



מכון טכנולוגי חולון  
Holon Institute of Technology

**HIT SAR Labs** איכות ומצוינות

## Comparative SAR Measurements Report

**Report Number:** 0104

**Ordered by:** Doctor Finkel LTD.

**Test Protocol:** The effectiveness of the Apron-d materials, provided by the customer, as means of field strength reduction.

**Report issued on:** 16.04.2016

**Reviewed by:** *M. Haridim*

\_\_\_\_\_ Prof. Motti Haridim



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## 1. General Information

### Client Information:

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**DOCTOR FINKEL**

## 2. Presentation of the materials

### Apron-d

This material is of fabric structure. There are three types of Apron-w, which mainly differ in thickness and metal content. The material is flexible and ruffled. It is thin and almost weightless. Its thickness varies from 0.1 mm to 0.15 mm. It is durable and .(dense by touch. It can be of light bronze or silver tinge color (non transparent

The thickest type of Apron-w (its thickness is 0.15mm) is of light bronze color, with one of its sides appearing lighter and glossier than the other side, which in turn is comparably dim and dark.

The second type of Apron-w has a bright silver tinge and is somewhat thinner (depending on the metal quantity content in its chemical structure) than a previously .described material, with the thickness of 0.13 mm

The third type of Apron-w is almost weightless, transparent and resembles a thin plastic net. Amidst the types that have been mentioned, this material can be classified as the thinnest one, with the thickness of 0.1 mm. It is also flexible and is .almost not ruffled. It feels soft

### 3. Experimental Results

#### General material test results

This test is intended to evaluate the screening capabilities of the proposed materials. The field of a distant source is measured by a monopole bare, and when covered by the proposed materials.

Material type	Frequency [MHz]	Power without Apron-w1	Power with Apron-w1	Total reduction
Apron-w1	995	10.06[mV]	47.05[μV]	94%

#### Experimental results



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Material Type	Frequency [MHz]	Power without Apron-w2	Power with Apron-w2	Total reduction
Apron-w2	995	10.06[mV]	183.6[ $\mu$ V]	98%

Material type	Frequency [MHz]	Power without Apron-w3	Power with Apron-w3	Total reduction
Apron-w3	995	10.06[mV]	1.228[mV]	88%

Material type	Frequency [MHz]	Power without Apron-w4	Power with Apron-w4	Total reduction
Apron-w4	950	3.5[mV]	169[ $\mu$ V]	95%



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## 4 Conclusions

The experimental results show that Apron-w effectively blocks electromagnetic radiation at cellular frequencies.



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**5 Apron-w photograph:**

