



**INTERNATIONAL COMPANY FOR ELECTROSMOG RESEARCH
IGEF CERTIFICATION AUTHORITY**

EXPERT REPORT

to assess the mobile telephone electrosmog harmonization module SAFER CALL of Schernhof Bio-Vital Technology with regard to its protective properties against electromagnetic radiation exposure

Client: Schernhof Handelsgesellschaft mbH
Bio-Vital Technologie
Stockach 30
A-6306 Söll

Object to be assessed: SAFER CALL Protection Sticker

Date: 16th March 2005

Publication is permitted only of the text in full. The copying or reproduction of extracts requires the author's consent.

Germany Italy Slovenia Netherlands Austria Switzerland Spain Czech Republic Hungary
IGEF Certification Authority Tenerife: Apartado 96, E-338370 La Matanza, Tenerife/Spain, Telephone 0034-922 337 844

Chairman of the International Company for Electrosmog research IGEF: Dipl.-BW Wulf-Dietrich Rose
Information and communication in the Internet: <http://www.elektrosmog.com> - E-mail: info@elektrosmog.com

Presentation of the problem

The manifold uses of modern technology are impossible without electric power and high-frequency electromagnetic radiation. Extensive equipment has been created to produce and distribute electric energy: power plants, power substations and transformer stations, high and medium-high voltage transmission lines, high-performance supply cables – right up to our domestic installation. This low-frequency network to supply power creates electric and magnetic fields and thus a significant part of the electromagnetic environmental pollution that is generally identified as electrosmog. All electrical devices, cables and other installations are also surrounded by electrical and magnetic fields and/or emit electromagnetic waves.

High-performance transmitters emit electromagnetic waves for mobile telecommunication, radio and television, radar, military monitoring, data transfer and directional radio etc.: high-frequency electrosmog, which we can no longer avoid. At the present time, the fields of mobile telecommunication technology are already ten to more than one hundred times higher than the emissions caused by television and radio transmitters, for example. And the fact is that we are just in the early stages of a development which is creating more and more ways to use wireless communication. Thus, in addition to mobile phones and indoor aeriels, there are also notebooks and computer networks which transfer their information using radio. And in practically every second house, cordless telephones conforming to the DECT standard are used, which emit pulsed microwaves around the clock – even when no phone call is being made.

This artificial electromagnetic radiation pollution, the intensity of which is often a million times greater than naturally occurring electromagnetic radiation, causes a range of problems in an increasing number of people: nervous complaints, difficulties in concentrating, headache, poor quality of sleep, loss of vitality and a reduced ability to cope with emotional and physical stress – the typical symptoms of electrostress. Epidemiological studies and experimental tests clearly demonstrate that electric and magnetic fields and waves, even at levels below the legal limits, may cause biological actions and organic effects that are potentially damaging to health.

In the light of the steady increase in electromagnetic radiation pollution in our environment, protecting ourselves from electrosmog in our own homes is becoming increasingly important. The issue of sleep is of crucial importance here. Scientific studies show that it is especially during the nocturnal regeneration period that our hormone balance is susceptible to electric and magnetic atmospherics. Therefore, in the area of sleep, particularly strict standards should be applied to the electromagnetic radiation pollution in the regeneration period.

The aim of the following study was therefore to test whether or to what extent the SAFER CALL protection sticker of Schernhof Handelsgesellschaft mbH does in fact offer protection against electrosmog and fulfils the requirements of the International Society for Electrosmog research IGEF, in order to be awarded the IGEF test seal "Tested and recommended by the IGEF".

1. Documented studies to prove the protective action of the SAFER CALL protection sticker against electromagnetic radiation pollution from mobile communication technology.

According to the manufacturer's information, the SAFER CALL protection sticker is a physically informed film that can protect the human organism from the effects of harmful influences caused by electromagnetic radiation when mobile communications devices are used.

