## 8 YMBIOCEUTICAL 8



# Harmonizer GmbH

# Report

This prospectus is intended exclusively for specialist personnel.

The information contained in this prospectus is no substitute for medical or therapeutic treatment. The purpose of the prospectus is to document information and experiences from other doctors and therapists so that one is then able to make decisions independently.

The data and facts provided have been researched with great care.

The authors and the company are, however, not responsible for any medical requirements that are referred to in the material that has been presented.

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Note: We would like to point out that the technology that is introduced here does not yet conform with the predominant scientific orthodoxy and doctrine and has not yet been recognised by traditional medical science.

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## **Symbioceuticals - Harmonizer Comfort**



### IIREC

International Institute for Research on Electromagnetic Compatibility

# Biophysical testing of the effect of the product

### «Harmonizer Comfort»

- including stress resistance in geopathogenic und technogenically disturbed magnetic fields

Report no.	123/2014
Date	December 13 <sup>th</sup> , 2014
Contractee	<b>Symbioceuticals – Harmonizer GmbH</b> Mr Jürgen Lueger
	Gangsteig 2 AT-5082 Grödig
Contractor/ Expert	<b>IIREC Dr. Medinger e.U.</b> Mag. Dr. Walter Hannes Medinger
	Ringstrasse 64 A-3500 Krems an der Donau
Number of pages	11 (excluding annex)
Annex	17 illustrations

IIREC Dr. Medinger e.U., Ringstr. 64, 3500 Krems an der Donau • Internationales Institut für EMV-Forschung • *E*lektro*M*agnetische *V*erträglichkeit auf biophysikalischer Grundlage • Ingenieurbüro auf dem Gebiet der Umwelttechnik • Wissenschaftliche Leitung: Mag. Dr. Walter Hannes Medinger • Allg. beeideter und gerichtl. zertifizierter Sachverständiger • Ruf: 0 29 42 20 786 • Kundendienst: 0699 181 282 51 • <u>www.iirec.at</u> • info@iirec.at

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In case of exploitation by the contractee, the report must not be handed on in an abbreviated version or a modified version.

The scope of this report is exclusively the documentation and evaluation of effects that were assessed by objective physical measurement. Neither the investigation of manufacturing nor of mode of operation of the product was contracted. It is up to the manufacturer to care for constant product quality.

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### I. Subject of Investigation

The international institute IIREC was mandated by Symbioceuticals – Harmonizer GmbH to test the effect of the product «Harmonizer Comfort» by objective measurements (with physical meters, independent of the subjective sensitivity of humans).

According to experience by IIREC the procedure of grid measurement of the vertical component of magnetic flux density, or induction, in the static (DC) and extremely low frequency (ELF) magnetic field ( $\pm$  3 dB range up to 18 Hz) including the evaluation of the divergence of the magnetic field gradient ist appropriate to give evidence if a product of this kind is able to **smoothen magnetic field gradients** (**«magnetic field equalizing effect»**).

In the study documented here **questions** relevant to the user were examined by measurements of the impact of the product on geopathogenic and technogenic magnetic field disturbances, such as:

↔ Will the product unfold its effect reliably, and

will this be impaired by disturbing influences?

A satisfying answer to these question is a precondition for awarding the biophysical test seal by IIREC.

The **test sample** was handed over to IIREC by the manufacturer. It was plugged in at a distance of approx. 50 cm to the measuring field.

The **test field** was the disturbed magnetic field above a geological anomaly, and in another instance, a relatively smooth background field in which a smart phone (iPhone) was operated. Both fields were located in the ground floor of the institute building. The measuring field was set up as shown in fig. I (annex) by a wooden measuring board with II X II measuring points stenced into it.

The magnetic field disturbances of natural (geological) or technical (iPhone) origin at the measuring site may result in effects in various frequency ranges. Note that the measurements and effects reported here are restricted to the DC and ELF field in the denoted frequency range. Radio frequency (RF) electromagnetic fields of the cellular phone were not comprised by the measurements, but the DC and ELF modulations thereof were well within the measurement range.

### 2. Testing of Effects in the Magnetic Field

The magnetic field has particular biological relevance because it permeates the body, it is not easily shielded, it influences all life processes and exerts an immediate impact on the ions, the electrically charged particles in the body (e.g. sodium, potassium, calcium, magnesium, zinc and many others in our cells, iron in hemoglobine etc.). Signals imprinted to cell water and body water are magnetic in nature.

Testing in the magnetic field, therefore, is the first choice when examining the coherent effect of resonance products. (In physics, coherence is defined as a constant phase correlation between oscillations of single elements. Coherence is the principle that maximises the impact of subtle microscopic effects, e.g. it converts normal light to laser light.)

#### 2.1 Method of measurement and evaluation

Test measurements were conducted according to the **grid measurement procedure** of IIREC in the DC and ELF magnetic field. The magnitude measured was the **vertical magnetic induction** in microtesla ( $\mu$ T). At each measuring site, a test field of 0.5 by 0.5 m was measured. In this measuring field there were II x II = 121 measuring points at a distance of 5 cm.

As a **meter** for measuring the magnetic flux density, or induction ( $\pm 3 \text{ dB}$  range up to 18 Hz) the digital precision teslameter 05/40 by Projekt Elektronik (Berlin) was applied. A VC-960 multimeter by Voltcraft served as a data logger. The most significant particulars of the measuring system were compiled in **table 1**.

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The measurement board representing the measuring field with stenced measuring points is equipped with a holder for the probe gliding on a cursor. This measurement **setting** makes it possible to move the probe to any measuring point avoiding deviations by inclination or torsion. Thus an optimal precision of measurement is guaranteed. For measurements involving a mobile phone the measuring apparatus provides a drawer. Positioned in this drawer, the cellular is situated beneath the measurement plane, in the center of the measuring field.

Teslameter	05/40
Measurement range	± 100 μT
Digital resolution	0,1 $\mu$ T (with data logger 0,01 $\mu$ T)
Measurement deviation	$\pm$ 0.5 % of measured value @ 40 $\mu$ T
$Frequencyrange(\pm_3dB)$	up to 18 Hz
Sensor system	fluxgate, sensitive to direction

 Table I: Significant technical data of teslameter

The evaluation and mapping of measured data was performed by the data analysis software Surfer by Golden Software. The values measured at single measuring points were interpolated by the software and mapped for the measurement area of 0.5 by 0.5 m. Contour lines were drawn along points of equal magnetic induction. The coordinate axes were labeled with lengths in m.

In the **diagrams** of the annex the areas between contour lines are colored. The respective value ranges of the vertical magnetic induction in  $\mu$ T can be read from the color scale. For a maximum of color differentiation a rainbow spectrum was applied in these diagrams.

The contour lines can be read in the same manner as the well-known lines of equal height in geographical maps. Lines lying close to each other indicate a strong gradient. Larger distances between the lines indicate a region with low gradients. A transition from a low gradient to a strong one or vice versa causes a disruption that will exert a biological irritation characteristic for geopathogenic zones. A smooth or "equalized" field is characterised by balanced gradients.

The effect of the product in the field can be seen when contrasting the situations without and with the impact of the product.

In order to be able to read this effect immediately from a diagram, **difference maps** were generated. In these diagrams, the mapped values are differences of measured values with and without the tested product, resp. For easy reading, these maps show threefold color: Blue color indicates a decrease, yellow color an increase (and white color constancy) of the measured value.

A third type of diagrams stellt maps the degree of biological disturbance for each measuring point. From the view of mathematical physics, this is calculated as the divergence of the field gradient (field gradient divergence FGD). More details are found in the comments to the diagrams in the annex, and in the following sections, as well.

#### 2.2 Detailed Investigations and Results

In each case, the measurements started recording the values of the measuring field without application of technical field sources or of the product to be tested. In one instance, a geopathogenic field was measured (fig. 2), in another instance a neutral background field for measurements with an iPhone (fig. 10). In the second instance, one more measurement was conducted to monitor the disturbance brought about by a cellular phone (fig. 11). The terminal measurement was, in any instance, designed as a repetition of the measurement of the disturbed field after activation of the Harmonizer Comfort (fig. 3 and fig. 12 resp.). The measurement with the Harmonizer in the geopathogenic field was completed once more after the Harmonizer had been put to test in an extremely inhomogeneous magnetic field (fig. 4).

