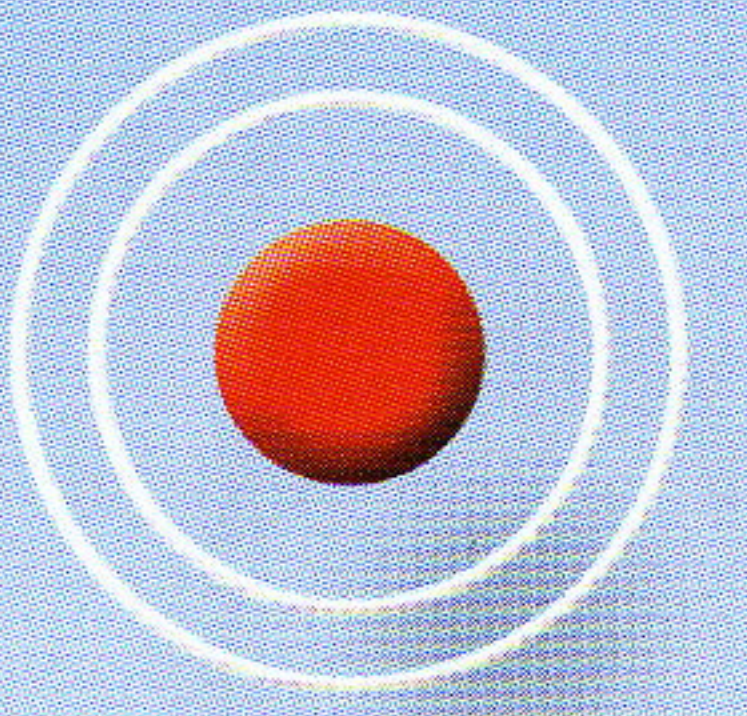


penenergetic



The Alternative

Agriculture, horticulture and water management are in the public eye. In recent years plenty of negative reports have undermined consumers' confidence. Pressure on farmers to maintain profitability is intense. Nevertheless, many farmers are questioning past assumptions. Protection of natural resources becomes a

top priority. Farmers question the effects fertilizers, additives, and conventional farming methods.

A fertilizer that successfully increases yields does not necessarily have an equal positive effect on soil, plants and groundwater. More and more farmers are taking a holistic

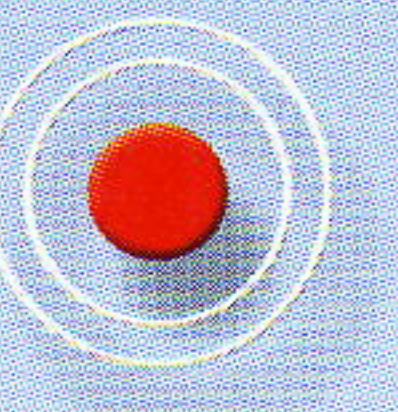
approach. They want good yields, conserving soil and groundwater at the same time. And they are interested in offering high-quality meat.

Here Penergetic offers an innovative product system, which is gentle on resources and secures optimal yields while simultaneously improving quality.