The following evidence and expert report document the protective effect of the SAFER CALL protection sticker and play a part in the process for the awarding of the distinction "Tested and recommended by the IGEF":

1.1 Expert report on the efficacy of the mobile phone harmonization module SAFER CALL of Schernhof Bio-Vital Technologie Dr. Uwe Gerlach, Physicist and Biofeedback/Neurofeedback expert, Taufkirchen

1.1.1 Evaluation and synopsis Part A – electroencephalographic measurement with neurofeedback EEGs

According to EEG measurements carried out on a total of 27 subjects within the scope of this study, it is clear in each case that the use of an active mobile phone causes increased amplitudes of all EEG frequency ranges compared to the baseline measurement, which, in the experience of competent neurofeedback experts of many years' standing, represents negative consequences for the health. This applies for the low-frequency exposure caused by the active mobile phone in the frequency range of 0 – 40 Hz (established in particular at a constant 35 Hz).

The majority of the diagrams showing the measurement results demonstrate a protective action of the SAFER CALL Protection Sticker in the low-frequency range examined.

The results of such measurements cannot be reproduced arbitrarily under the same conditions according to the postulate of scientific practice. The electromagnetic field of the mobile telephone induces varying changes in the frequency range amplitudes in the various test subjects, depending on their pre-exposure, their physiological and/or vegetative condition and possibly their electro-sensitivity.

The following results were recorded from the EEG measurement:

- The use of mobile communications technology generally results in increased EEG activity compared to the baseline measured values of the subjects, which must be presented as a negative effect on health.
- The cause of the increased EEG activity of the active mobile phone in the near zone is always substantial low-frequency spurious radiation, which this expert report discovered at 35 Hz in particular (but also at lower frequencies).
- In the far zone, weaker low-frequency spurious radiation has also been confirmed by the results of the BrainMaster trials.
- The direct effects of this low-frequency spurious radiation on the organism still need to be researched.
- The majority of the diagrams showing the measurement results of the neurofeedback study speak for the protective action of the SAFER CALL chip, but a statistical analysis is not possible on account of the low number of subjects involved.

- In young people, the ability to break down electrosmog stress even after a very short time is very much more pronounced than in older people. Accordingly, the EEG measurements in young people – with due caution and reservation in view of the small number of subjects – show fewer significant differences in the measurements with and without the use of the SAFER CALL chip.
- Older subjects showed throughout a smaller increase in EEG activity during the mobile phone call according to the baseline measurement (with and without the SAFER CALL module). In older, more relaxed people, EEG activity during the phone call was less with the module than without. This observation speaks for the positive protective action of the SAFER CALL protection sticker.
- It is not possible to establish within the scope of EEG measurements to what extent the vegetative mood of subjects is negatively affected by the high-frequency radiation that is certainly present (in the kilo-, mega- and gigahertz range) of the active mobile phone. Other electrical/electronic measuring procedures are required for this.

1.1.2 Analysis and synopsis Part B – Biofeedback procedure

To prove the protective action of the SAFER CALL protection sticker against electromagnetic radiation pollution when mobile communications technology is used, the biofeedback equipment “NEXUS 10” was used in this study on 14 test subjects to record and analyse the following signals of the vegetative nervous system.

