



GELITA

UPTO DATE

The Newsletter for GELITA Customers

#41

GELITA® gelatine

Often copied,
never matched!

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Dear reader,

Innovation management is a cornerstone of successful companies. GELITA goes one step further and builds on a whole culture of innovation. "The culture we live and breathe is crucial for innovations to emerge at all", confirms Wiebke Steinel, Manager Corporate Development, in an interview.

The motto "Off the beaten track – inspiration for better food, nutrition and health" with which we hosted the GELITA Symposium in Heidelberg this fall, and attracted around 80 participants from all over the world, is also in keeping with this approach. One of the topics was a revolutionary technology that GELITA developed together with two other companies. The so-called "fast forward

process" makes it possible to produce fruit gummies without starch molds. The new process not only improves hygiene, it also reduces production time many times over.

Manufacturers of soft capsules can also optimize their production with our innovations and thus save time and money. With GELITA® EC, we launched an enteric gelatine product on the market that can be produced in one step. GELITA® EC is already the fourth product in our portfolio for the controlled release of active ingredients.

Maybe this edition of uptodate will also set free a lot of good ideas when you read it? In this spirit we wish you a successful new year.



Michael Teppner

Global VP Marketing & Communication
GELITA AG

GELITA® EC

The perfect
(dis)solution

uptodate spoke with Wiebke Steinel,
Corporate Development Manager

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Interview

"Our innovation management clearly sets us apart from our competitors"

What corporate strategy is GELITA pursuing? Which challenges have to be mastered? Which products will be in demand in the future? And what role do customers play in the development of GELITA? An interview with Wiebke Steinel, Manager Corporate Development, about megatrends, markets and courage.

Ms Steinel, you are responsible for corporate development at GELITA. What is your role?

I am mainly responsible for strategy and innovation. The former ranges from development and implementation to performance monitoring. My

responsibilities also include the preparation of the three-day strategy meeting, during which our Global Executive Management team meets twice a year to moderate, follow-up and incorporate the results into the workplace. The subject of innovation

is closely linked to the strategy. I am responsible for, and coordinate ideas and innovation management worldwide. Designing and further developing the culture of innovation for GELITA also falls within my remit.

"The customer is at the beginning of everything"

You not only speak of innovation, but also about a culture of innovation. What's that all about?

The culture we live and breathe is crucial for innovations to emerge at all. We encourage our employees to think and get involved. Our managers must be open and willing to support the implementation of good ideas.

I believe that we can set a completely new course in terms of GELITA's future orientation. Be it new technologies, markets, products or applications.

What is GELITA's current corporate strategy?

Our strategic goal is the sustainable and profitable growth of our global market share.

What role do customers play in this?

Excellent customer management is a critical success factor for our company. GELITA wants to understand its customers and their needs, and thereby create added value for them. Our aim is not to simply serve a client inquiry, but to find the best solution. Of course, many innovation projects are driven by development partnerships with customers or impulses from customers. The customer is at the beginning of everything.

"Excellent customer management is one of the company's cornerstones"



What subject are you mainly busy with at present?

The implementation of our current Strategy 2020. Next year will be particularly exciting, as we are using the scenario technique for the first time to develop Strategy 2025. In the coming months, we will hold workshops with selected employees and external experts.

What do you expect from this new process?

On the one hand, the scenario technique is very systematic and structured, which makes the results comprehensible, on the other hand, it is not too complex. As a result of the workshops, we will get new ideas for the future of GELITA and fresh impetus. It will be very exciting to see which trends colleagues pick up on, which influencing factors they consider relevant and how these will affect GELITA.

This is based on first-class innovation and customer management as well as targeted acquisitions. At present, much of the focus is on penetrating growth markets. Our collagen peptides are the growth drivers for beauty,

"GELITA is all about finding the best solution for the client"

health and nutrition. But we also see exciting developments in the pharmaceutical and technical field.

GELITA is a leading company in its sector. How does the company want to grow in the future?

It goes without saying that there are competitors who are trying to challenge our position. Every company has to be prepared for this. We know our rivals, know what makes them "tick", and can assess their strengths. In terms of corporate development, the competitors of tomorrow are relevant for us, i.e. those we don't even know today and who may turn our business model upside down. Similar to how Uber influences the world of taxi drivers or AirBnB the hotel industry.