penergetic

*From Nature -
For Nature!*



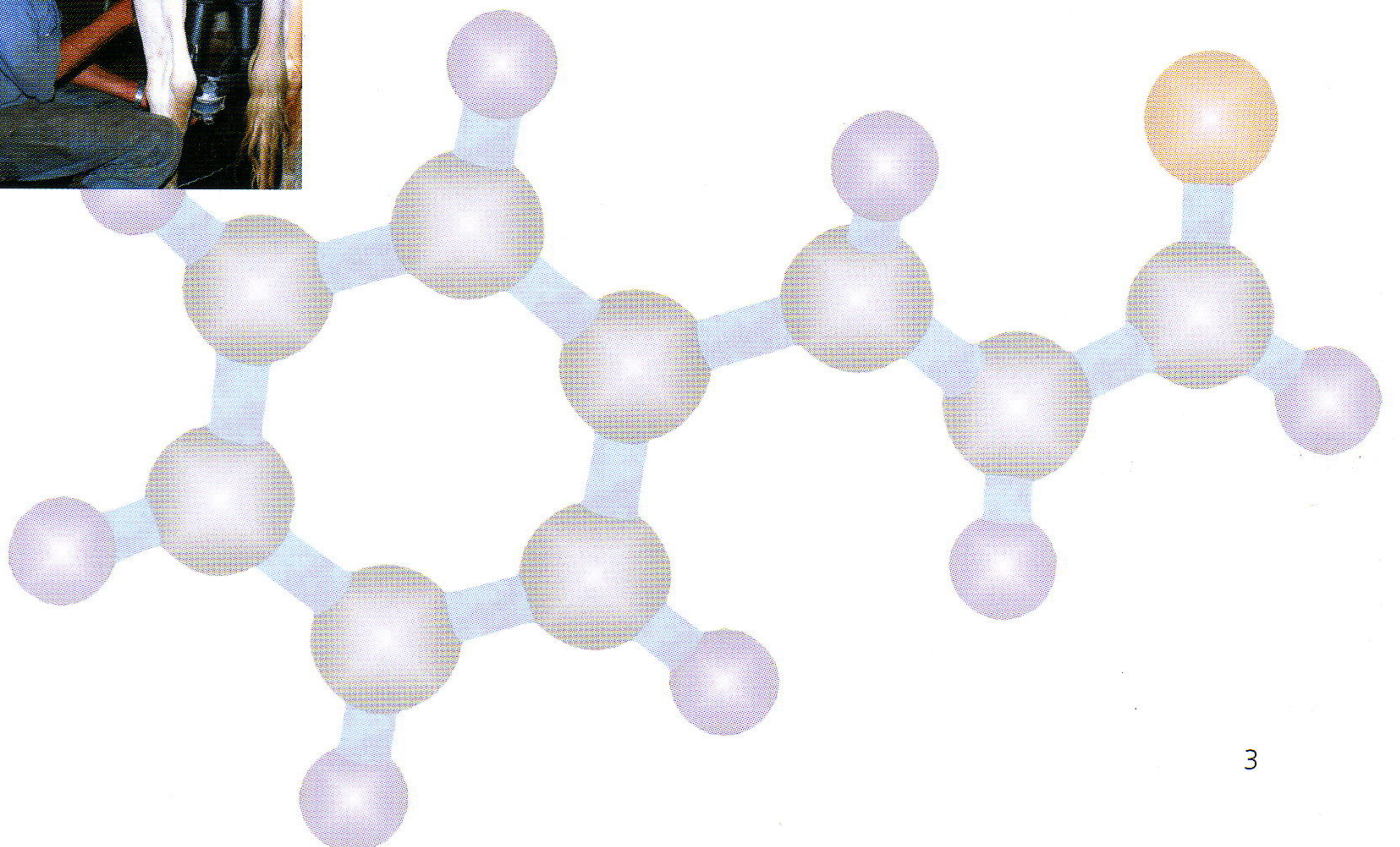