#### 2.2.1 Test in a geopathogenic field

The comparison of the measurement results of the geopathogenic background (fig. 2) and of the same test field after activation and 24 hours' impact of the Harmonizer Comfort (fig. 3) reveals at first sight an effective balancing of field disturbances by the Harmonizer. The difference mapping (fig. 5) confirms boldly the effect of the Harmonizer. Moreover, from the comparison of fig. 8 to fig. 7 the geopathogenic degree of disturbances can be clearly seen to fade out by impact of the Harmonizer.

#### 2.2.2 Stress test in an extremely inhomogeneous magnetic field

As a matter of experience, products well suitable to perform an effective balance of magnetic field disturbances may lose or even revert this effect when exposed to a strong inhomogeneity of the magnetic field. Therefore, this type of stress test forms a standard element in the testing routines of IIREC.

The stress test was conducted by exposition of the test sample of the Harmonizer Comfort during a period of 72 hours to a magnetic field that was generated by two permanent magnets of an induction of 7 mT each in an orthogonal configuration. After this period the test sample was taken back to the test field. The results of the following measurement of the field can be seen from fig. 4. This repetition of the field measurement under the impact of the Harmonizer reveals some zones of disturbance, but the difference mapping (fig. 6) confirms that the Harmonizer was as effective as before having undergone the stress test. From this we conclude that the exposition to the stressing magnetic field did not result in an impairment of the efficacy of the product. The alteration in the resulting field compared to the excellent previous result finds its explanation in natural background fluctuations.

#### 2.2.3 Test in a technogenically disturbed field (iPhone)

In this case, the measurement series consisted of three steps: (i) The measurement of the background yielded a virtually neutral (fig. 10), relatively undisturbed (fig. 15) magnetic field. (ii) Consecutively, the effect of an iPhone in transmission mode was measured. In this case, the disturbance immediately above the smart phone is predominant (fig. 11 and fig. 16 compared to figures 10 and 15, resp.). The difference mapping (fig. 13) however reveals disturbances in the ambience of the smart phone that are weaker but have amplitudes in a biologically sensitive range of values. (iii) The third measurement was conducted in the same manner as the second one, but in this case the Harmonizer Comfort was activated. The resulting alteration of the field (fig. 12) may be traced back – by aid of the difference mapping (fig. 14) – to the effect of the Harmonizer. The evaluation of degrees of disturbance, as well, exhibits in fig. 17 the improvement in contrast to fig. 16.

### 3. Expert's Opinion

#### 3.1 Metrological significance of results

The effects found in the measurements – on one hand the disturbing effects of various causes (geological, technical) in the test field, and on the other hand the alterations after activation of the Harmonizer Comfort – have an order of magnitude that is distinctly above the measurement uncertainty, so they are clearly classified as **significant**.

The reading of DC values on the precision teslameter 05/40 (including the ELF contribution) exhibits variations of  $0.05 \,\mu$ T. Measured values, therefore, are certain if exceeding  $0.1 \,\mu$ T. For effects evaluated as differences (between a "disturbed" field and a "balanced" one) according to laws of metrology, the threshold of certainty is computed at  $0.14 \,\mu$ T (=  $0.1 \,\mu$ T times square root of 2). Accordingly, DC effects from  $0.15 \,\mu$ T upward are classified as certain.

The ranges of values in the difference maps (figures 5, 6, and 14) immediately tell us that this criterion is fulfilled at numerous measuring points. *The effects found exceed distinctly the measurement uncertainty and thus are metrologically significant.* 

Moreover the results that were outlined in detail in section 2.2 and in the illustrations in the annex give the following answers to the themes of investigation presented in the introduction:

- The Harmonizer Comfort unfolds its measurable impact of balancing the magnetic field within 24 hours in a geopathogenic field, or within 30 minutes on technogenic magnetic field disturbances in the ambience of a smart phone in transmission mode.
- The efficacy of the product is not lost after a 72 hours' Exposition to a strong and extremely inhomogeneous magnetic field.

#### 3.2 Biological relevance of results

The human body, as a "receiving antenna", is endowed with maximal biological sensitivity in those ranges where natural electromagnetic fields prevail or variate. The variations of the geomagnetic field e.g. range to an order of magnitude of  $0.2 \mu$ T. In the measurement series conducted we gave evidence of the ability of the product to balance disturbances in this range of tenths of microtesla. This property is of utmost biological importance, because it reduces the degree of disturbance to a scale that does no biological harm.

To be sure in this point, the degree of biological disturbance, or irritation, was evaluated for the measuring points in the test field (**field gradient divergence FGD**, figures 7 to 9, and 15 to 17). The mapping of results of this data analysis reveals the improvement brought about by impact of the Harmonizer Comfort.

In the study documented here the **impact of the Harmonizer on geopathogenic as well as technogenic disturbances** was tested. Magnetic disturbances of these types imponder biologically quite often **at sleeping and working places**, because of long duration of stay.

The effets of the Harmonizer that were evidenced here (balance of geopathogenic and technogenic disturbances, and resistance against strong magnetic field disruptions) confirm, on the whole, a remarkable reliability of the product.

#### 3.3 Awarding of test seal

Thus, by **objective physical measurements** with meters sensitive to **magnetic induction** the reliability and stress resistance of the biologically beneficial effect of the Harmonizer Comfort, namely its balancing of magnetiv field gradients, was proven.

With this being evidenced, the conditions for awarding the test seal of IIREC to the product are fulfilled. The manufacturer/contractee is entitled – under the additional terms and premises quoted below – to declare the product «Harmonizer Comfort» as »tested by IIREC« and to attach the following test seal to the product:



Terms:

(I) The validity of the test seal shall be prolongued in due time before expiration.

(2) IIREC shall be informed immediately of any alteration of the terms of manufacturing or of the effect of the product.

(3) The test seal shall not be applied any longer, should future testing by IIREC find a decline of product quality, or one of the terms of application not to be met any more.

Premises:

(I) The consumers of the product shall be notably informed on the proper application of the product, and that a combination with a different product might be counterproductive and should be avoided.

Important notes:

(I) The test seal may be applied with the product, the product documents, or the product wrapping, wherever a seal is attached by the manufacturer.

(2) IIREC will offer to the contractee in due time, before expiration of the validity of the test seal, a periodic audit and prolongue, in case of a positive result, the validity of the test seal.

(3) If desired, IIREC will elaborate suggestions for an extended quality assurance of the product.

(4) It is up to the manufacturer to care for constant product quality.

By his signature the expert confirms that the measurements and evaluations were conducted under his supervision, and the results being correct within the precision limits of measurement and evaluation.

Walk Under

Walter Hannes Medinger, MSc, PhD

Generally Sworn and Certified Expert at Court Scientific Head of IIREC International Institute for *EMC* Research *E*lectro*M*agnetic *C*ompatibility on a biophysical foundation

## Annex:

### 17 Illustrations



#### Fig. 1: Measurement setting

For each measuring procedure the measuring apparatus was set up in the field. It is made up of a wooden measuring board with holes arranged in a regular grid representing the measuring points. A cursor – to which the probe (black) is fixed in a holder (white) – can be moved to any measuring point. The teslameter (yellow) as the registration unit proper is connected to the data logger (grey). – For measurements in the ambience of a mobile phone, the mobile is positioned in a drawer, immediately beneath the center or the measuring field.

The diagrams to follow show interpolations of values that were measured in a **geopathogenic field**. These diagrams were generated by the data analysis software Surfer by Golden Software.





#### Fig. 4: Measurement with Harmonizer Comfort following stress test

This map shows the field values in the test field with Harmonizer Comfort, measured after the Harmonizer was put to a 72 hours' stress test in an extremely inhomogeneous magnetic field.

Compared to fig. 3 an increase of irregularities in the field is found. A more detailed assessment is necessary in order to discern whether the Harmonizer has lost in efficacy during the stress test. Another possibility is a rise of geopathogenic activity while the efficacy of the Harmonizer was not impaired.

The followig illustrations exhibit for each measuring point a difference of values that were measured in two measurement situations (cf. Diagrams 2 to 4), thus representing the *net effect* of the Harmonizer before and after the stress test.