Where do you see the greatest challenges for the near future?

The availability of animal raw materials will continue to be a limiting factor in the future. Environmental developments can make this even more difficult in the long term. Our production is also very resource-intensive, which is why all our efforts in the area of sustainability are very important. We are also in the process of finding out what digitization can mean for us. Our production process has established itself over many decades. Translating this into a digital world will be a major challenge.

What trends are emerging with regard to the products?

The megatrends are health and demographic change. In the peptide field, we speak of healthy or happy aging. But the pet food segment is also growing rapidly. Among other things, this has to do with the individualization of society, because many pets provide company for singles and are important family members. This is why they are willing to invest in their well-being. We also aim to open up new markets with the development of performance additives for new biodegradable surface cleaners as well as cooling lubricants and cooling release agents, thus making a further contribution to sustain-

ability. We are also seeing markets merge with each other, e.g. for food and pharmaceutical products, as shown by the newly coined word "phood". One example of this is gummy bears enriched with vitamins or ingredients.

How do you minimize the uncertainties involved in making future decisions?

In order to broaden our own perspective, we involve external experts in the new strategy development process. We make informed decisions on the basis of intensive research. But, of course, we can never fully know what the future will bring, a residual risk always remains. So leadership requires a lot of courage to make decisions.

What attracts you to your task?

It is very varied and complex. I have to keep an eye on the big picture and have a good understanding of the business, organization and culture in order to be able to provide the right impulses for new processes. I find that very exciting.

What do you value the most about the company?

The culture of everyday interaction is exceptionally good. Thanks to ONE GELITA, the company has undergone tremendous development in recent years. But the numerous possibilities open to GELITA also make the company and the future so interesting.


 A portrait of Wiebke Steinel, a woman with blonde hair, smiling and holding a tablet. She is wearing a black top and a patterned scarf. The background is blurred, showing the word 'GELITA' in large yellow letters.

Wiebke Steinel

holds a Master's degree in Management and Business Development with a focus on strategy and innovation. During her studies, she accompanied a change management project at GELITA. At the end of 2011 Steinel took over the position of Head of Human Resources and Organizational Development. She has been the Manager of Corporate Development since 2014.

Gelatine – the all-rounder

Better informed and more critical: consumers are looking very carefully at food choices. Products with allergens, E-numbers or complicated lists of ingredients are being left on the shelf more and more often. How good then, that GELITA can provide its customers with gelatine, a pure foodstuff – which offers even more applications than other hydrocolloids.

— Gelatine has been used for many years and is one of the most thoroughly tested foods there is. The hydrocolloid forms a thermoreversible gel that quickly absorbs water when consumed in the mouth and melts at body temperature. By contrast, the melting point of other thermoreversible gels, for example those produced by agar-agar, is way above body temperature. The low melting point of gelatine gels enables an intense release of aromas. This unique taste experience and mouthfeel is crucial for many consumers when making a purchase decision. Calorie-conscious consumers in particular are happy about another advantage: the melting point, aroma release and texture hardly change even if sugar substitutes are used instead of sugar.

Unmatched versatility

Gelatine is a natural foodstuff, a pure protein. Being classified as a foodstuff, gelatine does not count as a food additive with an E-number. As a result, gelatine meets the requirements of clean labeling products, among other things, for which the demand is constantly growing. In the production of foodstuffs, no artificial or modified additives requiring an E-number are used wherever possible. Gelatine does not contain any preservatives or other additives and is free of fat, cholesterol and uric acid compounds. All raw materials – pig skins and bones – as well as bovine hides and bones – come

from healthy animals that have been approved for human consumption and examined by veterinarians. In addition to animal protein gelatine, there are also vegetable hydrocolloids such as pectin, carrageenan, agar agar or starch and fermented products such as gellan and xanthan gum. The products used instead of gelatine are usually combinations of different hydrocolloids. The more complex the composition of a substance, the higher the risk that unpredictable reactions may occur during production. If substitutes are used, the list of ingredients is extended significantly, which in turn deters many consumers.