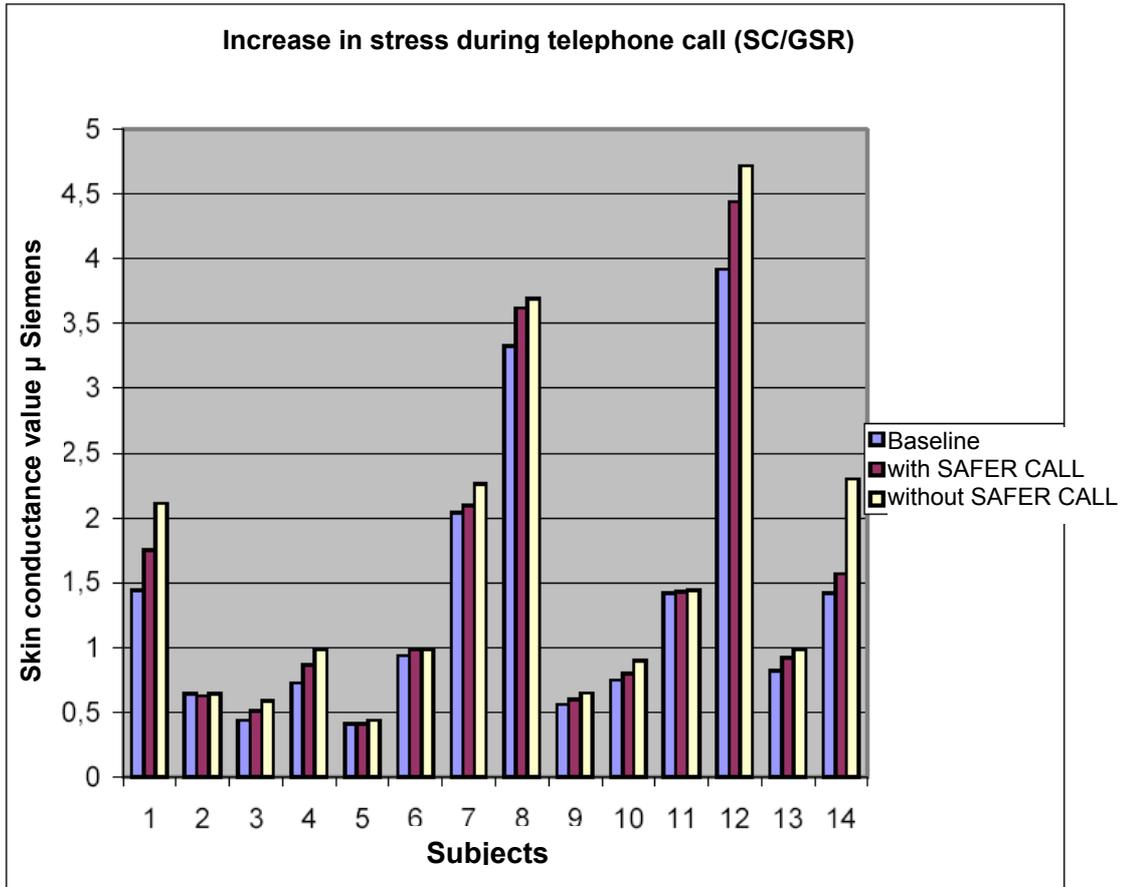
- SC/GSR – skin conductance value
- skin temperature
- BVP amplitude
- heart rate

Previous studies had demonstrated that electromagnetic fields from mobile radio technology is most likely to cause changes in the skin conductance values as a result of increased sweat gland activity, and in skin temperature.

When the body is exposed to incompatible information or oscillations, it tries to protect itself by electrophysical means, by reducing its permeability to this oscillation. In practice, this is achieved by an increase in skin resistance. The sweat gland activity increases electrical conductivity, thus enabling the excitation level to be measured. Heat production as a result of HF fields with a frequency of more than 1 MHz has also been the subject of several studies.

The findings of the studies confirmed these expectations.

The following results of the feedback measurement can be recorded:



- In comparison to the average skin conductance values of the baseline, when telephoning with the SAFER CALL chip, only a slight increase in stress between 0 and in the maximum case 22 percent is recorded. The sweat gland activity of the predominant majority of the test subjects increased when the mobile telephone was activated, and at the end of the measurement period, it was only slightly above the baseline values.
- When telephoning without the SAFER CALL chip, the measuring report showed a clear increase in stress accumulation in the overwhelming majority of the test subjects. The increase in sweat gland activity as protection for the organism is recorded here, apart from a few exceptions, at between 11% up to a maximum value of 62%.
- This study likewise confirms the findings of the EEG measurements, namely that young and healthy test subjects are able to break down electrosmog stress significantly more quickly. However, it is to be expected that the constant excitation of the nervous system as a result of the significantly more frequent use of mobile telecommunications equipment will lead to negative effects on health when viewed in the long term.
- When including stressed or electrosensitive people in such a study, an even clearer reduction in sweat gland activity is to be expected when the SAFER CALL chip is used when telephoning with mobile communications equipment.