Now will follow – in analogy to fig. 5 and 6 – *difference mappings* representing the net effect of the Harmonizer Comfort. Fig. 13: Effect of the iPhone (without an 0.5 Harmonizer) 0.45 This diagram maps for each measuring point the difference of measured values from fig. 11 minus fig. 0.3 ю. Apart from the strong effects immediately above the iPhone showing up in the center of the field additional magnetic field disturbances are recognisable in the surroundings amounting at 0.1 to 0.2 microtesla. 0.1 This is the amplitude of natural magnetic field n variations. It is of great biological relevance, because the body is very susceptible to this amplitude, and in the phoning situation these disturbances extend to 6.3 0.35 0.4 0.45 sensitive regions inside the head. 0.6 Fig. 14: Effekt of the Harmonizer 0.46 This net effect is mapped in the neighbouring diagram as the difference of the values from fig. 12 minus fig. 11. 0.35 This diagram answers the question, what was the 0 impact of the Harmonizer on the situation with the iPhone in the field. 0.25 -0.2 It can be recognised that these alterations have 0.2 considerable amounts (to -0.5 microtesla) balancing -0.3 0.1 the effects in the ambience of the iPhone. (Where in -0 4 fig. 13 an increase of values was indicated in yellow п color, a decrease is indicated in fig. 14 in blue color, 0.05 and vice versa.) 0.05 0.45 01 0.15 0.25 0.35 0.4 At last, the degrees of biological disturbance in the measuring field are mapped as in fig. 7 to 9. 0.5 Fig. 15: Degree of disturbance in the background field 0.45 2500 0.4 2000 1500 The mapping shows a relatively low level of 0.35 -1000 disturbance in the background field. -500 0.3 -0 (Note that the scale of values was shifted compared -500 0.25 to fig. 7.) -1000 0.2 -1500 2000 0.15 2500 3000 0.1 3500 0.05 04 0.15 0.25 03 0.35 0.45





## Air particle measurement in the Chiemsee-Apotheke OHG pharmacy in 83339 Chieming, Hauptstraße 4 Air particle with the MALVERN Laser Particle Counter MPC 3106 particle measurement device



#### Declaration and objective of the measurement:

When using the particle measurement device, 28 litres from one room were sucked in through two sheets of glass in one minute. A different pattern arises from the laser emissions through the sheets of glass. On the basis of this distribution, a client can determine and count the size of the

particles.

During this measurement process, 0.3/0.5/1.0/3.0/5.0/10.0 micrometres were measured. Particle counters are used in clinics and also in the manufacturing of medicaments for inspecting the clean room conditions.

#### Potential influences on the measurement result: Temperature, air humidity, draught and direct sunlight

#### **Declaration, measured object, pharmacy:**

- Chiemsee-Apotheke pharmacy in 83339 Chieming. The proprietor Mr. Roeder was also present

- Date:  $10^{\rm th}$  October 2014 at 6:15 pm

- Weather sunny, but with no direct sunlight into the pharmacy / doors closed / lighting in operation

- Temperature at the first measurement 22.7 degrees Celsius
- Air humidity 51%
- Measurement units 10 pieces, a total of 30 measurements without interference suppression
- Ceiling height 2.54 metres
- A number of connected rooms, doors opened, no draught
- Suction height with anti-static hose from the counter 85 cm

- Pharmacy equipmen : vapour lamps, carpets in the area behind the counter, radiators, a number of checkouts, WLAN

#### **Result particle measurement first measurement average after 30 measurements:**

#### Re-measurement 2<sup>nd</sup> day with Harmonizer Comfort installed (on 10/10/2014 at 9:40 pm): Date 11/10/2014 / Time from 7:21 am Air humidity 50% Temperature 22.3 degrees Celsius



### (on 10/10/2014 at 9:40 pm): Date 19/10/2014 / Time from 6:17 pm Air humidity 45% Temperature 23.5 degrees Celsius

1.8u         23567         22277           3.8u         1296         997           5.8u         293         215           18.u         78         78           LOCATION 801, 18:20:32 OCT 19,14         18:20:32 OCT 19,14	
CVCLES = 010, PERIOD         = 00:01:00           SIZE         CUMULATIVE         DIFFERENTIAL           0.3u         242482         167006           0.5u         75476         52528           1.0u         22948         21592           3.0u         1356         1028           5.0u         328         227           10.u         101         101	A STATE OF A
Libert fun Bat, 18:21735 001 19:14           CVCLES = 018, PERIOD = 00:01:00           SIZE CUMULATIVE DIFFERENTIAL           0.3u         243483           1.6u         22795           3.6u         1294           1009         5.8u           285         203           10.u         82	

Assessment, results after the measurements in the Apotheke Chieming pharmacy: No significant change was determined after approximately 8 hours. Reduction in dust 0.3 micrometres: approx. 8.8%

## Assessment after 9 days installation of Harmonizer Comfort: Reduction in dust: 0.3 micrometres: 56.8 % Despite air humidity of 45 % and temperature of 23.5 degrees Celsius.

Chieming, dem 23.10.2014





## Air particle measurement in the Pizzeria Aldente

# in 83339 Chieming Air particle with the MALVERN Laser Particle Counter MPC 3106 particle measurement device





#### **Declaration and objective of the measurement:**

When using the particle measurement device, 28 litres from one room were sucked in through two sheets of glass in one minute. A different pattern arises from the laser emissions through the sheets of glass. On the basis of this distribution, a client can determine and count the size of the particles.

During this measurement process, 0.3/0.5/1.0/3.0/5.0/10.0 micrometres were measured. Particle counters are used in clinics and also in the manufacturing of medicaments for inspecting the clean room conditions.

#### Potential influences on the measurement result: Temperature, air humidity, draught and direct sunlight

#### Declaration on the property measured, a pizzeria:

- Pizzeria Aldente in 83339 Chieming

- Date:  $18^{\mbox{th}}$  October 2014 at 7:31 am

- Weather: sunny, but with no direct sunlight into the Pizzeria/doors closed/ lighting in operation

- Temperature at the first measurement 23.2 degrees Celsius
- Air humidity 50%

- Measurement units 10 pieces, a total of 30 measurements without interference suppression

- Ceiling height 3.31 metres

- A number of connected rooms, doors opened, no draught

- Suction height with anti-static hose from the counter 75 cm

- Pizzeria equipment: emitters, wooden flooring, tiles, Wodtke pellet stove, radiators, a number of radio ordering devices, WLAN

- First measurement without Harmonizer Comfort, without pellet stove heating periods

- Additional measurements with Harmonizer Comfort in the heating periods

#### **Result particle measurement first measurement average after 30 measurements:**

LOCAT	ION 001, 07:31:	18 OCT 15,14	
CYCLES	5 = 010, PERIOD	= 00:01:00	
SIZE	CUMULATIVE	DIFFERENTIAL	
0.30	313511	250389	
0.5u	63122	54271	
1.Øu	8851	8240	
3.0u	611	492	
5.0u	119	90	
10.u	29	29	
-	11		-

Re-measurement after three weeks with Harmonizer Comfort installed (on 15/10/2014 at 8:35 am) Date 04/11/2014 / Time from 6:35 am Air humidity 43% Temperature 21.8 degrees Celsius

10.0	J		
LOCAT	ION 001, 06:35:	20 NOV 04,14	
CYCLES	6 = 010, PERIOD	= 00:01:00	
SIZE	CUMULATIVE	DIFFERENTIAL	
0.Ju	247688	209884	Constant of
0.5u	37804	33298	
1.00	4206	4067	
3.0u	139	110	
5.00	29	15	
10. u	14	14	1
			12

Assessment, results after the measurements in the Pizzeria Aldente Chieming: as a result of the additional fine dust pollution from the pellet stove during the heating period, an increase of the measurements during the 2<sup>nd</sup> measurement occurred. After three weeks, the first measurement was also reduced despite the heating

After three weeks, the first measurement was also reduced despite the heatin operation!

Assessment after 20 days installation of Harmonizer Comfort: Reduction in dust: 0.3 micrometer: 21% Despite air humidity of 43% and temperature of 21.8 degrees Celsius. Also despite heating operation.

Chieming, dem 05.11.2014





## Air particle measurement in Villa Wallner in 83339 Chieming. Air particle with the MALVERN Laser Particle Counter MPC 3106 particle measurement device





#### Declaration and objective of the measurement:

When using the particle measurement device, 28 litres from one room were sucked in through two sheets of glass in one minute. A different pattern arises from the laser emissions through the sheets of glass. On the basis of this distribution, a client can determine and count the size of the

particles.

During this measurement process, 0.3/0.5/1.0/3.0/5.0/10.0 micrometres were measured. Particle counters are used in clinics and also in the manufacturing of medicaments for inspecting the clean room conditions.