The health plus

Even allergy sufferers can safely consume gelatine, because the hydrocolloid triggers no known allergies. This is an advantage that also benefits manufacturers, as products containing allergens must be clearly labelled. Conscious consumers may avoid such foods even if they have no allergies. Another plus point: The hydrocolloid strengthens the connective tissue, improves the skin and provides shiny hair and firm fingernails. Gelatine is available in various gelling strengths and grinding degrees. It is suitable for gelling, bonding, binding and stabilizing emulsions and foams, and provides the original chewing pleasure of the

popular gummy bears. With the help of the hydrocolloid, which GELITA offers tailor-made for specific applications, food producers can create new, innovative and healthy products. All the substitutes can only cover partial aspects of gelatine's property profile, but never the entire spectrum.



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Enjoyment
with gelatine


Panna cotta

(For 4 people)

500 ml whipped cream
30 - 50 g sugar
3 sheets of gelatine
1 vanilla pod, including the pulp

- Soak the gelatine in cold water.
- Heat half of the cream slowly but do not boil and add the vanilla pod pulp and sugar.
- Remove the heat, squeeze out the gelatine and stir into the cream without heating.
- Allow the mixture to cool while stirring lightly. As soon as the mixture gels, beat the other half of the cream until stiff and fold in.
- Pour the mixture into dessert bowls and allow to stand in the fridge for at least four to five hours.

Enjoy your treat!

Four glass vials are arranged in a row. Each vial contains a syringe with a yellowish, translucent substance inside. The syringe in the first vial on the left has a 3D printed orange structure at its tip. The other three syringes also have similar orange structures at their tips. The vial on the far left has a label that reads 'Fraunhofer IGB'.

Tissue from
the 3D printer –
with gelatine
from GELITA

Organic tissue from the 3D printer

People requiring an organ transplant often have to wait very long or even in vain. In order to become independent of organ donations, scientists are researching ways to artificially synthesize the heart, liver or kidneys – for example using a 3D printer. Whether it will ever be possible to replicate complex organs in such a way that they replace the function of their healthy role models still remains to be seen. Meanwhile, the Fraunhofer Institute is working on printing cartilage tissue in the foreseeable future.

At first glance, the printer looks like any inkjet printer. But when it starts working, it soon becomes clear: this is about something different. Texture instead of text. Heavy transparent drops fall into a Petri dish, where they soon gel; so-called biotinte ("bio-ink") – based on GELITA® gelatine. In the near future, it is planned to produce such transplantable tissue that could be used, for example, in knee surgery. "I deliberately avoid speaking of entire organs such as hearts or the like. It will be a long time before we are ready to reproduce blood vessels", says Dr Kirsten Borchers, who is responsible for bio-printing at the Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB in Stuttgart. What her research group produces on the 3D printer is fascinating enough: a tissue matrix with living cells (hence "bio" – "living" in ancient Greek) that should return to their original task. This is comparatively easier than with a large organ because the cells in cartilage have only one single function. "The matrix should

these cells would come from the patient. "Our goal is to make the added cells feel so comfortable in our artificial matrix that they remember their function and start building an original matrix again," says the researcher.

Research with small cubes

"It sounds a lot like science fiction when you read somewhere that we're working on organs from the printer", Borchers laughs. "In fact, our work is progressing in the tiniest of steps. Often our day-to-day work routine is such that we try out whether small cubes of material stop, tip over or even run away." The current goal is to perfect the biotinte so that, on the one hand, it can be printed, and on the other, is compatible with the cells with which it is intended to be populated. "That's why gelatine is ideal for our work." Their raw material – collagen – is found in the environment of the vast majority of cells in the body and corresponds to the



The 3D printer at work. In the syringes: different biotinte formulations (see main picture, too).

it with certain molecules so that on a light impulse it cross-links and no longer flows away. Particularly important: the researchers believe that gelatine still has great potential as a basic material to adapt the ink and matrix properties to different types of tissue. GELITA offers a range of special gelatines that are particularly suitable for medical developments. "MedellaPro®", for example – Dr Borchers also uses this among others – has excellent biocompatibility and high tissue cell affinity", Dr Christoph Simon, contact person for technical applications at GELITA, explains.

To a large extent, it is the consulting expertise that distinguishes GELITA as a partner. If I need to know how gelatine determines the isoelectric point, I can ask Mr Simon. If we need different specifications for different ink properties, he knows what to do", says Borchers. And who knows if GELITA® gelatine might one day be the basis on which the first artificially produced blood vessel is built.