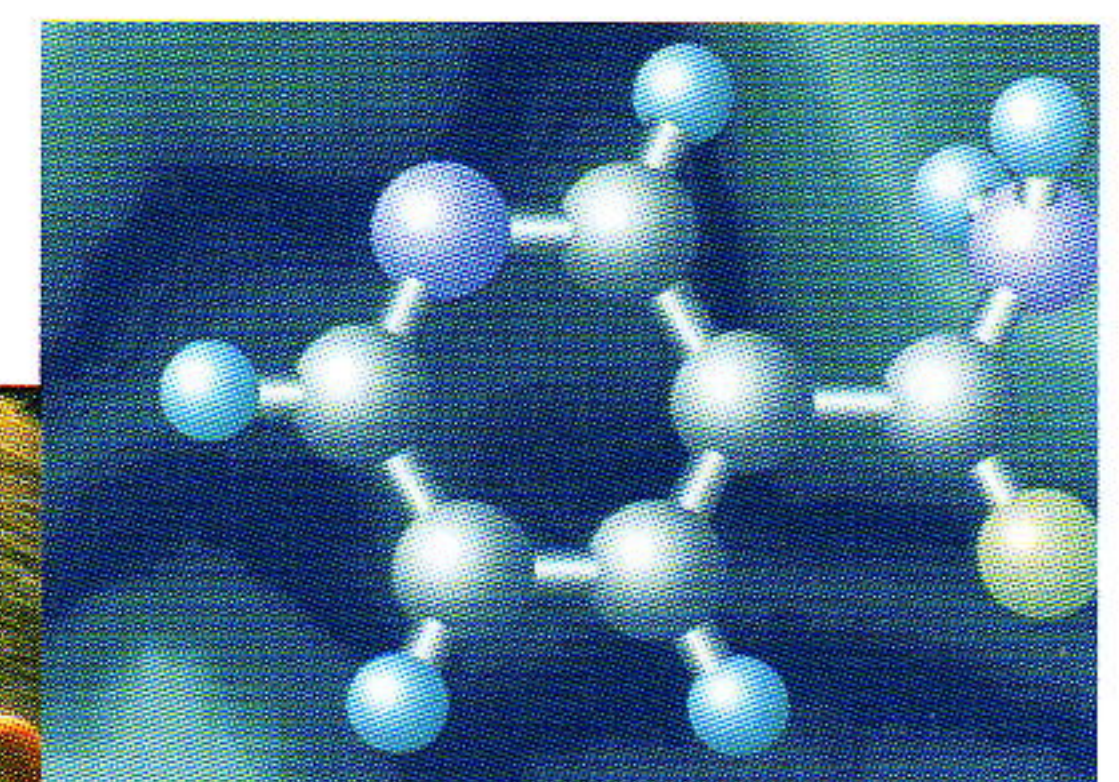
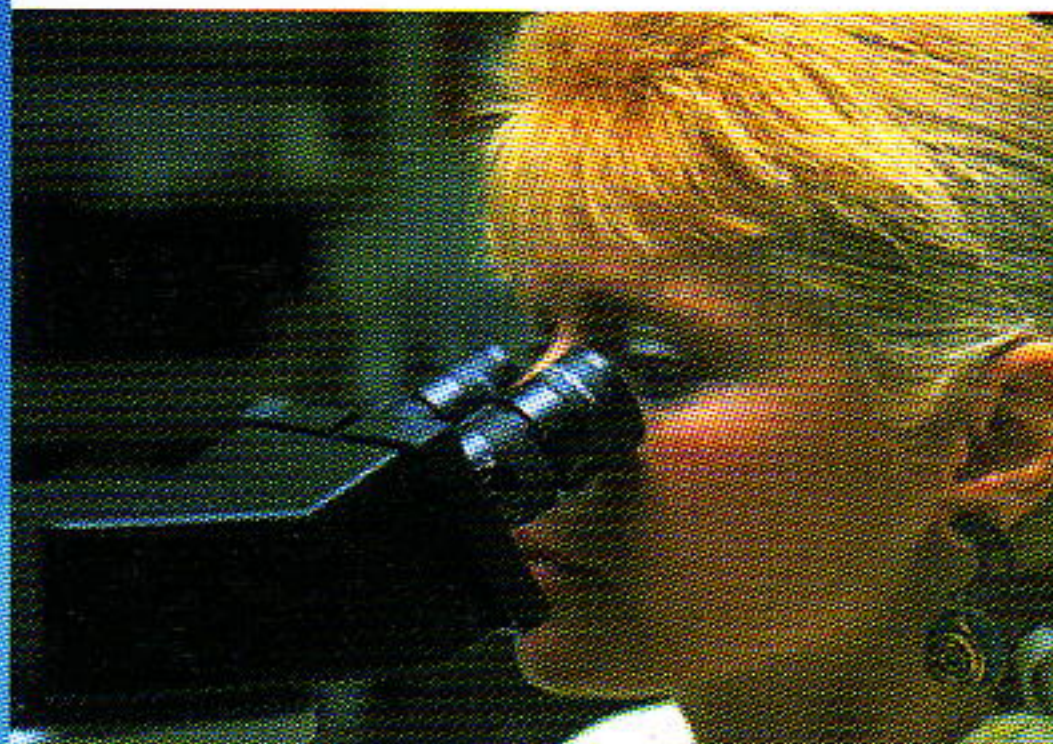
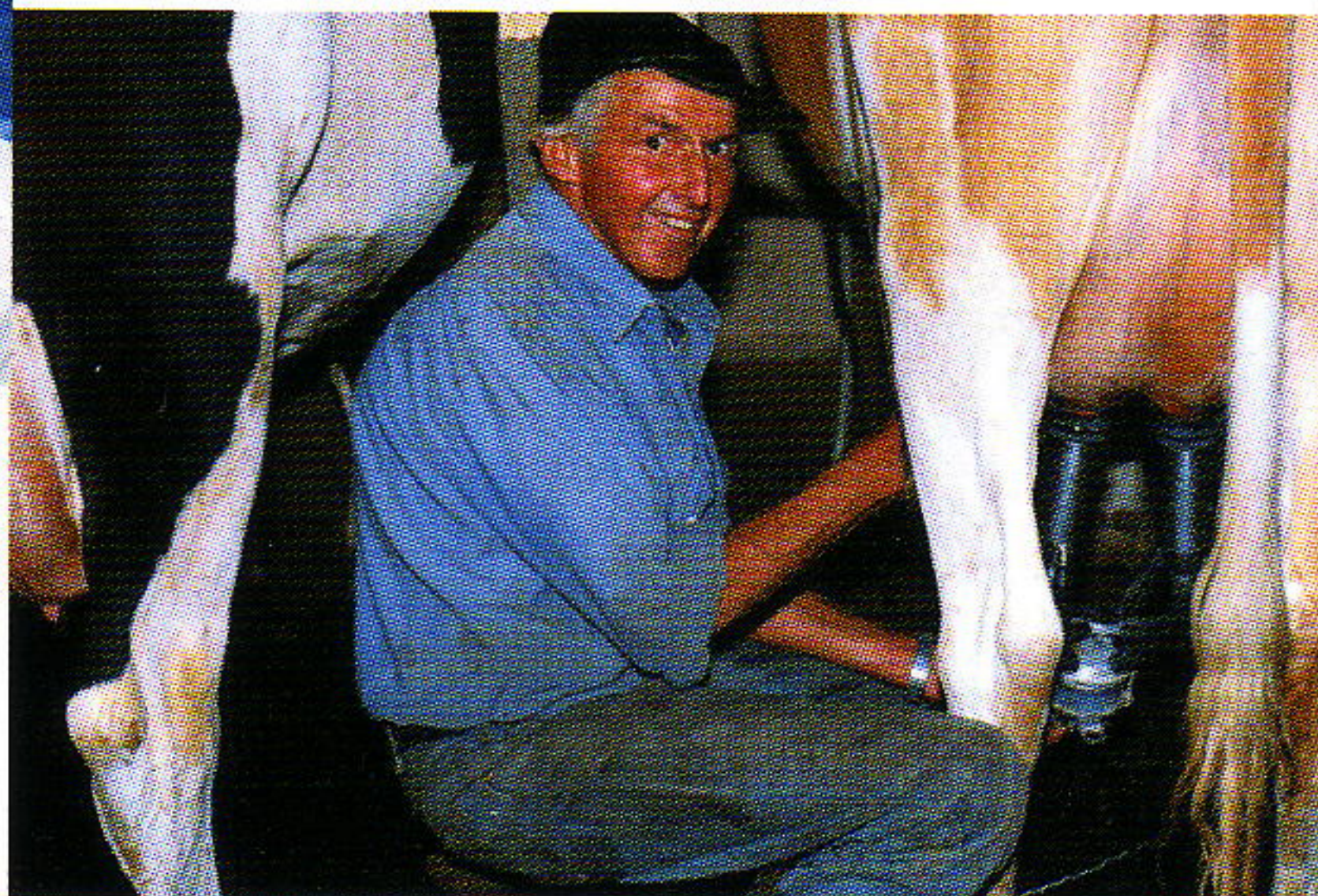