#### Potential influences on the measurement result: Temperature, air humidity, draught and direct sunlight

#### Air particle measurement in Villa Wallner:

Declaration on the property measured, Villa Wallner:

- Villa Wallner in 83339 Chieming, Mr Wallner was present
- Date: 04<sup>th</sup> November 2014 at 7:18 pm
- Weather: sunny, but with no direct sunlight into the Villa/ Doors to two rooms were open / lighting in operation
- Temperature at the first measurement 18.5 degrees Celsius
- Air humidity 51%
- Measurement units 10 pieces, a total of 30 measurements without interference suppression
- Ceiling height 3.16 metres
- A number of connected rooms, doors open, no draught
- Suction height with anti-static hose from from the sofa 40 cm

- Villa equipment: lamps, parquet flooring in the area, radiators, mantelpiece / wood- burning stove, WLAN

#### **Result particle measurement first measurement average after 30 measurements:**

	LOCATIO	N 001, 19:18:2	5 NOV 04,14	
	CYCLES :	= 010, PERIOD	= 00:01:00	
	SIZE C	UMULATIVE D	IFFERENTIAL	
	0.30	531424	269039	
	0.5u	262385	178221	
	1.0u	84164	80714	
	3.0u	3450	2954	A State
-	5.0u	496	451	
	10.u	45	45	
				Contraction of the
		1 004 1011011	NY NOLL ON 14	A STORE

#### Re-measurement after 6 days with Harmonizer Comfort installed (on 04/11/2014 at 8:15 pm): Date 10/11/2014 / time from 8:18 am Air humidity 49% Temperature 19.4 degrees Celsius

-			
LOCATIO	N 001, 20:18	:25 NOV 10,14	
CYCLES :	= 010, PERIO	) = 00:01:00	100
SIZE C	UMULATIVE	DIFFERENTIAL	
0.Ju	415578	322193	and Basel
0.5u	93385	77350	
1.0u	16035	14739	
<b>3.</b> 0u	1296	1022	
5.0u	274	228	P.S.
10.u	46	46	

Re-measurement after a further 6 days with Harmonizer Comfort installed (on 04/11/2014 at 8:15 pm): Date 15/11/2014 / Time from 5:15 pm Air humidity 49% Temperature 18 degrees Celsius

LOCAT	ION 001, 17:40:50	6 NOV 15,14	
CYCLE	6 = 010, PERIOD	= 00:01:00	
SIZE	CUMULATIVE D	IFFERENTIAL	
0.3u	314530	219028	
0.50	95502	61723	
1.00	33779	29974	
3.0u	3805	2801	
5.0u	1004	675	
10. u	329	329	
LOCATI	ON 001, 17:41:5	7 NOV 15,14	

Assessment, results after the measurements in the Villa in Chieming: A change was determined after approximately 6 days. Reduction in dust 0.3 micrometres: approx. 21.83%

## Assessment after a total of 11 days installation of Harmonizer Comfort Reduction in dust: 0.3 micrometres: 41% Despite air humidity of 49% and temperature of 18 degrees Celsius.

Chieming, dem 16.11.2014



## Symbioceuticals – Harmonizer Car



### IIREC

International Institute for Research on Electromagnetic Compatibility

# Biophysical testing of the effect of the product

### «Harmonizer Car»

- including stress resistance in disturbed magnetic fields of a passenger car

Report no.	124/2014
Date	December 18 <sup>th</sup> , 2014
Contractee	Symbioceuticals – Harmonizer GmbH Mr Jürgen Lueger
	Gangsteig 2 AT-5082 Grödig
Contractor/ Expert	<b>IIREC Dr. Medinger e.U.</b> Mag. Dr. Walter Hannes Medinger
	Ringstrasse 64 AT-3500 Krems an der Donau
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In case of exploitation by the contractee, the report must not be handed on in an abbreviated version or a modified version.

The scope of this report is exclusively the documentation and evaluation of effects that were assessed by objective physical measurement. Neither the investigation of manufacturing nor of mode of operation of the product was contracted. It is up to the manufacturer to care for constant product quality.

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#### Page

### I. Subject of Investigation

The international institute IIREC was mandated by Symbioceuticals – Harmonizer GmbH to test the effect of the product «Harmonizer Car» by objective measurements (with physical meters, independent of the subjective sensitivity of humans).

According to experience by IIREC the procedure of grid measurement of the vertical component of magnetic flux density, or induction, in the static (DC) and extremely low frequency (ELF) magnetic field ( $\pm$  3 dB range up to 18 Hz) including the evaluation of the divergence of the magnetic field gradient ist appropriate to give evidence if a product of this kind is able to **smoothen magnetic field gradients** (**«magnetic field equalizing effect»**).

In the study documented here **questions** relevant to the user were examined by measurements of the impact of the product on technogenic magnetic field disturbances in a passenger car, such as:

- ↔ Will the product unfold its effect reliably, and
- will this be impaired by disturbing influences?

A satisfying answer to these question is a precondition for awarding the biophysical test seal by IIREC.

The **test sample** was handed over to IIREC by the manufacturer. For testing, it was attached to the battery of the test car.

The **test field** was the disturbed magnetic field on the driver seat of the car. The measuring field was set up as shown in fig. I (annex) by a wooden measuring board with II X II measuring points stenced into it.

The electromagnetic technologies in a passenger car (electric installation with DC or low frequency AC from the battery and the dynamo machine, resp., ignition sparks, radio control with RF electromagnetic waves, magnetization of vehicle body and steel tyres etc.) operate in various ranges of frequency and emit several types of fields.
Note that the measurements and effects reported here are restricted to the DC and ELF field in the denoted frequency range. Neither radio frequency (RF) electromagnetic fields nor DC and LF electric fields were comprised by the measurements, but DC magnetic fields and their modulations in the ELF range.

### 2. Testing of Effects in the Magnetic Field

The magnetic field has particular biological relevance because it permeates the body, it is not easily shielded, it influences all life processes and exerts an immediate impact on the ions, the electrically charged particles in the body (e.g. sodium, potassium, calcium, magnesium, zinc and many others in our cells, iron in hemoglobine etc.). Signals imprinted to cell water and body water are magnetic in nature.

Testing in the magnetic field, therefore, is the first choice when examining the coherent effect of resonance products. (In physics, coherence is defined as a constant phase correlation between oscillations of single elements. Coherence is the principle that maximises the impact of subtle microscopic effects, e.g. it converts normal light to laser light.)

#### 2.1 Method of measurement and evaluation

Test measurements were conducted according to the **grid measurement procedure** of IIREC in the DC and ELF magnetic field. The magnitude measured was the **vertical magnetic induction** in microtesla ( $\mu$ T). At the measuring site (the driver seat in a passenger car) a test field of 0.5 by 0.5 m was measured. In this measuring field there were 11 x II = 12I measuring points at a distance of 5 cm.

As a **meter** for measuring the magnetic flux density, or induction ( $\pm 3$  dB range up to 18 Hz) the digital precision teslameter 05/40 by Projekt Elektronik (Berlin) was applied. A VC-960 multimeter by Voltcraft served as a data logger. The most significant particulars of the measuring system were compiled in **table 1**.

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The measurement board representing the measuring field with stenced measuring points is equipped with a holder for the probe gliding on a cursor. This measurement **setting** makes it possible to move the probe to any measuring point avoiding deviations by inclination or torsion. Thus an optimal precision of measurement is guaranteed.

Teslameter	05/40
Measurement range	± 100 μT
Digital resolution	0,1 µT (with data logger 0,01 µT)
Measurement deviation	$\pm$ 0.5 % of measured value @ 40 $\mu$ T
Frequency range $(\pm_3 dB)$	up to 18 Hz
Sensor system	fluxgate, sensitive to direction

 Table I: Significant technical data of teslameter

The **evaluation and mapping of measured data** was performed by the **data analysis software Surfer** by Golden Software. The values measured at single measuring points were interpolated by the software and mapped for the measurement area of 0.5 by 0.5 m. Contour lines were drawn along points of equal magnetic induction. The coordinate axes were labeled with lengths in m.

In the **diagrams** of the annex the areas between contour lines are colored. The respective value ranges of the vertical magnetic induction in  $\mu$ T can be read from the color scale. For a maximum of color differentiation a rainbow spectrum was applied in these diagrams.

