

1993–2018

25
YEARS

THE
STABILISER
PEOPLE

hydrosol

THE STABILISER PEOPLE



Dr Matthias Moser, Managing Director of Hydrosol, on the company's contribution to addressing the most pressing challenges of our time.

**“WE’RE
MAKING THE
FUTURE!”**

THE YUM EFFECT!

THE YUM EFFECT!

Looks and tastes good – Hydrosol makes foods for life.

THE YUM EFFECT!

CREAMY!

It's how yogurt should look – fresh and creamy. That makes it appetising. And protective colloids are what make it like that. Without them, the casein would flock out during pasteurisation, or they would escape after a short time and collect on the yogurt in the form of a watery yellow liquid. Most importantly, colloids give the yogurt that creamy feel on the tongue.

Did you know?
Hydrosol also has the ingredients for currently trending products like Greek-style and high-protein yogurt.

THE YUM EFFECT!

GREAT BITE!

Sausages only taste right when they have a firm bite. With a system of hydrocolloids, fibre and enzymes, Hydrosol improves the texture of scalded sausages and most importantly gives them the desired bite. This system also prevents the unappetising release of fat or gel. Because sausages also have to look good!

Did you know?

Hydrosol also offers unique hydrocolloid-based sausage casings: co-extruded alginate casings.

JUICY!

When you bite into a golden-yellow nugget, you expect a firm, juicy texture, regardless of whether it's a vegan or animal-based nugget. Hydrosol has developed a versatile binding system for just such an eating experience. It improves the texture of meat or fish, or even plant-based products like vegan nuggets and burgers.

Did you know?

We also develop texturates based on plant proteins, so that appetising products always have the perfect bite.

THE FOOD INDUSTRY IN FIGURES

68.9

Food and beverage exports by Germany in 2016 in billions of euros.

56.4

Food and beverage exports by France in 2016 in billions of euros.

Source: Press office of the Federation of German Food and Drink Industries (BVE) e.V., Eurostat

78.2

Food and beverage imports by Germany in 2016 in billions of euros.

50.3

Food and beverage imports by France in 2016 in billions of euros.

Revenues of the largest industries in Germany in 2017 in billions of euros:

422 **180**

Automotive Food

240 **140**

Mechanical engineering Chemical

Source: Federal Statistical Office, Fachserie 4, Reihe 4.1.1 Produzierendes Gewerbe

Persons employed in the largest industries in Germany in 2017:

820,000 **434,000**

Automotive Food

955,000 **314,000**

Mechanical engineering Chemical

Source: Federal Statistical Office, Fachserie 4, Reihe 4.1.1 Produzierendes Gewerbe

Revenues of the largest industries in the EU in 2016 in billions of euros:

928 **950**

Automotive Food

658 **507**

Mechanical engineering Chemical

Sources: VDMA | European Chemical Industry Council (Cefic), "Facts and Figures 2017"; Verband der Chemischen Industrie e.V. | Eurostat

Persons employed in the largest industries in the EU:

12,600,000 **44,240,000**

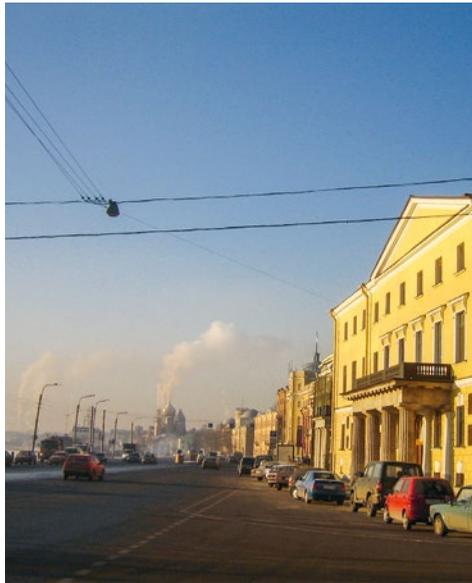
Automotive (2015) Food (2015)

3,400,000 **1,140,000**

Mechanical engineering (2017) Chemical (2015)

Sources: European Chemical Industry Council (Cefic) | European Automobile Manufacturers Association (ACEA), "The Automobile Industry Pocket Guide" | Data & Trends 2017, EU Food and Drink Industry

SUBSIDIARIES



Here to stay – Hydrosol opens its first Russian office in Leutnant Schmidt Street in St Petersburg.

2007

THE FIRST OFFICE IN RUSSIA

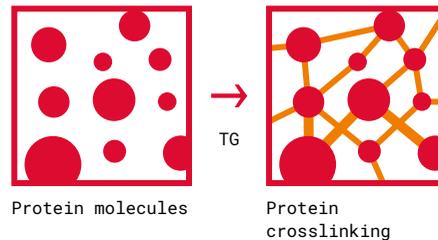
Hydrosol founds Stern Ingredients Russia (SIRUS) in St Petersburg. This first Russian subsidiary is a logical consequence of our strong growth in that country. With a team of experts who have the requisite linguistic and cultural skills, Hydrosol can work more closely with its Russian customers to set the course for the future of the Russian food industry in accordance with the company philosophy: “always close to the customer”.

PRODUCT INNOVATION

2008

FUNCTIONAL TUNING OF THE ENZYME TRANSGLUTAMINASE

Cross-functional research in the Stern-Wywiol Gruppe leads to a new product innovation for the meat and fish industry – improved texture through transglutaminase. Working with sister company SternEnzym, Hydrosol refunctionalises this texture-giving enzyme, making it possible to get the most out of valuable meat and fish resources – another way in which Hydrosol contributes to sustainability in food production, which is indispensable in view of the growing worldwide demand for meat.