The Penergetic Technology

On the one hand the Penergetic process is based on the laws of classical sciences, on the other hand on phenomena that have been the subjects of extensive experimentation and observation over many years but whose mechanisms are still only partially understood in terms of conventional theoretical models.

Thus, the Penergetic system is based on sciences such as physics, biology, biophysics, chemistry and at the same time, incorporates empirical knowledge gained through exhaustive observation and record keeping – the way medical and pharmaceutical knowledge was gained in the days before laboratory protocols defined the cause-and-effect parameters of science. This “trial and error” scientific

approach is still valid in areas where precise theoretical and experimental models for reproducing exact results are unavailable. “Trial and error” is still being used to advance the state of knowledge in fields such as genetic engineering and molecular biology. Thus, some of the explanations that Penergetic infers from observed phenomena rest on hypotheses regarding the underlying processes.



Basic Considerations

The concept that underlies PENERGETIC's products is to use all of a substance's known active agents and mechanisms that positively stimulate the development of animals and plants, either by healing them or affecting growth, or on catalytic impact. This idea is not in itself unusual. If we look at the substances present in e.g. the camomile plant, their healing qualities are unquestioned by both alternative and conventional medicine and the plant is used accordingly. The following example — again using camomile — will illustrate the process. Suppose that 15 percent of the European population were suffering from acute influenza (all too often a reality in the winter); and suppose that just 20 percent of these sufferers wanted to treat themselves with the tried and true remedy of camomile, commonly available in 100 g packets. In this case, 2,250 tons of camomile would be needed on the market immediately — an astronomical amount. Very rapidly, the available supply would be exhausted and shortages would occur.

Here is where PENERGETIC AG's extraordinary product strategy comes in.

PENERGETIC does not process, say, 2,250 tons of camomile to get the treatment materials but instead takes advantage of the existence of so-called "information carriers," or IC (carrier substances), to bring to a wide market the full effect of the original substances in plants like camomile.

IC are available in sufficient quantities and quality to make it unnecessary to touch the stocks of original substances.



In this context, "information" refers to the entirety of the active parameters of the original substances. In the case of camomile, for example, IC_{camomile} contains a complete set of information on camomile's

active substances and their interactions. If this IC is correctly and completely captured — and this is exactly what the PENERGETIC technology does — a specific amount of IC will have the same effect as a comparable concentration of the original substance.

The truly extraordinary development here is not the actually observed phenomenon of the IC, but the technology that enables a transfer of active processes from original substances to the information carrier. In fact, this is an application of the principle of modulation in electronics and radio technology, a common method for imprinting audio information onto a carrier wave (e.g. spoken words or music).





Basis

After years of laboratory experiments and field trials, Penergetic selected a number of substances in order to make systematic use of their known active parameters in agriculture and horticulture, in water management as well as in other market sectors. The precise understanding of these substances accounts for Penergetic's current success. Some of these substances are essential trace elements (the earth's crust contains, for example, 64 of such elements), some are chemical elements (such as oxygen), others are miscellaneous compounds. However, all fulfil two essential criteria:

1. The entirety of active parameters / active processes (including their effect in life applications) is clearly documented and has been acknowledged by science (just as with camomile).

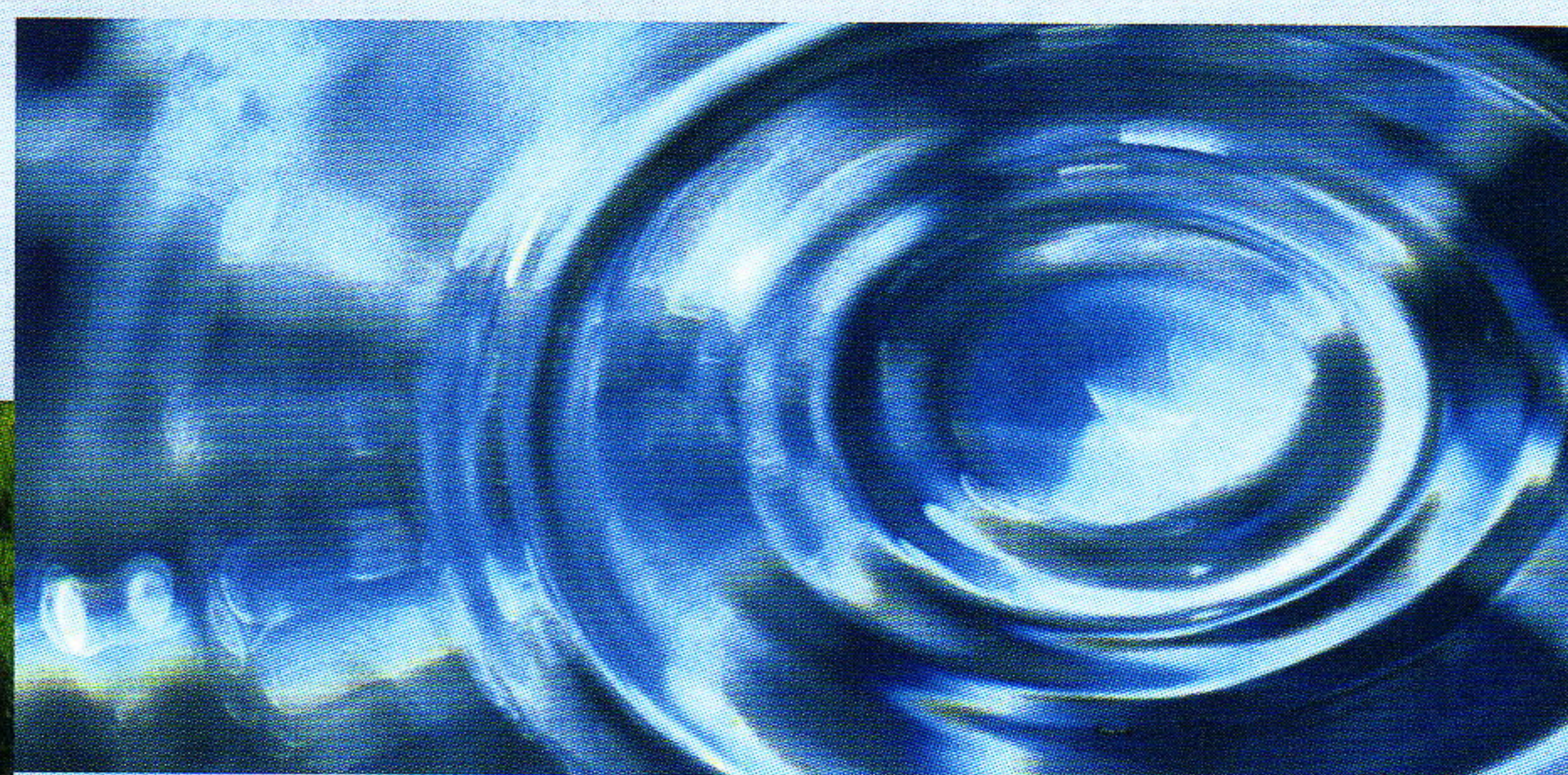
2. Each of these substances has its specific oscillation pattern and its own characteristic frequency.