The contour lines can be read in the same manner as the well-known lines of equal height in geographical maps. Lines lying close to each other indicate a strong gradient. Larger distances between the lines indicate a region with low gradients. A transition from a low gradient to a strong one or vice versa causes a disruption that will exert a biological irritation characteristic for geopathogenic zones. A smooth or "equalized" field is characterised by balanced gradients.

Additionally, a curvature of the contour lines indicates an irregularity of the gradient, contour lines of (approximately) parallel course indicate even gradients (if the distances between the lines are approximately even).

The effect of the product in the field can be seen when contrasting the situations without and with the impact of the product.

For an immediate assessment of the biological effect **another type of diagrams** was generated. It maps the degree of biological disturbance for each measuring point. From the view of mathematical physics, this is calculated as the divergence of the field gradient (**field gradient divergence FGD**). More details are found in the comments to the diagrams in the annex, and in the following sections, as well.

#### 2.2 Detailed Investigations and Results

#### 2.2.1 Test in a passenger car

The first measurement recorded the measuring field (driver seat) in "engine idle" mode of the test car of type Ford Fiesta (v. fig. 2). In order to activate the dynamo machine, the light was turned on.

In the second measurement run (fig. 3) under the same conditions the effect of the Harmonizer Car was tested that was before attached to the battery of the car. The cathode was chosen as point of attachment because it is the source of electrons. (Electrons are the carrier of the effective "field-shaping" information and are the principal causative factors of electric and magnetic effects during the measurement.)

Comparing the measurement results of the original field (fig. 2) and the same field under the impact of the Harmonizer Car (fig. 3), the effect of the harmonizer in the field would be missed unless a closer look were given to the diagram (cf. notes to fig. 3). The immediate mapping of the degree of biological disturbance at the single measuring points underlines the improvement by the Harmonizer Car more clearly (fig. 6 compared to fig. 5, cf. explanatory notes to the diagrams).

#### 2.2.2 Stress test in an extremely inhomogeneous magnetic field

The last measurement repeated the measurement of the test field with the Harmonizer, but before the Harmonizer Car had undergone a stress test in an extremely inhomogeneous magnetic field Die letzte Messung war eine Wiederholung der Vermessung des Testfeldes, nachdem der Harmonizer Car einem Härtetest im extrem inhomogenen Magnetfeld unterzogen worden war (fig. 4).

As a matter of experience, products well suitable to perform an effective balance of magnetic field disturbances may lose or even revert this effect when exposed to a strong inhomogeneity of the magnetic field. Therefore, this type of stress test forms a standard element in the testing routines of IIREC.

The stress test was conducted by exposition of the test sample of the Harmonizer Car during a period of 72 hours to a magnetic field that was generated by two permanent magnets of an induction of 7 mT each in an orthogonal configuration. After this period the test sample was taken back to the battery of the car. The results of the following measurement of the test field are displayed in fig. 4. The mapping of the interpolated measurement results shows approximately the same effect as found before the stress test. From this we conclude that the exposition to the stressing magnetic field did not result in an impairment of the efficacy of the product. The more explicit evaluation of degrees of biological disturbance at the measuring points reveals that in a wide area of the field the field gradients were even balanced more smoothly after putting the Harmonizer to the stress test (fig. 7).

### 3. Expert's Opinion

#### 3.1 Metrological significance of results

The effects found in the measurements – on one hand the disturbing effects of the construction of the car and the operation of the engine in idle mode as recorded in the test field (driver seat), and on the other hand the alterations after bringing in the Harmonizer Car – have an order of magnitude that is distinctly above the measurement uncertainty, so they are clearly classified as **significant**.

The reading of DC values on the precision teslameter 05/40 (including the ELF contribution) exhibits variations of  $0.05 \,\mu$ T. Measured values, therefore, are certain if exceeding  $0.1 \,\mu$ T. For effects evaluated as differences (between a "disturbed" field and a "balanced" one) according to laws of metrology, the threshold of certainty is computed at  $0.14 \,\mu$ T (=  $0.1 \,\mu$ T times square root of 2). Accordingly, DC effects from  $0.15 \,\mu$ T upward are classified as certain.

The ranges of values are extremely wide, so the evaluation was restricted to a range from -30  $\mu$ T to +20  $\mu$ T. As can be seen from figures 2 to 4, shifts of 1  $\mu$ T and more are easily discerned. *The effects found exceed distinctly the measurement uncertainty and thus are metrologically significant.* 

Moreover the results that were outlined in detail in section 2.2 and in the illustrations in the annex give the following answers to the themes of investigation presented in the introduction:

- The Harmonizer Car, if attached to the battery, balances the disturbed magnetic field in the cabin of a passenger car (at the driver seat).
- The efficacy of the product is not lost after a 72 hours' exposition to a strong and extremely inhomogeneous magnetic field.

3.1

### Biological relevance of results

The human body, as a "receiving antenna", is able to adapt to a wide variety of magnetic field situations, such as prevailing in different regions of the world. But during a stay in one place, the human body expects a balanced magnetic field situation, i.e. an even course of magnetic field gradients.

To be sure in this point, the degree of biological disturbance, or irritation, was evaluated for the measuring points in the test field (**field gradient divergence FGD**, figures 5 to 7). The mapping of results of this data analysis reveals the improvement brought about by impact of the Harmonizer Car.

The degrees of biological disturbance, or irritation, are quite high in the technogenic magnetic field on the driver seat of a passenger car, as we found here. Values exceeding 10,000 microtesla/m/m (i.e. 10 mT/m/m) are classified, according to the experience of IIREC, as an extreme irritation, that reported as unpleasant by nearly all test persons (disregarding individual sensitivity).

Magnetic disturbances of this amplitude imponder extraordinarily for car drivers and passengers – because they do not variate their position during a ride. This may impair the well-being of the passengers and the attention of the driver. Frequent drivers are even put to an elevated risk of serious long-term diseases.

The evaluation of the measurements conducted under the impact of the Harmonizer Car revealed that in a wide area of the seat of the driver the Harmonizer reduced the degrees of irritation below 1-2 mT/m/m. These low degrees of irritation are biologically well tolerable. The effects of the Harmonizer Car that were evidenced here (balance of technogenic disturbances in the cabin, and resistance against strong magnetic field disruptions) confirm, on the whole, a remarkable reliability of the product. The effect of the Harmonizer contributes to the prevention of possible health hazards thru magnetic field disruptions.

#### 3.2 Awarding of test seal

Thus, by **objective physical measurements** with meters sensitive to **magnetic induction** the reliability and stress resistance of the biologically beneficial effect of the Harmonizer Car, namely its balancing of magnetic field gradients, was proven.

With this being evidenced, the conditions for awarding the test seal of IIREC to the product are fulfilled. The manufacturer/contractee is entitled – under the additional terms and premises quoted below – to declare the product «Harmonizer Car» as »tested by IIREC« and to attach the following test seal to the product:



Terms:

(I) The validity of the test seal shall be prolongued in due time before expiration.

(2) IIREC shall be informed immediately of any alteration of the terms of manufacturing or of the effect of the product.

(3) The test seal shall not be applied any longer, should future testing by IIREC find a decline of product quality, or one of the terms of application not to be met any more.

Premises:

(I) The consumers of the product shall be notably informed on the proper application of the product, and that a combination with a different product might be counterproductive and should be avoided.

Important notes:

(I) The test seal may be applied with the product, the product documents, or the product wrapping, wherever a seal is attached by the manufacturer.

(2) IIREC will offer to the contractee in due time, before expiration of the validity of the test seal, a periodic audit and prolongue, in case of a positive result, the validity of the test seal.

(3) If desired, IIREC will elaborate suggestions for an extended quality assurance of the product.

(4) It is up to the manufacturer to care for constant product quality.

By his signature the expert confirms that the measurements and evaluations were conducted under his supervision, and the results being correct within the precision limits of measurement and evaluation.

Walk Under

Walter Hannes Medinger, MSc, PhD

Generally Sworn and Certified Expert at Court Scientific Head of IIREC International Institute for *EMC* Research *E*lectro*M*agnetic *C*ompatibility on a biophysical foundation

# Annex:

### 7 illustrations



#### Fig. 1: Measurement setting

For each measuring procedure the measuring apparatus was set up on the driver seat of the test car. It is made up of a wooden measuring board with holes arranged in a regular grid representing the measuring points. A cursor – to which the probe (black) is fixed in a holder (white) – can be moved to any measuring point. The teslameter (yellow) as the registration unit proper is connected to the data logger (grey).