Dr Kirsten Borchers with gelatine-based biotinte for printing cartilage tissue.

be as similar as possible to the tissue it will replace", Borchers explains. In the case of cartilage, hyaluronic acid, among other things is added to the biotinte, as it also plays a major role in natural cartilage. "The similarity is important because the cells communicate through this matrix." Living cells are already added to the biotinte before printing – in the case of tissue transplantation,

extracellular matrix of tissues. Gelatine, the hydrolyzate of collagen, can be dissolved in water, which makes it easier to use in the printer.

"The fact that gelatine melts at body temperature is at the same time its disadvantage. The tissue should not liquefy when it is transplanted into the body. Hence the researchers chemically modify

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Breaking new ground



Almost 80 participants from 20 countries accepted GELITA's invitation to the two-day symposium in autumnal Heidelberg. Under the motto "Off the Beaten Track – Inspiration for better food, nutrition and health", the guests discussed new product developments and sustainable approaches. Surprise unveiling: the revolutionary Fast Forward Process technology.

Dr Matthew Lange from the Department of Food Science and Technology, University of California, introduced the topic of food digitization. The development of an "Internet of Food" platform should make it easier to track food ingredients and produce individualized food. Prof. Dr Wolfgang Meyerhof, a leading expert in molecular genetics, shared his knowledge on the physiological reasons for eating preferences with the attentive audience.

Meyerhof, who investigated the principles governing taste receptors, showed how flavor preferences can be learned and even influenced. Hans-Ulrich Frech, Global VP Business Unit Collagen Peptides, GELITA, explained how collagen peptides can help the body to help itself. VERISOL®,

for example, increases the elasticity of the skin and reduces wrinkles and cellulite.

In the panel discussion, the cooperation between Hänsel Processing, Winkler and Dünnebier Süßwarenmaschinen (WDS) and GELITA was presented. The three companies have developed a revolutionary technology: the "Fast Forward Process", which makes it possible to produce fruit gummies with reusable silicone instead of starch molds. The new process improves hygiene and reduces production time from 24 to less than two hours.

The participants were also able to become active themselves and produce creative products with GELITA collagen proteins. In addition, GELITA's experts had implemented numerous product ideas exclu-

sively for the symposium: the guests were given the chance to sample unusual Caribbean cocktails that highlighted the stability of gelatine and its ability to form foams. The jelly fountain opened completely new taste experiences. The visitors could hold salami, crackers or sweets in the fountain and cover it with jelly.

The participants were highly enthusiastic, full of inspiration, and forged numerous new contacts.

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Impressions from the symposium
can be found here:
www.gelita.com/de/gelita-events



Be looking for
information about
the 2018 GELITA
Symposium to be held
in North America in
September 2018.

The perfect (dis)solution

One soft capsule is meant to dissolve very quickly, the other slowly or only late in the intestine (enteric). This is possible with gelatines from GELITA. With GELITA® EC, the company offers the first product based only on gelatine that even saves time and money in production.

Soft capsules have been very popular with consumers for decades as a delivery form for active ingredients and nutrients. After all, soft capsules are simple and pleasant to swallow. Nevertheless, there has been one disadvantage so far. Fish oil or other omega-3 fatty acids, which are highly valued food additives, often cause unpleasant burping with a fish taste. This undesirable side-effect discourages normally health-conscious consumers to such an extent that many choose to do without the food supplement. That is now a thing of the past. With GELITA® EC, the company has launched the first gelatine-based product that doesn't dissolve until it reaches the intestine, and can even be produced in one single production step.

Win-win product for manufacturers and customers

Previously, manufacturers had to coat their capsules in a complex second step in order to make them resistant to gastric juice. Apart from the cost-intensive effort, various polymers are used for the coating of the gelatine capsule shell. With GELITA® EC, the additional effort is eliminated and the capsules retain the natural ingredients preferred by the end consumer. Manufacturers not only save time and money, they can also offer their customers a more attractive product.

GELITA® EC is the fourth product in GELITA's portfolio for the application-oriented release of active ingredients. In addition, GELITA® RXL R2 and GELITA® RXL with their reduced cross-linking effects stand for very fast release, and GELITA® GELATINE for standard release.