In other words, the ensemble of active parameters, which is unique for each substance, is reflected in the specific oscillation pattern of the very substance. Thus, not only the entirety of active parameters carries all "information" of this substance, but also its specific oscillation pattern contains this feature.

Penergetic takes advantage of these features in its process technology. In order to imprint the entirety of active parameters (substance information) onto the information carrier (IC) via the classic model of modulation, external electric and magnetic fields are used. This takes into account the influence

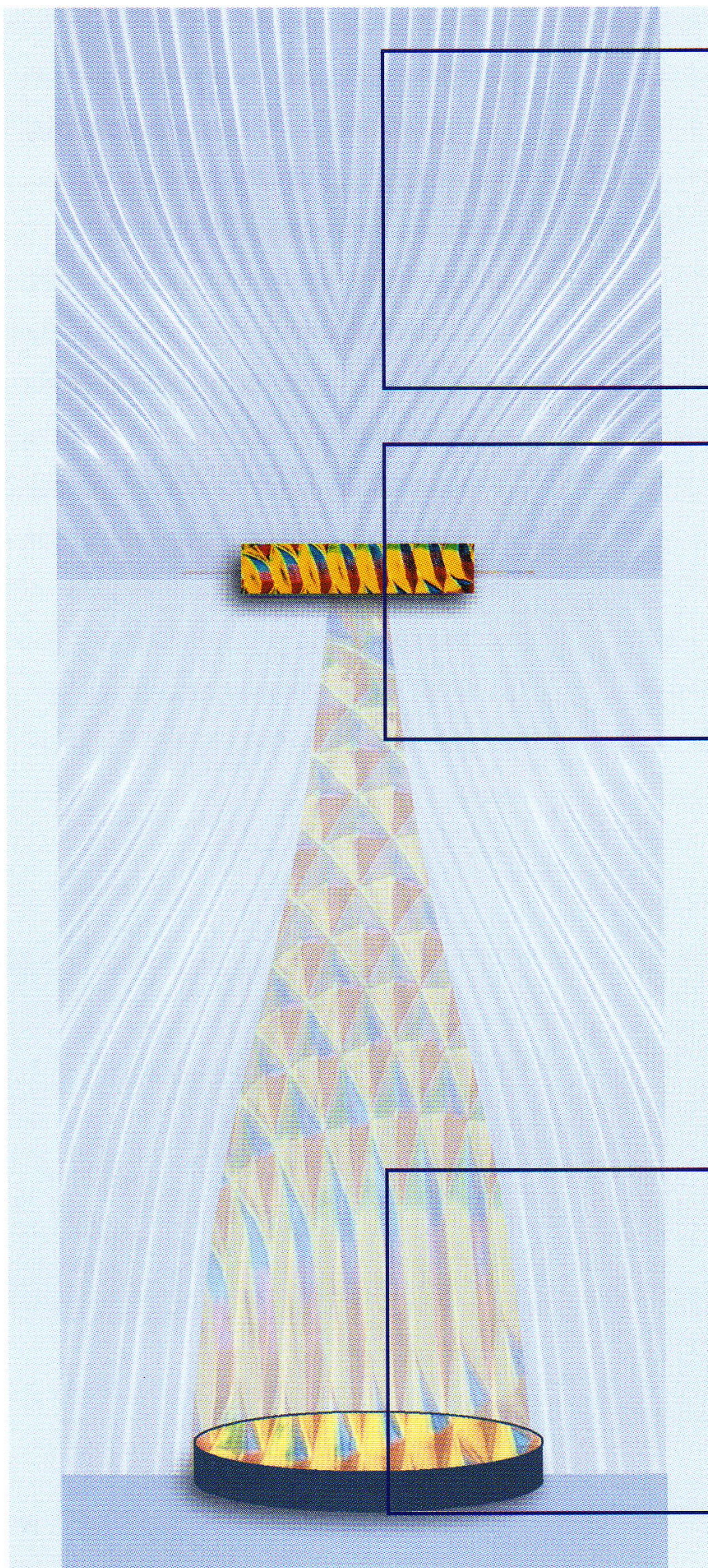
of gravity and the earth's magnetic field. (Note: The magnetic induction of the earth's magnetic field, B , is 10^{-4} Tesla).

The substance-specific oscillation patterns are hereby influenced (primarily amplitude-modulated) in such a way that no loss of information occurs during the stimulation imprinting of corresponding oscillation patterns onto the carrier substance. Up until recently this challenging problem could only be solved empirically, not analytically. In other words, by systematically conducting numerous experiments and subsequently analysing and observing the short- and long-term effects of the particular IC on actual outcomes in farming, horticulture, and water management.