The diagrams to follow show interpolations of values that were measured. The diagrams were generated by the data analysis software Surfer by Golden Software. The following diagrams are maps of the vertical magnetic flux density in microtesla ( $\mu$ T) as indicated by the color scale and the contour lines. The values displayed at the measuring points match exactly the measured values. Values in between were interpolated by the software. Lengths along the coordinate axes are labeled in Meters (m).





## Symbioceuticals – Harmonizer Water



#### Ernst F. Braun & Sarah Steinmann Eichenweg 8

CH-3628 Uttigen

Client: Jürgen Lueger

Distilled water

Sample A

photographed on frozen drops







Drops from sample A were frozen and photographed under the microscope. The resulting crystals were seen to be significant and were therefore selected by the photographers.



Atelier for ART and Mystic

November 2014 © Probe Nr: 3228

Water crystals a natural phenomenon

web:www.wasserkristall.ch

Ernst F. Braun & Sarah Steinmann Eichenweg 8 CH-3628 Uttigen

web:www.wasserkristall.ch

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Client: Jürgen Lueger

Distilled + Harmonizer Water Information water

Sample B

photographed on frozen drops







a natural phenomenon

Water crystals

Drops from sample B were frozen and photographed under the microscope. The resulting crystals were seen to be significant and were therefore selected by the photographers.



#### without Harmonizer Water



with Harmonizer Water



# Symbioceuticals – Harmonizer Mobile



### IIREC

International Institute for Research on Electromagnetic Compatibility

# Biophysical testing of the effect of the product

### «Harmonizer Mobile/Bluetooth/WiFi»

including stress resistance



Report no.	51/2015
Date	May 15 <sup>th</sup> , 2015
Contractee	Symbioceuticals -Harmonizer GmbH Mr Jürgen Lueger
	Gangsteig 2 AT-5082 Grödig
Contractor/ Expert	<b>IIREC Dr. Medinger e.U.</b> Mag. Dr. Walter Hannes Medinger
	Ringstrasse 64 AT-3500 Krems an der Donau
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#### Page

### I. Subject of Investigation

The international institute IIREC was mandated by Symbioceuticals – Harmonizer GmbH to test the effect of the product «Harmonizer Mobile/Bluetooth/WiFi» (v. title photograph) by objective measurements (with physical meters, independent of the subjective sensitivity of humans) in combination with a cellular smart phone.

According to experience by IIREC the procedure of grid measurement of the vertical component of magnetic flux density, or induction, in the static (DC) and extremely low frequency (ELF) magnetic field ( $\pm$  3 dB range up to 18 Hz) including the evaluation of the divergence of the magnetic field gradient ist appropriate to give evidence if a product of this kind is able to **smoothen magnetic field gradients** (**«magnetic field equalizing effect»**).

Although the range of application of the product in quest (mobile phones, Bluetooth, WiFi) comprises radio technologie with radio frequency carrier waves, with the respective devices and radio waves additional static magnetic fields or low frequency modulations, resp., are found which possess particular biological significance. The metrological procedure applied here grasps, in the usual "DC mode" of measurement, the vertical component of magnetic fields up to a frequency of 5 Hz. From the results thereof, conclusions are drawn regarding biologically effective magnetic field disturbances or measures against them, by use of a patented evaluation procedure.

In the study documented here **questions** relevant to the user were examined, such as:

- Will the product unfold its effect reliably, and
- will this be impaired by disturbing influences?

A satisfying answer to these question is a precondition for awarding the biophysical test seal by IIREC.

Two **test samples** were handed over to IIREC by the manufacturer. One of them was attached in the original condition to an iPhone, the other one was applied after having undergone a stress test.

The **test field** was a relatively smooth background field in which a smart phone (iPhone) was operated. The measuring field was set up by a wooden measuring board with II X II measuring points stenced into it.

### 2. Testing of Effects in the Magnetic Field

The magnetic field has particular biological relevance because it permeates the body, it is not easily shielded, it influences all life processes and exerts an immediate impact on the ions, the electrically charged particles in the body (e.g. sodium, potassium, calcium, magnesium, zinc and many others in our cells, iron in hemoglobine etc.). Signals imprinted to cell water and body water are magnetic in nature.

Testing in the magnetic field, therefore, is the first choice when examining the coherent effect of resonance products. (In physics, coherence is defined as a constant phase correlation between oscillations of single elements. Coherence is the principle that maximises the impact of subtle microscopic effects, e.g. it converts normal light to laser light.)

#### 2.1 Method of measurement and evaluation

Test measurements were conducted according to the **grid measurement procedure** of IIREC in the static and lowest ELF magnetic field (DC measurement up to 5 Hz). The magnitude measured was the **vertical magnetic induction** in microtesla ( $\mu$ T). At each measuring site, a test field of 0.5 by 0.5 m was measured. In this measuring field there were 11 x II = 12I measuring points at a distance of 5 cm.

As a **meter** for the magnetic flux density, or induction, the digital teslameter FM 302 by Projekt Elektronik (Berlin) was applied, with a probe that is sensitive to direction, and immediate transfer of measurement data to the measurement computer. The most significant particulars of the measuring system were compiled in **table 1**.

The measurement board representing the measuring field contains the measuring points stenced into it, with the latter equally serving as holders for the probe. This measurement **setting** makes it possible to fix the probe at any measuring point avoiding deviations by inclination or torsion. Thus an optimal precision of measurement is guaranteed.

For measurements involving a mobile phone the measuring apparatus provides a drawer. Positioned in this drawer, the cellular is situated beneath the measurement plane, in the center of the measuring field.

Teslameter FM 302	DC
Measurement range	$\pm$ 200 $\mu T$
Frequency range $(\pm 3 dB)$	DC – 100 kHz
Measurement deviation (@25° C)	< 0,1 % ± 2 Digit DC
Signal assessment	average
Axial probe "AS-UAP Lot"	Fluxgate, sensitive to direction
Frequency range of probe $(\pm_3 dB)$	0 - 500 Hz

**Table 1:** Significant technical data of teslameter

The evaluation and mapping of measured data was performed by the data analysis software Surfer by Golden Software. The values measured at single measuring points were interpolated by the software and mapped for the measurement area of 0.5 by 0.5 m. Contour lines were drawn along points of equal magnetic induction. The coordinate axes were labeled with lengths in m.

In the **diagrams** of the annex the areas between contour lines are colored. The respective value ranges of the vertical magnetic induction in  $\mu$ T can be read from the color scale. For a maximum of color differentiation a rainbow spectrum was applied in these diagrams.

The contour lines can be read in the same manner as the well-known lines of equal height in geographical maps. Lines lying close to each other indicate a strong gradient. Larger distances between the lines indicate a region with low gradients. A transition from a low gradient to a strong one or vice versa causes a disruption that will exert a biological irritation characteristic for geopathogenic zones. A smooth or "equalized" field is characterised by balanced gradients.

The effect of the product in the field can be seen when contrasting the situations without and with the impact of the product.

In order to be able to read this effect immediately from a diagram, **difference maps** were generated. In these diagrams, the mapped values are differences of measured values with and without the tested product, resp. For easy reading, these maps show threefold color: Blue color indicates a decrease, yellow color an increase (and white color constancy) of the measured value.

A third type of diagrams stellt maps the degree of biological disturbance for each measuring point. From the view of mathematical physics, this is calculated as the divergence of the field gradient (field gradient divergence FGD). More details are found in the comments to the diagrams in the annex, and in the following sections, as well.

#### 2.2 Detailed Investigations and Results

In the first run, the measurements recorded the values of the measuring field as ist was found without bringing in the mobile phone or the product to be tested: a neutral background field for measurements with an iPhone (figures 1 and 9). For a precise comparison to following results, this drawer (though still empty) was present during the background measurement. The extraordinary sensitivity of the measurement procedure can be seen from the fact that even a minute influence of the side boards of the drawer placed below the measurement plane was registered.

#### 2.2.1 Test with iPhone

Another measurement in each measurement series was conducted to record the disturbance caused by a non-harmonized iPhone (figures 2 and 10).

The last measurement in each measurement series was a repetition of the foregoing measurement, but in this case an Harmonizer Mobile/Bluetooth/WiFi was attached to the iPhone 30 minutes before the measurement.

The iPhone was activated during measurements and operated in transmission (conversation) mode. In order to guarantee a constant quality of transmission the background noise of a TV set was transmitted instead of speech.