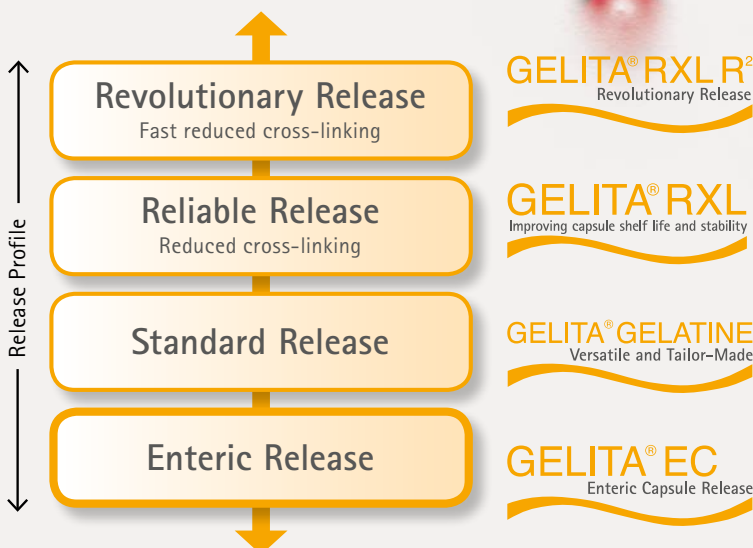
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Release Profile of the GELITA® Portfolio



Innovation competitions

GELITA up there with the best

414 companies competed for the award of the TOP 100 Innovation Competition 2017, and GELITA was among the top ten companies in the category "Innovative Processes and Organisation".

Together with the Vienna University of Economics and Business, the organizers of TOP 100 annually identify the most innovative companies. The evaluation criteria include how conducive the structures and resources are to innovation, the extent to which the corporate climate

facilitates innovation in the long term, and how successful the individual companies are with it.

GELITA succeeded in making a good impression with continuous improvements in their own production processes and the development of new products. "We are very proud of this award and will continue to systematically develop innovative ideas in the future to achieve sustainable economic success", said a delighted Michael Teppner, Global VP Marketing & Communication of GELITA,

at the award ceremony for the 4th German SME Summit in Essen, Germany. GELITA can also be justifiably proud of this: the business magazine Wirtschaftswoche has published a list of the TOP 50 most innovative medium-sized companies. GELITA ranks 33rd.

Image: Michael Teppner, Global VP Marketing & Communication (left), together with Dr Alexander Raab, Global VP Business Unit Gelatine (right), received the award from science journalist and TV presenter Ranga Yogeshwar.



Respect!

For GELITA, sustainability is expressed in one word: respect. This includes respecting the uniqueness of each individual, cultural diversity, and nature. Respect also means cultivating good relationships and communicating in an attentive and respectful manner. To protect nature, GELITA continuously reduces its ecological footprint. Accordingly, half of the world-wide production sites have already introduced a certified environmental management system in accordance with ISO 14001, and others will follow in the coming years. You can read what else we do in the second Sustainability Report: www.gelita.com/de/zweiter-nachhaltigkeitsbericht-der-gelita-ag



Exciting competition

The annual GELITA Trail Marathon Heidelberg enjoys great popularity: 1,672 runners started in cool weather at the beginning of October. The biggest crowd-puller was the main race. More than 400 participants ventured onto the demanding course, in which 42 kilometers, 1,500 meters of elevations and three mountains had to be overcome. Pierre-Emmanuel Alexandre won in 3:06:10 hours. He and the favorite Florian Neuschwander, who set a new track record last year, fought a thrilling race. But Neuschwander had to give up a few kilometers before the finish line because of a fall. In the women's category, however, there was no surprise: Aoife Quigly won for the third time in a row.



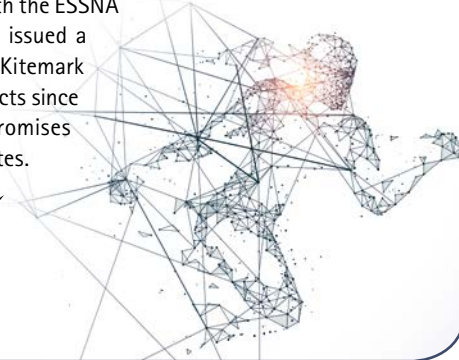
New Chief Financial Officer for GELITA

Since 1 October 2017, GELITA has had a new Chief Financial Officer (CFO): Stefan Scherer has more than 20 years of experience – including as CFO and Chief Operating Officer – in the food industry. Regarding his first few weeks at GELITA, the 50-year-old says: “Mutual respect and appreciation are lived out at GELITA.” In addition to honesty and openness, both values are close to his heart. Stefan Scherer succeeds Klaus Hanke, who has retired after 19 years with GELITA.