Process Technology

A simplified schematic explanation of the PENERGETIC's complex production process is presented here. The processing equipment consists essentially of three integrated components: the head unit, the transfer unit, and the base unit. The schematic illustration reflects the essential components.



Head Unit HU

Two axially symmetrical bodies are positioned with a defined volume between them. The space between the bodies is filled with process-specific materials at a defined total density. One of the bodies is metal and therefore conducts electricity.

Transfer Unit TU

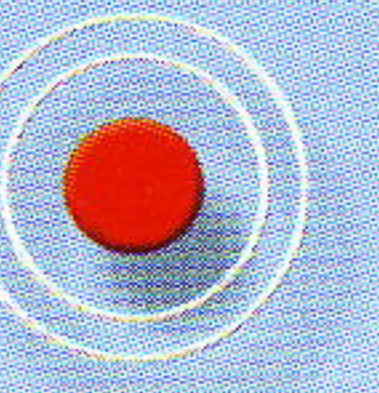
It consists of an adjustable holder for specimens (original substance and test substance) that can be moved horizontally and vertically, and an array of coils for the generation of a magnetic field.

Base Unit BU

It is made up of a horizontal conveyer belt with an integrated vertically adjustable container that can hold different amounts of material, from very small up to 75 kg of IC, over a coil array that can generate a further magnetic field.

Overall Layout

The special configuration of the head and base units allows for the generation of an electrical field between them. The production facility, located at PENERGETIC headquarters, is several meters high.



Modes of Action

The idea to try to use electrical and magnetic fields to imprint the characteristics of various properties onto information carriers does not just originate in the knowledge that substance-specific oscillation patterns and frequencies exist, but that such fields can create interactions that are applied in science, technology and medicine.

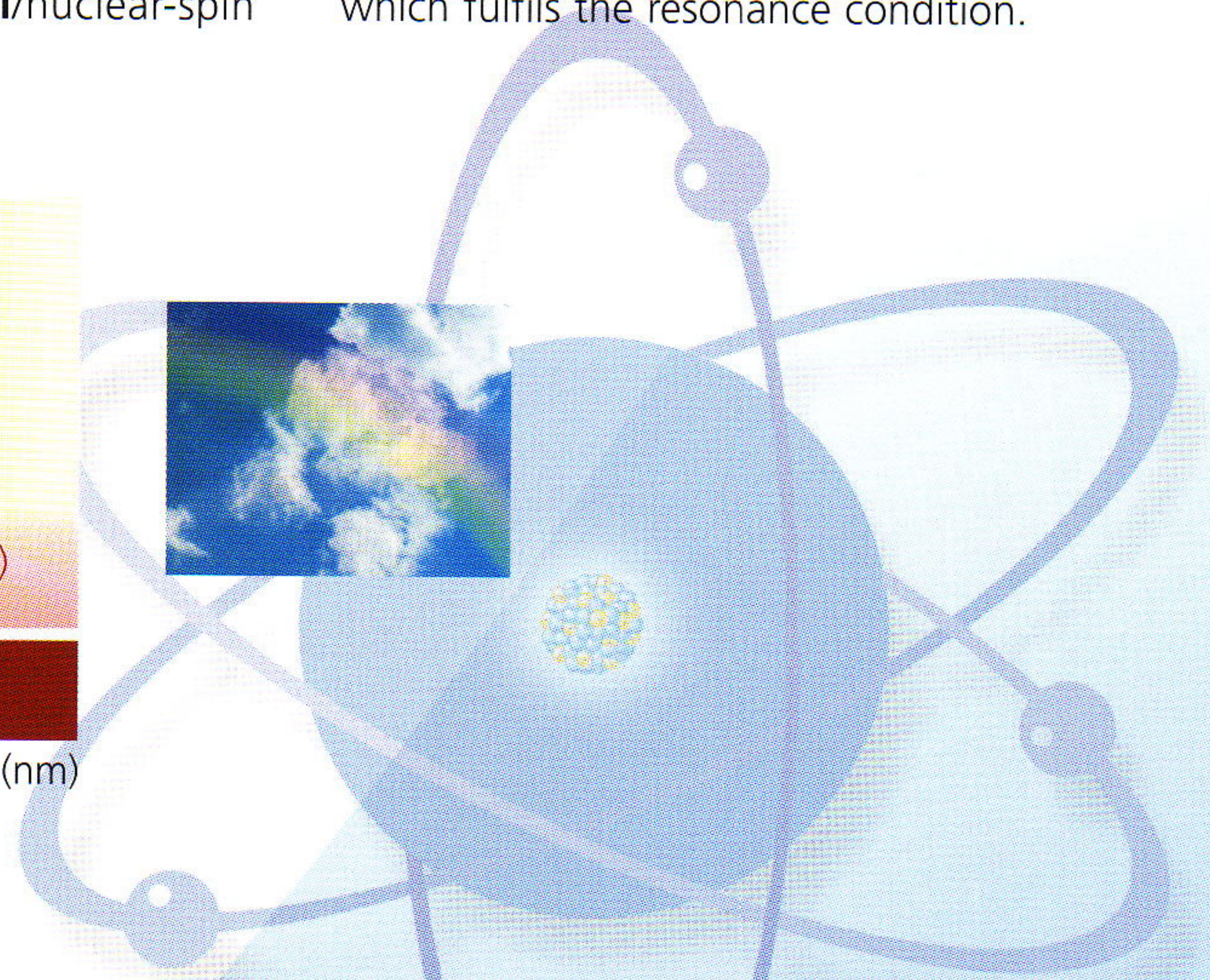
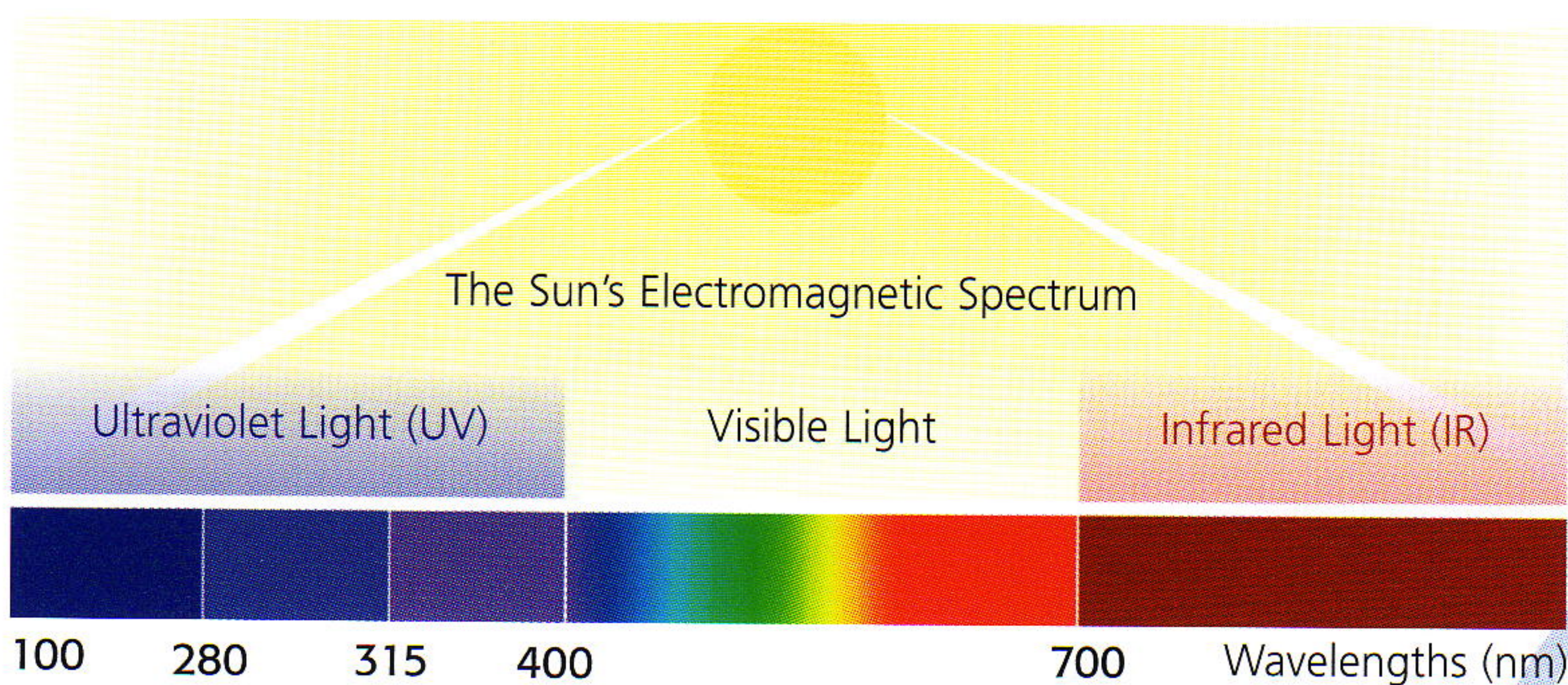
The fact that elementary particles are associated with a magnetic moment can be used. During this magnetic moment