#### 2.2.2 Stress test - Repetition of test with iPhone

As a matter of experience, products well suitable to perform an effective balance of magnetic field disturbances may lose or even revert this effect when exposed to a strong inhomogeneity of the magnetic field. Therefore, this type of stress test forms a standard element in the testing routines of IIREC.

The stress test was conducted by exposition of the test sample of the product during a period of 72 hours to a magnetic field that was generated by two permanent magnets of an induction of 7 mT each in an orthogonal configuration, at a distance of 30 cm.

After this period the test sample was taken back to the test field and the first series of three measurements was repeated, as outlined above. The results of the second series of measurements can be seen from figures off.

This repetition of the field measurement under the impact of the Harmonizer having undergone the stress test reveals that the Harmonizer was as effective as before. From this we conclude that the exposition to the stressing magnetic field did not result in an impairment of the efficacy of the product.

Summing up, the field with the iPhone and a test sample of the product (independent of this having been put to the stress test or not) is characterized, on the whole, like a field in which the mobile was not present. Only at the position of the iPhone itself a distinct magnetic field disturbance occurs, but this would not be prevented by other means than by shielding. But the measurements brought forth even a reduction of this disruption.

### 3. Expert's Opinion

#### 3.1 Metrological significance of results

The **effects found in the measurements** – on one hand the disturbing effects of the iPhone in the test field, and on the other hand the alterations after activation of the Harmonizer Mobile – have an order of magnitude that is distinctly above the measurement uncertainty, so they are clearly classified as **significant**.

The reading of DC values on the teslameter (including the ELF contribution) exhibits variations of 0,05  $\mu$ T. Measured values, therefore, are certain if exceeding 0,1  $\mu$ T. For effects evaluated as differences (between a "disturbed" field and a "balanced" one) according to laws of metrology, the threshold of certainty is computed at 0,14  $\mu$ T (= 0,1  $\mu$ T times square root of 2). Accordingly, DC effects from 0,15  $\mu$ T upward are classified as certain.

The ranges of values in the difference maps (figures 4 to 5 and 12 to 13) immediately tell us that this criterion is fulfilled at numerous measuring points. *The effects found exceed distinctly the measurement uncertainty and thus are metrologically significant.* 

Moreover the results that were outlined in detail in section 2.2 and in the illustrations in the annex give the following answers to the themes of investigation presented in the introduction:

- The Harmonizer unfolds its measurable impact of balancing the magnetic field within 30 minutes on technogenic magnetic field disturbances in the ambience of a smart phone (iPhone), keeping it up in transmission mode.
- The efficacy of the product is not lost after a 72 hours' exposition to a strong and extremely inhomogeneous magnetic field.

#### 3.2 Biological relevance of results

The human body, as a "receiving antenna", is endowed with maximal biological sensitivity in those ranges where natural electromagnetic fields prevail or variate. The variations of the geomagnetic field e.g. range to an order of magnitude of  $0.2 \mu$ T. In the measurement series conducted we gave evidence of the ability of the product to balance disturbances in this range of tenths of microtesla. This property is of utmost biological importance, because it reduces the degree of disturbance to a scale that does no biological harm.

To be sure in this point, the degree of biological disturbance, or irritation, was evaluated for the measuring points in the test field (**field gradient divergence FGD**, figures 6 to 8 and 14 to 16). The mapping of results of this data analysis reveals the improvement brought about by impact of the Harmonizer

In the study documented here the **impact of the Harmonizer in combination with an iPhone** (as a representative transmitter of radio frequency waves with magnetic side effects in DC and lowest ELF range, or Sub-ELF range, resp.) was tested. Immediately at the position of the transmitting device magnetic field disturbances were found that can not be avoided (only eliminated by a sumptuous magnetic shielding). This study focussed on **magnetic field disturbances in the ambience of the transmitter**.

Magnetic disturbances of these types imponder biologically particularly in the practical situation of phoning. When holding e.g. an iPhone close to one's ear, magnetic disruptions in the ambience of the mobile extend to sensitive regions such as the inner ear, the brain, the eye hole, the mouth hole, etc.

To avoid ("harmonize", "neutralize") magnetic field disturbances in these body regions contributes essentially to the prevention of harmful biological effects. This applies particularly to persons who are frequent or long-term mobile phone users.

The same is true of frequent or prolongued stay in the radiatin field of cordless (DECT standard), of bluetooth transmitters or WiFi routers.

#### 3.3 Awarding of test seal

The effects of the Harmonizer established here, namely its balancing of magnetic field gradients in the ambience of a mobile phone, but moreover its resistance against strong magnetic field disruptions) give evidence of the reliability of the product tested here.

Thus, by **objective physical measurements** with meters sensitive to **magnetic induction** the reliability and stress resistance of the biologically beneficial effect of the Harmonizer Mobile/Bluetooth/WiFi, namely its balancing of magnetiv field gradients, was proven.

With this being evidenced, the conditions for awarding the test seal of IIREC to the product are fulfilled. The manufacturer/contractee is entitled – under the additional terms and premises quoted below – to declare the product «Harmonizer Mobile/Bluetooth/WiFi» as »tested by IIREC« and to attach the following test seal to the product:



#### Terms:

(I) The validity of the test seal shall be prolongued in due time before expiration.

(2) IIREC shall be informed immediately of any alteration of the terms of manufacturing or of the effect of the product.

(3) The test seal shall not be applied any longer, should future testing by IIREC find a decline of product quality, or one of the terms of application not to be met any more.

#### Premises:

(I) The consumers of the product shall be notably informed on the proper application of the product, and that a combination with a different product might be counterproductive and should be avoided.

#### Important notes:

(I) The test seal may be applied with the product, the product documents, or the product wrapping, wherever a seal is attached by the manufacturer.

(2) IIREC will offer to the contractee in due time, before expiration of the validity of the test seal, a periodic audit and prolongue, in case of a positive result, the validity of the test seal.

(3) If desired, IIREC will elaborate suggestions for an extended quality assurance of the product.

(4) It is up to the manufacturer to care for constant product quality.

By his signature the expert confirms that the measurements and evaluations were conducted under his supervision, and the results being correct within the precision limits of measurement and evaluation.

Wolle Under

Walter Hannes Medinger, MSc, PhD

Generally Sworn and Certified Expert at Court Scientific Head of IIREC International Institute for *EMC* Research *E*lectro*M*agnetic *C*ompatibility on a biophysical foundation

# Annex:

16 illustrations

#### I. Measurement with Harmonizer test sample before the stress test

A. Topographic **maps of measured values of the vertical magnetic induction** (DC and lowest ELF range): The following diagrams map the measured magnitude in microtesla ( $\mu$ T) according to the color scale and contour lines. The values displayed at the measurements point match exactly the measured values. At indermediate points, the values were interpolated by the software. The lengths along the coordinate axes are labeled in meters (m). Interpolations and diagrams were generated by the data analysis software Surfer by Golden Software (Interpolation method: Kriging).



B. <b>Difference maps</b> of the vertical magnetic induction: The following diagrams display for each measurement point <i>differences</i> of values measured in two different situations (cf. diagrams 1 to 3), thus representing the <i>net effect</i> of the iPhone (without an Harmonizer) and of the Harmonizer.			
	Fig. 4: Effect of the iPhone in transmission mode The values in this diagram were calculated as differences between the values of fig. 2 minus those of fig. 1, in other words: the net effect brought about by the operation of the iPhone against the background. Blue color indicates a decrease of measured values, yellow color an increase.		
1 0.9- 22 0 ph	Fig. 5: Effect of the Harmonizer in combination with the iPhone		
	This diagram represents the difference between the measured values of fig. 3 minus those of fig. 2, thus pointing out the effect of the Harmonizer against the iPhone without harmonization.		
0.5 0.4 0.3 0.2 0.1 0.2 0.1 0.2 0.1 0.2 0.1 0.2 0.2 0.1 0.2 0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	The increase of measured values having been predominant in fig. 4 (yellow color!) is now compensated for by a decrease (blue color!). Vice versa, at some points showing up in blue in fig. 4, an increase of values (marked by yellow color) is displayed now. The maximal effects amount at $+/-0.4 \mu$ T.		



#### II. Measurement with test sample of the Harmonizer after stress test

A. Again, the results of measurements are displayeded as topographic maps in the first place. The focus is once more the occurrence of **magnetic field disturbances in the ambience of the iPhone** in transmission mode (with an open line). But an additional question is **whether the Harmonizer has lost efficacy thru the stress test conducted between the measurement series I and II**.