NEW SEAL OF QUALITY

GELITA has been a member of the **European Specialist Sports Nutrition Alliance (ESSNA)** since 2016. The association represents the interests of athletes in relation to manufacturers of dietary supplements. The aim is to provide athletes with safe, high-quality and effective products. The products should comply with European regulations and the ingredients should be clearly visible. To make it easier for consumers to identify whether a product complies with the ESSNA guidelines, the association has issued a new quality seal: the ESSNA Kitemark has hallmarked members' products since September 2017 and thus promises even more protection for athletes.



TRADE FAIRS

DATES:

Visit GELITA and experience innovative products for the megatrends of tomorrow. In 2018, we will exhibit at the following fairs, among others:

ENGREDEA, Anaheim	09 to 11 March 2018
FIC, Shanghai	22 to 24 March 2018
SSE, Secaucus, NJ	10 to 11 April 2018
VITAFOODS, Geneva	15 to 17 May 2018
FCE PHARMA, Sao Paulo	22 to 24 May 2018
HNC, Shanghai	26 to 28 June 2018
IFT, Chicago	16 to 18 July 2018
VITAFOODS ASIA, Singapore	11 to 12 September 2018

Masthead

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Global perspective

How the world stays young

The French woman Jeanne Calment was 122 years old when she died in August 1997. So far, no other woman is known to have grown so old – but it can't take much longer. People are living longer and longer with increasing medical progress, better living conditions and greater prosperity. In order for them to feel good and stay fit, a healthy diet and sufficient exercise are important. In addition, GELITA's products containing collagen can counteract the aging process. BODYBALANCE®, for example, maintains muscle mass, thus reducing the age-related breakdown of skeletal muscles. FORTIGEL® collagen peptides counteract the breakdown of cartilage mass and, therefore, joint problems. FORTIBONE® in turn increases bone density and can even help osteoporosis patients.

Staying mobile is one thing. But it's not just women that want to age attractively. The proverb "beauty comes from within" can be charmingly reinterpreted here: foodstuffs with a certain beauty effect, so-called Nutricosmetics, are a growing market. Products with VERISOL® from GELITA have been shown to preserve the firmness and elasticity of the skin. Small wrinkles are part of getting older and characterize a face: GELITA Sol® C acts against deep and unsightly wrinkles. The micro-peptides in the corresponding care products penetrate into the deep layers of the skin and keep it fresh and young. And beyond that? A positive attitude to life also helps!



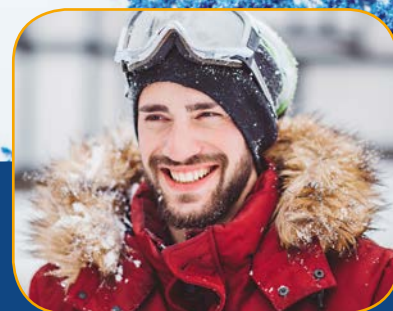
Europe

The life expectancy of people living in Monaco is an incredible 89.5 years. Germans live to 80.7 on average. Overall, life expectancy in Europe is lower than in Asian countries, but there are so-called blue zones, mostly islands where people grow surprisingly old. The Greek island of Ikaria is one such place. The proportion of over-90s is ten times higher than the European average. One reason could be the diet, another could simply be genetic predisposition.



Japan

Drinking green tea, a diet rich in fish and algae products: Are these the factors that make the Japanese grow so old? Their life expectancy is an impressive 85 years. Reason or consequence: Japan is one of the leading markets for nutricosmetics. Marshmallows against wrinkles or drinks for supple joints have been common products here for years.



Canada

Life expectancy in Canada has risen over the past ten years by just under two years to 81.9 – while, in neighboring USA, it has stagnated and even declined to 78.8 years in 2015. In Canada, older people in particular remained healthier than they used to, which is one of the factors behind rising life expectancy. Health care may play a role in this. The Canadians are also considered very athletic.



Read more about GELITA® EC
at www.gelita.com and download
brochures free of charge!

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customer magazine are published
in English, German, Portuguese and
Spanish.

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