the particle's spin can be made to interact with magnetic fields, with the result that a particle will contain different amounts of energy in a magnetic field depending on the orientation of its spin.

In the atom, for example, such interactions take place between electron and nucleus or between different electrons, and this phenomenon led directly to the development of nuclear magnetic resonance imaging (**NMRI**/nuclear-spin

tomography), in which magnetic inductions of about 5 Tesla are used.

In addition, chemical structural analysis uses nuclear-spin tomography to observe the effects that surrounding electrons and nearby atoms exert on the nuclear spin. For example, free electrons can create an additional magnetic field that reinforces or weakens the outer field, depending on the strength of the new field. This results in a frequency shift, which fulfils the resonance condition.



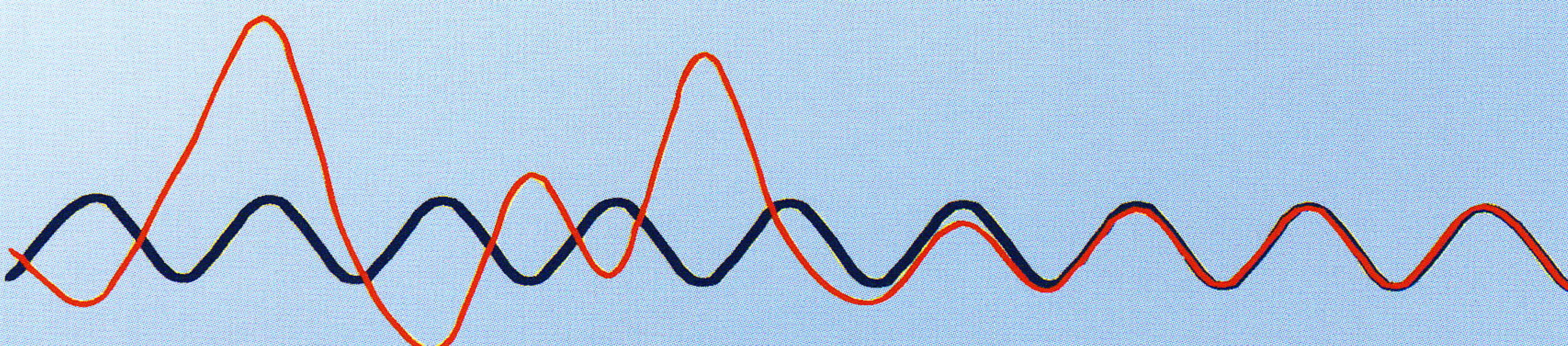
Modulation Principle

Penergetic uses this scientific knowledge, combined with a detailed understanding of the effects of selected substances and the widely disseminated knowledge of the industrial applications of analog modulation (AM) in the production of "actively-informed" substances.

