloid capacity for collagen peptides. The Eberbach plant invested in four washing drums for cattle hides, and GELITA responded to the growing demand for leaf gelatin by expanding the leaf drying capacity. A new robot and a fully automatic acid dilution plant will help to further optimize production processes from an ecological and economic viewpoint in the future.



FORTIBONE® impresses experts

At the end of March, GELITA participated in the 2017 osteology congress in Erlangen, Germany. About 600 doctors, professors, and chairpersons of osteology associations from Germany, Austria and Switzerland participated in the prestigious event. GELITA was represented with an info stand on FORTIBONE®, the collagen peptide that contributes decisively to promoting bone stability and flexibility. In his presentation, Dr Steffen Oesser, Head of the Kiel Collagen Research Institute, explained the results of a double-blind study* on the effects of the bioactive collagen peptides in FORTIBONE®. "The participants showed great interest", says Martin Walter, product manager for Health and Nutrition, about the successful participation at the congress.

**uptodate reported on this in issue 39.*



TRADE FAIR DATES:

Visit GELITA and experience innovative products for the megatrends of tomorrow. This year, we will exhibit at the following fairs:

Foodpro, Sydney	16 to 19 July 2017
FISA, Sao Paulo	22 to 24 August 2017
Vitafoods Asia, Singapore	5 to 6 September 2017
SupplySide West, Las Vegas	28 to 29 September 2017
CPHI, Frankfurt	24 to 26 October 2017
FOOD MATTERS, London	21 to 23 November 2017
FIE, Frankfurt	28 to 30 November 2017

Masthead

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Global perspective

How the world enjoys coffee

For many people around the world, coffee is indispensable: whether as a pick-me-up in the morning, as a digestif after a meal, or just as a treat. The origin of coffee is presumed to be in the Kaffa region in Ethiopia. It then spread in the 14th century in the Arab region by slave traders. The port of Mokka – today al-Mukha, in Yemen – was the center of the coffee trade for a long time. To prevent their trading partners in other countries from using the beans for cultivation, they were rendered sterile in the town by pouring hot water over them: The Mokka bean was born. The fact that caffeine stimulates concentration has been proved in numerous studies. In this regard, the most positive effects are achieved by drinking many small sips of coffee throughout the day. Meanwhile, scientists are even investigating to what extent coffee can keep inflammation processes at bay. Ginseng Coffee is considered to be particularly healthy, especially when it is enriched with VERISOL® by GELITA: this beauty-enhancing combination is above all popular in Italy and some Asian countries. A coffee with cream and topping is, of course, also delicious – the perfect consistency is achieved with the help of GELITA® JELLY DIPPING.



Ethiopia, Greece, Turkey

Coffee preparation in Ethiopia is probably still the same as in the early days: The beans are roasted, ground and crushed in an iron pan. This rather coarse powder is brought to the boil with water and sugar in a carafe until the mistress of ceremonies is happy with the color and consistency. The impression of being present at a sacred rite is intensified by the simultaneous burning of incense. Turkish or Greek coffee is also prepared by boiling the ground coffee with sugar and water, and then served without filtering in small cups.



Scandinavia, Italy, France

The Finns are the record holders in coffee consumption: Every Finn drank 4.1 cups a day per year on average in 2013. The Germans drink 2.6 cups; drip brewed coffee is still the most common. In Italy, the home of Ristretto, Caffè Latte – and ginseng coffee – they surprisingly only enjoy 1.9 cups per day per person. "French press" describes a way to prepare coffee in which hot water is poured onto the ground beans in a cafetière and allowed to brew briefly. They are then pressed down with a plunger to the bottom of the beaker. The method is, however, no more widespread in France than elsewhere.



United States, Vietnam, Brazil

The Americans like their coffee sweet: for example, with caramel on the cream topping. In Vietnam as well – the second biggest coffee exporter in the world – coffee literally sweetens the day: It is drunk with ice cream and sweet condensed milk, and often enough cold. The right aroma is provided by the nutty-chocolaty type of coffee Catimor. Cafezinho in Brazil is straightforward: black ground coffee from a thermos flask, sweetened from a second – amazingly unspectacular for the world's largest coffee exporter.



Read more about the NOVOTEC® effect at www.gelita.com and download brochures free of charge!

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You can also read up to date on the Internet. All the articles in GELITA's customer magazine are published in English, German, Portuguese and Spanish.

See for yourself: You'll find the current issue and the previous issue at www.gelita-uptodate.com.

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GELITA
Improving Quality of Life