- When considering the change in the skin temperature of the test subjects when telephoning with a mobile phone, the measured values seem relatively constant, with minor fluctuations. In contrast to the normal interaction, the intensity of the circulation falls with the duration of the telephone call in the majority of subjects, so that the skin temperature is affected by the energy of the electromagnetic field.
- The curve shape of all measured biofeedback signals shows a balanced tendency in period 2 of the measuring report (telephone call with SAFER CALL chip) in all test subjects. Including electrosensitive persons in such a study could corroborate this statement.

2. Findings of the examinations using dark field microscopy by the naturopathy practice Scheller, Bad Reichenhall

The naturopathy practice Scheller, Bad Reichenhall, carried out an examination of the protective action of the SAFER CALL chip on behalf of Schernhof Handelsgesellschaft mbH using the dark field microscopy technique which is familiar in alternative medicine. It is well known and also an indication of the quality of donor blood, where blood platelets bind together as a result of electrosmog and form long, rolled chains. These may then lead to flow obstructions and blockages in the veins.

The examination resulted in the following findings:

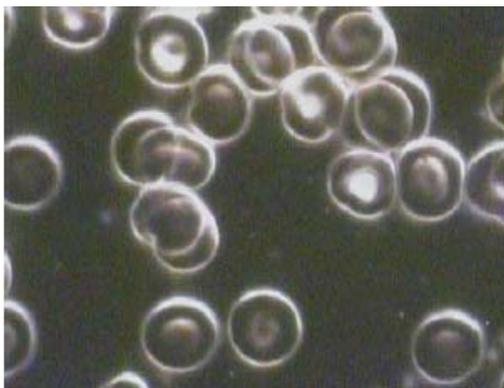


Fig 1: Blood picture of test person before phone call

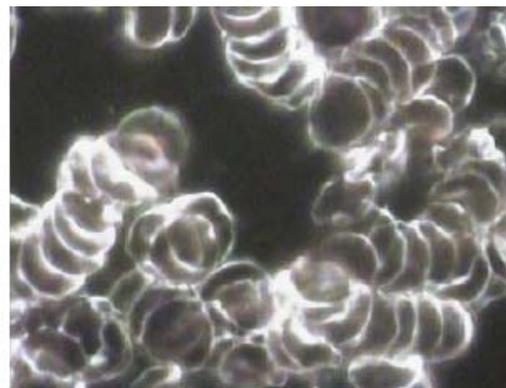


Fig.2: Blood picture of test person after phone call without SAFER CALL

The formation of the "money rolls" described above after the mobile phone call (5 minutes) with out the SAFER CALL chip is clearly visible.



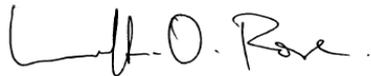
Fig. 3: Blood picture of test person after a mobile phone call (5 minutes) with SAFER CALL chip

This examination also confirms the protective action of the SAFER CALL protection sticker against electrosmog pollution.

In addition, tests were also carried out to establish whether the use of aluminium in the case of the SAFER CALL chip possibly strengthens the electromagnetic radiation. In the case of a mobile phone with an aerial, free radiation is always to be expected. In the case of a mobile phone with an internal aerial too, such as the Siemens MC 60 mobile phone, no strengthening of the electromagnetic radiation was detected as a result of the SAFER CALL chip.

The findings of the study have thus demonstrated that the SAFER CALL protection sticker of Schernhof Handel mbH is suitable for protection against electrosmog. The requirements of the International Company for Electrosmog research IGEF for being awarded the test seal "Tested and recommended by the IGEF" are fully satisfied.

16th March 2005

A handwritten signature in black ink, appearing to read 'Wulf-Dietrich Rose'.

Wulf-Dietrich Rose
Head of IGEF Certification Authority