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Web pages: <http://kyttariki2.biol.uoa.gr> <http://multimedia.biol.uoa.gr>

## CERTIFICATE

of protection suitability from mobile phone electromagnetic radiation.  
Shielded phone case models No: 101, 102, 201, 301

Models tested: **MOBILEPRO / SUPERBOX** No: 101, 102, 201 and 301

Models  
No 101 / 102

Date: 15 January 2010.

### 1. Models tested:

- No. 101 (external dimensions: 8,0 x 13,0 cm) vertical phone placement
- No. 102 (external dimensions: 8,5 x 15,0 cm) vertical phone placement
- No. 201 (external dimensions: 7,5 x 14,0 cm) horizontal phone placement
- No. 301 (external dimensions: 7,0 x 13,0 cm) vertical phone placement



### 2. Fitness of shielded cases for protection from mobile radiation:

- 2.1. Case No 101 is suitable for phones that fit in whole, with no protruding antenna
- 2.1. Case No 102 is suitable for phones that fit in whole, with no protruding antenna
- 2.3. Case No 201 is suitable for phones that fit in whole, with or without external antenna
- 2.4. Case No 301 is suitable for phones that fit in whole, with no protruding antenna.

### 3. Use of cases:

The above models (No 101, 102, 201, 301) are intended for use as transport as well as communication cases, containing the mobile phone. Speaking and communication in general should be done using: a) Separate wireless Bluetooth headset or b) ordinary hands-free earphones or c) using the hands free speakerphone mode for open air conversation and d) using the case in the car's front window, rear window, side windows, with a special fixing.

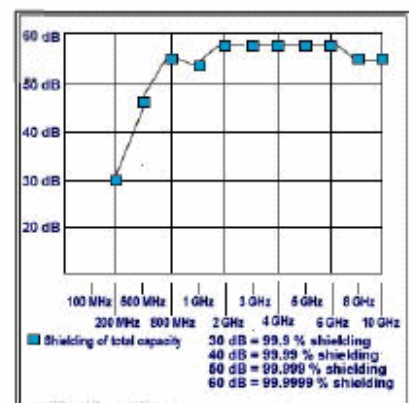
### Model 201



### 4. Special production characteristics of mobile radiation shielded cases

These cases contain, between the inside and outside walls, a special artificial patented insulating fabric, which reflects the radiation emitted from mobile phones' antennas. In particular, all cases have a PROTECTED SIDE (which should be placed towards the body) and a NON PROTECTED SIDE (which should be facing away from humans). Each case side is clearly marked (on 301, only the protected [back] side is marked). The cases are manufactured in accordance with patents No: GR1005265/05 & GR1005919/08 of GR-EU Patents Office / Industrial Property Organization (O.V.I.).

**5. Technical specifications of insulating fabric:** The signal on GSM-900 transmission system is attenuated by 54 db while for the GSM-1800 is attenuated by 58 db. Tests of the insulating fabric were made in accordance with military standards by Professor Pauli of the University of German Armed Forces in Nuremberg on May 2000.



6. Cases test environment: All above cases have been tested with:

A) with a plethora of mobile phones from all major manufacturers (such as Nokia, Sony-Ericsson, Motorola, LG, Samsung, Siemens, Sharp, Apple iPhone, etc.), B) In test environments where signal from the mobile-operators antenna was: b1) very good, b2) good, b3) moderate, b4) very weak, C) in a mode of operation where the mobile was always connected to the mobile-operator antenna base and was in a: c1) waiting mode, c2) phone was called from another land based and mobile phone, c3) the phone was calling another mobile and land based phone, c4) in conference mode with another mobile and land based phone, c5) with various levels of speech intensity, D) Tests were made using mobile telephone transmission systems GSM-900 & GSM-1800.

#### 7. Measurements & measurements objective:

The measurements were made with electronic instruments of high precision that measure non-ionizing electromagnetic radiation from mobile phones. More than 50 different telephone devices were tested in all the above test conditions. Measuring instruments used: a) Smart FieldMeter EMC Test Design, LLC, Newton MA, USA, b) ACECO, SC-1 Plus RF Counter, USA. In the pictures, measurements show electric field in Volt / meter (V / m). The purpose of the measurements was to determine the attenuations in the non-ionizing radiation emitted from mobile phones, while using the shielded protection cases.

#### 8. Sampling & testing of the produced cases:

5% of all radiation protection products produced is subjected to testing with the supervision of qualified personnel (all produced models)

#### 9. Measurement results:

The Cases measured showed weakening of the intensity of non-ionizing radiation emitted from the antenna of mobile phones from the protected side in models:

On GSM-900:

No. 101 and 102: 93.5% on average

No. 201: 97.5% on average,

No. 301: 90% on average.

On GSM-1800:

No. 101 and 102: 87.5% on average

No. 201: 91.5% on average,

No. 301: 87% on average.

On the non protected side, the intensity of the radiation emitted from the antenna of the mobile also weakens, but at a rate of about 40% on average.

Additional information can be found at: [http://kyttariki.biol.uoa.gr/emr\\_group.htm](http://kyttariki.biol.uoa.gr/emr_group.htm)

You can see the patented models tested at: <http://www.mobilepro.gr>

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Speaking phone without protection case at GSM 900



values in Volt/meter

Speaking phone using a protection case at GSM 900



values in Volt/meter

Speaking phone using a protection case at GSM 1800



values in Volt/meter