The decision to use the modulation process was an obvious choice because of

the comprehensive understanding of the active parameters of the original substances and of their oscillation patterns. The idea of modulation is a continuous modification of the carrier wave resembling the approach used in radio engineering, in which a particular carrier frequency is transmitted by means of the applied fields. The aim, however, is to transmit

the actual frequency data from the oscillation patterns without loss of information. To achieve this, the frequency information of the carrier wave is transformed by increasing or reducing its amplitude. The edges of these carrier waves now form a wave shape that corresponds to the frequency information (the frequency pattern) to be transferred.



Assignment of Specific Parameters

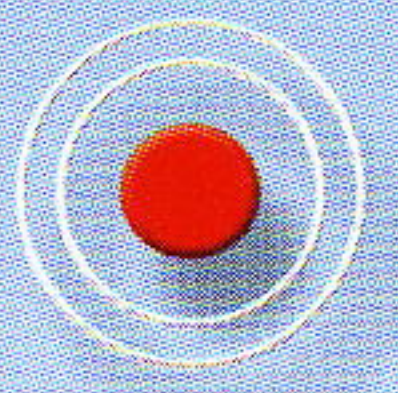
- The carrier wave in the modulation outlined is defined as a compound wave by the magnetic fields H_1 and H_2 . (Aim: resonance effects).
 - The actual frequency data to be imprinted is determined by the (amplified) ensemble of all oscillations of the substance specific oscillation pattern (of the particular original substances OS used).
 - The field H_1 has an effect on the oscillation patterns of the OS.
 - The field H_2 has an effect on the oscillation patterns of the information carriers IC, which are to be modified in their entirety.
 - The field E is spread as a directional field between the production units HU and BU.
- The fields H_1 and H_2 are arranged in such a way that they can be coupled (resonance hypothesis). Depending on the original substance and the ultimate practical application, their magnetic inductions are varied from 0 to several Tesla.

Parameterensemble

W_{Pi}^{OS}	The sum of all active parameters of the OS to $i=1-m$ (entirety)
E	Electrical field strength, field between production units HU and BU
H	Magnetic field strength H_1, H_2 (implicit $E_{1,2}$ at coil 1,2)
\emptyset	Magnetic flow \emptyset_1, \emptyset_2
t_E, t_H	Action time t of E and H_1, H_2
OS^n	Original substances (number with $n=1-k$)
IC^o	Information Carrier IC (number with $o=1-q$)
$OS^n_{A,d}$	Surface area A and thickness d of OS^n
$OS^n IC^o$	Distance between original substance n and information carrier o
f_H	Frequency of magnetic fields H_1, H_2
$f_H^{profile}(t)$	Frequency profile (amplitude and strength depending on t)
n ($n=1-k$)	Varying numbers of original substances OS
o ($o=1-q$)	Varying numbers of information carriers IC
i ($i=1-m$)	Number of different active parameters of OS and (identical) IC

When these parameters are considered, the result is the following fundamental interdependence between the original substance and the characteristic effects Pengergetic products (and therefore of the IC):

$$\sum_{i=1}^m W_P^{IC} = f(W_{Pi}^{OS}, E, H_{1,2}, \emptyset_{1,2}, t_E, t_H, OS^n_{A,d}, OS^n IC^o, f_{H_{1,2}}, f_{H_{1,2}}^{profile})$$



Overview and Outlook

The interrelations within the Penergetic production process are highly complex and are also influenced by external parameters. The main achievement in developing the process technology was to find the optimal design of arrangement and orientation of the various fields, in coordination with the other process components. Particularly in this area, a multitude of experiments had to be carried out because analytical solutions for the whole phenomenon of information imprinting were not and are not available.

It turned out that other fields such as those from mobile communications caused more or less intense disturbance, depending on the location of the production site. Penergetic was not exempt by this disturbance at various locations, until

the company moved to its present production site. Here it found optimal field conditions and was able to further reduce disturbance sufficiently by means of interference-shielding technology. Today, Penergetic AG, with its tried and tested process technology, delivers reproducible, effective, results with consistently high product quality. However, some of the process steps could only be developed from an empirical method and therefore required an ongoing proactive quality-control effort to ensure the effectiveness and active range of the information carriers used by Penergetic. Therefore, various institutions have been commissioned to carry out neutral examinations that not only shed light on the consistency of Penergetic products (compared to

the effectiveness of the original substances), but should also clarify individual, active mechanisms.

Penergetic's products have elicited a positive response from a large number of reputable clients in various market sectors and different countries, who have provided statements that lend witness to the far-reaching positive impacts of Penergetic products.

The following quote might be of particular interest:

"Magnetic energy is the elementary energy on which the entire life of the organisms depends."

[Prof. Dr. Werner Heisenberg, physicist and philosopher, winner of the Nobel Prize for Physics]

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