

**BactoAlarm**<sup>®</sup>  
BioSensor

# Our Product Philosophy

Smart packaging.

Smart protection.

Smart health.

**Human + Food = Development**

# We eat.

All people: Child. Adult. Old man. Woman. Man. Rich. Poor.  
All perspectives: Theist. Agnostic. Atheist.  
All times: Day. Night. Winter. Summer. 10,000 years ago. Today.  
All moments: Peace. War. Love. Frustration. Victory. Defeat.  
All of us: You. We. They. I.

**Everyone eats.**

# Civilisation and Food

Food was decisive for the development of civilisation in direct and amazing ways.

For example: A shift from hunting and gathering to agriculture increased productivity, which resulted in population growth and the division of labour, and boosted the exchange of commodities, which in turn produced property rights, central government, political institutions, ideology, and writing.

**Yes, food produced writing.**

Humans learnt to harvest corn and preserve meat, which helped them survive in cold seasons and on long journeys.

Spices had a huge impact on the European economy in the Middle Ages. Spices were luxury goods, means of hoarding capital and a kind of currency, as well as the causes of armed conflicts.

Spices were a factor behind the Age of Discovery. Ferdinand Magellan's voyage was stimulated by the Portuguese blocking the passage of Spanish ships loaded with spices along the coasts of Africa, so the Spaniards were forced to look for new transit routes.

**People were looking for food, rather than gold.**

People in North Korea are on average 8 cm shorter than South Koreans.

Genetics has nothing to do with the difference. According to experts, the reason is years of famine, brought about by poor harvests due to ineffective agriculture, which have plagued North Korea in recent decades. In other words, malnutrition is the reason.

**It has taken just 70 years.**

**Food is business.**

# Food increases.

Food consumption has been growing fast.

For example, China consumed 8 million tons of meat in 1978, or one-third of the 24 million tons consumed in the USA. However, China overtook the USA as the world's leading meat consumer by 1992. At present, China consumes 71 million tons of meat, which is at least twice as much as the USA.

Therefore, there will always be food producers.



# Food Business: A New Vision.

What is in demand is not just food, but quality food and responsible food.

**What does 'responsible food' mean?** It is food that is produced, preserved and recycled with the utmost care for humans, their bodies, and the environment.

Foodstuffs should answer the questions that worry the consumer right away.

# Food and Anxiety

# What happens to our food?

Technologies, artificial intelligence, GMOs.

People are no longer sure what they eat.

They ask questions, 'Why does this food go off too quickly, and why is that food preserved too long?'

'Where does uneaten food go?'

'What happens to crops and food animals from the moment they begin to grow until they are served to be eaten?'

**We require more from food.**

# Safeguards and Responsibility

People want to be sure they eat organic and that quality food that is good for them.

They want to be responsible consumers and know they are in control of what they eat.

**This is just the first step.**

**Food makes another revolution.**

# We know what, where, and when.

...happens to our food. We want to see here-and-now quality proof and to know that food production costs are reasonable.

We want to know that new technologies do not only entertain us, make our phones thinner and thinner, or make spaceflights easier...

...but they also ensure that our intake of energy is safe, high quality, and environmentally-friendly.

**This is our philosophy:  
Food Civilisation's New Stage**



**We are changing the world again  
in search of development.**

**I am what I eat,  
and I am a human.**

**BactoAlarm**<sup>®</sup> BioSensor

# What do we produce?

An innovative material developed on a special formula and made from accepted food additives.

It is placed on the inside of food packaging with modified atmosphere. The sensor monitors the presence of any microorganisms and demonstrates their growth by changing the monitor's colour from green to black.

The change in colour occurs when metabolites released by microorganisms reach the sensor and is clearly visible for consumers or retailers.

# or simply

A thin high-tech strip that is easy to place on food packaging. It changes its colour when the food quality is beginning to change, but does not affect or come in direct contact with the food.

Therefore,

We know for sure how long we can use the product, and we know exactly when it can no longer be used.

**What problem do we solve?**

**Too much food, too little food.**

On a global scale,  
there is so much food waste  
that it makes up between  
**1/3 and a 1/2 of total food  
production.**



Every year,  
48 million people suffer from  
food-borne illnesses in the US  
alone. 128,000 are taken to  
hospital, and over 3,000 die.

# What can we do?

Play a part in the global practices of food safety.

Make it tangible, innovative, accessible and affordable.

Ensure consumer food safety.

Just because we know how to do this!

# Why do we do this?

Minimise food-related risks.

Inform consumers about what they eat and increase food retailers' awareness.

Change the outdated food-testing system by introducing a smart, simple, easy, and cheap control method.

Be the number-one benchmark for all food certification agencies, in order to guarantee food safety for everyone!

Advance food industry and science.

Earn money to fully achieve these stated goals.

# Benefits

Foodstuffs last longer

Less waste

Safer food

Big cost cuts

**We benefit from what  
is good for many.**

**Why should you trust us?**

**Our partners are  
our biggest asset.**



# iPak AG (our established partners)

University of Zaragoza

<https://www.unizar.es/university-zaragoza>

Samtack

<http://www.samtack.es>

Discovery Flexibles

<http://www.discoveryflexibles.com>

Tested and proven to be  
positive for the following  
micro-organisms

**Moulds:** *Aspergillus flavus* (Spanish Type Culture Collection, CECT, 2687), *Penicillium roqueforti* (Fungi Culture Collection, IBT, 21319), *Eurotium repens* (IBT 1800), *Penicillium islandicum* (CECT 2762), penicillin ampoules (IBT 21314), *Penicillium expansum*, *Penicillium nalgiovensis*.

**Yeasts:** *Candida albicans* (American Type Culture Collection, ATCC, 64550), *Debaryomyces hansenii* (CECT 10353), *Zygosaccharomyces rouxii* (CECT 11928), *Botrytis cinerea*.

**Bacteria:** *Enterococcus faecalis* (ATCC 29212), *Listeria monocytogenes* (ATTCC 7644), *Bacillus cereus* (CECT 495), *Staphylococcus aureus* (ATCC 29213), *Salmonella choleraesuis* (CECT 4000), *Yersinia enterocolitica* (CECT 4315), *Escherichia coli* (ATCC 29252), *Pseudomonas aeruginosa* (ATCC 27853)

**Why will it work?**

There is a problem.

There is a solution.

The solution works.

It is cheaper to use BactoAlarm<sup>®</sup>  
than to do without it.

**What are the gains?**

**Reducing food waste by 1%  
means saving \$3 billion.**

**Our Mission:  
What are we intent  
on achieving?**



Like all product developers, we are intent on boosting our sales and promoting our technologies.

We want to change the world to help the human race.

The world will change for the better with BactoAlarm®.

**Big change is in small details.**

See a niche,  
develop a technology,  
change the order of things,  
**and profit.**

Food is us.  
Food is civilisation.  
Food is business.  
Food is progress.  
Food is the future.

**BactoAlarm**<sup>®</sup>  
BioSensor

**The product philosophy**

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