B. Now will follow - in analogy to fig. 4 und 5 - difference mappings representing the net effect of the Harmonizer Comfort. Fig. 12: Effect of the iPhone (without an Harmonizer) 0.9 This diagram maps for each measuring point the 0.8difference of measured values from fig. 10 minus 0.7 fig. 9. 0.8 0.7 0.6 0.6 Apart from the strong effects immediately above the iPhone showing up in the center of the field 0.5 additional magnetic field disturbances are 0.4 -0.1 -0.2 -0.3 -0.4 -0.5 -0.6 recognisable in the surroundings amounting up to D.A 0.50.81 36 +  $I/-0.5 \mu T$ . 0.3 This is the amplitude of natural magnetic field 0.2 variations. It is of great biological relevance, because 0 1 the body is very susceptible to this amplitude, and in the phoning situation these disturbances extend to 0.2 0.4 0.5 0.6 sensitive regions inside the head. Fig. 13: Effect of the Harmonizer 0.9 This net effect is mapped in the neighbouring diagram as the difference of the values from fig. 11 0.  $\cap$ 0.6 0.5 0.4 0.3 0.2 0.1 0 -0.1 minus fig. 10. 0.7 This diagram answers to the question, what was the 0.0 impact of the Harmonizer on the situation with the iPhone in the field. -0.2 -0.3 -0.4 -0.5 -0.6 -0.7 -0.8 -0.9 1 0.5 It can be recognised that these alterations have 0.4 considerable amounts (up to  $+ 0.5/- 1 \mu$ T) balancing 0.3 the effects in the ambience of the iPhone. Man beachte z.B. die Punkte auf der Höhe y = 0.3. 0 : 0.2 (Where in fig. 12, e.g. at y = 0.3, an increase of values 0 was indicated in yellow color, a decrease is indicated in fig. 13 in blue etc.) 0.4 0.5 0.6 0.7 0.9 0'8



## Subjekt 1 Harmonizer Mobile



Dark field image before the telephone call

Dark field image after the telephone call with a commonly smart phone

Dark field image after the telephone call with a commonly available smart phone, harmonise with Harmonizer Mobile

## Subject 3 Harmonizer Mobile



Dark field image before the telephone call

Dark field image after the telephone call with a commonly available smart phone

Dark field image after the telephone call with a commonly available smart phone, harmonise with Harmonizer Mobile
### Subject 5 Harmonizer Mobile



Dark field image before the telephone call



Dark field image after the telephone call with a commonly available smart phone



Dark field image after the telephone call with a commonly available smart phone, harmonise with Harmonizer Mobile

## Symbioceuticals – Harmonizer Card



Two red roses in distilled water. The water was not changed. Both roses were placed in the same area with a gap due to the emissions of the Harmonizer Card. You can see the two roses after 15 days in this picture.

On the left, a red rose with distilled water without harmonisation – on the right, a red rose with distilled water and Harmonizer Card harmonisation.



# Symbioceuticals – Harmonizer Med



#### Before treatment subject 1



Subject 1 came into the practice with prostate complaints. That can be seen precisely in the D-factor, slight inflamed and in the regulation condition, that for him was only 29%. That means that the body was having to work very hard to restore a healthy condition. The factor B shows a displacement in the meridians, and factor C shows that, i.e. in muscular terms, resources are already depleting.

Course of treatment

After testing, I decided upon the bacteria module, the meridian module and as the child suffered from ADHS, the hormone balancing module.

The treatment lasted approximately one hour.

Sylke Jakobi Compens Bioenergetiker S Laasener Straße 15, 07545 Gera Mobil: 01 77 / 38 77 149

#### Subject 1 after treatment



After approximately one hour of treatment with the Harmonizer Med in connection with the bacteria module, the meridian module and the hormone balancing module, a major improvement of the general condition of the subject could be determined. The prostate pains had disappeared completely, and he felt visibly relaxed. The regulation condition improved considerably. The D-factor fell back down to a normal condition. That means that the inflammatory factors declined. One could also see a clear improvement in the B-factor that evaluates the meridians. It could be said that this person was fully back to normal.



#### Subject 2 before treatment



Subject 2 came into the practice with severe abdominal complaints and exhaustion. Furthermore, she had also been being treated using conventional treatments for some time due to a histamine intolerance. There was unfortunately no progress. After a comprehensive medical history, I found out that she had also undergone a number of operations. The D-factor again showed a strong inclination to inflammation. The regulation condition lay at 86%, that means that the body was having to work very hard to keep itself in a good condition.

The body was actually working too hard and was trying to compensate for intolerances so that the subject was in a severe state of exhaustion.

#### Course of treatment:

Testing revealed that the patient reacted negatively towards all major allergens, the scars module and the hormone balancing module.

The treatment lasted one hour.

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#### Subject 2 after treatment



After approximately one hour of treatment with the scars module, the hormone balancing module and the major allergens, the subject was able to leave the practice with no pain. She was of course given the Symbio Harmonizer Card so that she could use the card for all meals and beverages.

The evaluation of the measurement revealed a significant improvement of the D-factor which was based on the reduction of the histamine. The regulation condition levelled off at a normal level, so that the body did not have to work excessively. After the treatment, all body structures were very well balanced. The subject immediately felt a certain amount of tranquility and was extremely happy to be able to eat everything again and could hardly wait to try out the Symbio Harmonizer Card.



#### Subject 3 before treatment



Subject 3 came to me with strong emotional fluctuations, headaches and general listlessness in all areas. The subject's physical condition resembled a state of exhaustion, which he might well have had for more than six months already.

The A-index showed very clearly that he had no more daily energy. The B-index displayed the condition of the meridians, these also showed a clear deficit. As a result, the regulation condition was also only 3%. One could also talk about a physical stiffness here. The acupuncture factor of 31% showed the organs that also required help.

Course of treatment:

The testing resulted in the meridian module, the acids-alkali balancing module and the hormone balancing module.

The treatment also lasted approximately one hour.

ike lakobi Compens Bioenergetiker <Laasener Straße 15, 07545 Gera Mobil: 01 77 / 38 77 149

#### Subject 3 after treatment



After approximately one hour of treatment with the Harmonizer Med and the accompanying modules, one could very clearly see that the subject was perfectly balanced and was full of confidence. He felt resilient once more.

One could see very clearly in the A-index that the provision of energy of the body had increased again, and that it can now work by itself again. For the B-index that interprets the meridians, one can also again see a tendency towards orderliness. The general regulation increased to 20%, and that indicates that the body has again achieved a good level of homeostasis.

A further appointment was then set where we tested out the supporting dietary supplements for the body.



#### Subject 5 before treatment



Subject 5 before treatment

Subject 5 came into the practice with severe discomfort in the lumbar spine, constipation, digestion problems and continually recurring infections.

The regulation condition of this person is very greatly reduced, and the acupuncture factor also only shows a value of 9%. That is indeed a higher tendency for physical complaints.

Testing of the modules took place after a comprehensive medical history.

Course of treatment:

The testing of modules resulted in the hormone balancing module, major allergens, the virus module, the acid-alkali balancing module and ATP.

The treatment lasted approximately one hour.

ike lakobi S. Compens Bioenergetiker Laasener Straße 15, 07545 Gera Mobil: 01 77 / 38 77 149

#### Subject 5 after treatment



After treatment, the acupuncture factor increased from 9% before the treatment to 43% after the treatment. That is a clear sign that the organs are again working as they should. There again occurred a balancing within the meridian system. In addition, I gave her the recommendation to visit an orthopaedist who should be able to treat the blockages in the cervical vertebral column area. My recommendation was the development of the intestines, and I also gave her the Symbio Harmonizer Card for all meals and beverages.

The patient felt very relaxed after the treatment and also felt a pleasant warmth in the body.

ke laka 5 Compens Bioenergetiker Laasener Straße 15, 07545 Gera Mobil: 01 77 / 38 77 149

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Harmonizer GmbH

## Imprint

Development and production	Jürgen Lueger, Dr. med. Josef Hutter, Gerald Spiss
Distribution	Symbioceuticals -Harmonizer GmbH
	Gangsteig 2
	A-5082 Grödig
	Tel.: +43 6246 93252
	Fax: +43 6246 93252-14
	office@symbio-harmonizer.com
	UID: ATU68750808
	Company register: FN416848m
Management	Jürgen Lueger, Dr.med. Josef Hutter, Gerald Spiss