Meat textures are formed by crosslinked amino acids, the building blocks of proteins. The crosslinking process is initiated by transglutaminase, and is used in the production of products like formed meat.

NEW FUNCTIONAL SYSTEMS FOR RECOMBINED DAIRY PRODUCTS

Hydrosol products are also useful in other areas. New functional systems improve the quality of recombined products for the dairy industry. This is especially significant for arid regions like the Middle East and Africa, where fresh milk is in short supply. These systems make it possible to use milk powder as a base for high-quality, good-tasting foods like yogurt, cheese and other dairy products. Millions of people around the world benefit from this successful research.

A WORLD FIRST

2009

THE FIRST MAYONNAISE THAT CAN BE FROZEN AND THAWED AGAIN WITHOUT LOSS OF STABILITY

The Schleswig-Holstein Ministry of Economic Affairs supports another Hydrosol product development – freeze/thaw-stable mayonnaise. This, the world’s first in an all-in mayonnaise, is just one of many products in Hydrosol’s ever-expanding portfolio. Hydrosol organises its activities in the business areas Dairy, Ice-cream, Deli Foods and Meat, each led by an industry expert.

CLEAN LABEL

2010

HIGH-LEVEL VISITORS – HYDROSOL HOSTS THE GERMAN DELI FOODS INDUSTRY

Germany’s leading makers of deli foods visit Hydrosol for an industry meeting about Clean Label. Meanwhile, Hydrosol intensifies its research and development in dairy, expanding its portfolio of stabilising systems for plant-based whipping and cooking cream. This gives rise to the pioneering of new systems whose whippability remains unsurpassed to this day – recombined alternatives to cheese and innovative solutions like yogurt cubes as alternatives to white cheese (like feta) in salads.

PARTICLE-ENGINEERING

2011

NEW FLUIDISED BED CAPABILITIES

Hydrosol adds state-of-the-art fluidised bed capabilities to its production technologies, thus making an entry into the field of “particle engineering”. The company can now use new techniques like agglomeration and granulation, enabling the development of entirely new types of functional systems with improved activity profiles. The technology also allows Hydrosol to make coated products with novel solubility characteristics.



Multitalented – our fluidised bed system offers a wide variety of technical possibilities. Photo: Martin Ehrlich, Production Director.



EMULSION

VISCOSITY

$$1 + 1 = 3$$

MOUTH FEEL

STABILITY

VOLUME

TEXTURE

EXPERTISE I MULTIFUNCTIONAL SYSTEM SOLUTIONS

Hydrosol compounds are more than just the sum of their parts. By making intelligent use of synergies between different components, they deliver functionalities out of all proportion to the individual raw materials, and at lower cost.

*Prof. Dr.-Ing. Herbert Weber (Emeritus),
Beuth Hochschule für Technik Berlin, Lifesciences & Technology*



Left: No sprinkles yet – but Jane Krieger’s delicious new soft-serve ice cream creation is already working out pretty well in trial industrial production

EXPERTISE III
APPLICATIONS TECHNOLOGY



PASTEURISING AND HOMOGENISING

Things are also busy in the ice cream and milk laboratory. Machines large and small are at work. For example, one is filling juices made from a Hydrosol concentrate recipe. This new trend product is under development for customers in Arabian and African markets. Another production line is mixing a cocoa drink. Right next to it, samples of a new vegetable-based cream are being pasteurised at ultrahigh temperature before being homogenised. Just a few steps away, the creams are tested for stability with state-of-the-art analytical equipment.

Not cool – the modern UHT pilot plant. Sebastian Barsch and Dorian Riegel investigate the behaviour of various dairy products at ultrahigh temperatures.

DEVELOPMENT TOGETHER WITH CUSTOMERS

Hydrosol doesn’t use its well-equipped applications technology just for its own recipes. Customers, too, can improve their own processes here using Hydrosol’s technology and expertise. Hydrosol also cooperates with various national and international research institutions, such as the Fraunhofer Society, on the development and testing of new applications technologies.

SAUDI ARABIA

CREAMY DELIGHT AT HIGH TEMPERATURES

In Arab countries there's one thing that is part of every good meal – breakfast cream.

Lightly gelled, thick, and with a gentle note of caramel – that's how people in Saudi Arabia like their breakfast cream, ideally with honey and fruit. The cream is produced and eaten almost exclusively in the Middle East. Its long shelf life makes it ideal for the region's hot climate.

The name is slightly misleading, though, as breakfast cream is by no means eaten only for breakfast, but whenever a meal is a special occasion and calories aren't as much of an issue. In Saudi Arabia, breakfast cream comes in sterilised cans. The contents can be flipped out and then stand on the plate like a gelled dessert for eating with a spoon or spreading on flat bread with a knife. Other versions are only lightly gelled and flow easily out of the can.

But the sweet cream is always thick and leaves behind a smooth mouth feel. Traditionally, breakfast cream is made of milk cream, although there are now also contemporary versions with lower fat content. In other countries in the region, like Iran, breakfast cream is sold in Tetrapaks. The product is the same in name only, since the heating and filling processes differ, as does the consistency. It is more viscous, creamy and not at all gelled. But all breakfast creams throughout the region have one thing in common: people love them.



“EATING IS THE NEW POP CULTURE”

What foods will be on tomorrow's menu? How will we eat our meals? And what conclusions should the food industry draw from this?

These are the questions that interest nutritionist and author *Hanni Rützler*. Journalist *Marc-Stefan Andres* spoke with her.