

# **Appendix for the Report**

## **Dosimetric Assessment of the Victor Reader Stream from HumanWare (FCC ID: XT5503VRC) (IC: 8670A-503VRC)**

### **According to the FCC Requirements SAR Distribution Plots**

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**IMST GmbH**

Carl-Friedrich-Gauß-Str. 2  
D-47475 Kamp-Lintfort

**Customer**

HumanWare  
445, Rue Du Parc-Industriel  
Longueuil, (Quebec)  
Canada J4H 3V7

The test results only relate to the items tested. This report shall not be reproduced except in full without the written approval of the testing laboratory.

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## 1 SAR Distribution Plots, Body Worn, IEEE 802.11b

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [Stream 5\\_ywhm\\_1\\_CH6\\_b.da4](#)

DUT: Humanware; Type: Stream; Serial: 5

Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.93$  mho/m;  $\epsilon_r = 53.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.55, 7.55, 7.55); Calibrated: 24.09.2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 20.09.2012
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Body Worn/Area Scan (10x13x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.377 mW/g

**Body Worn/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.77 V/m; Power Drift = -0.091 dB

Peak SAR (extrapolated) = 1.31 W/kg

**SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.163 mW/g**

Maximum value of SAR (measured) = 0.493 mW/g

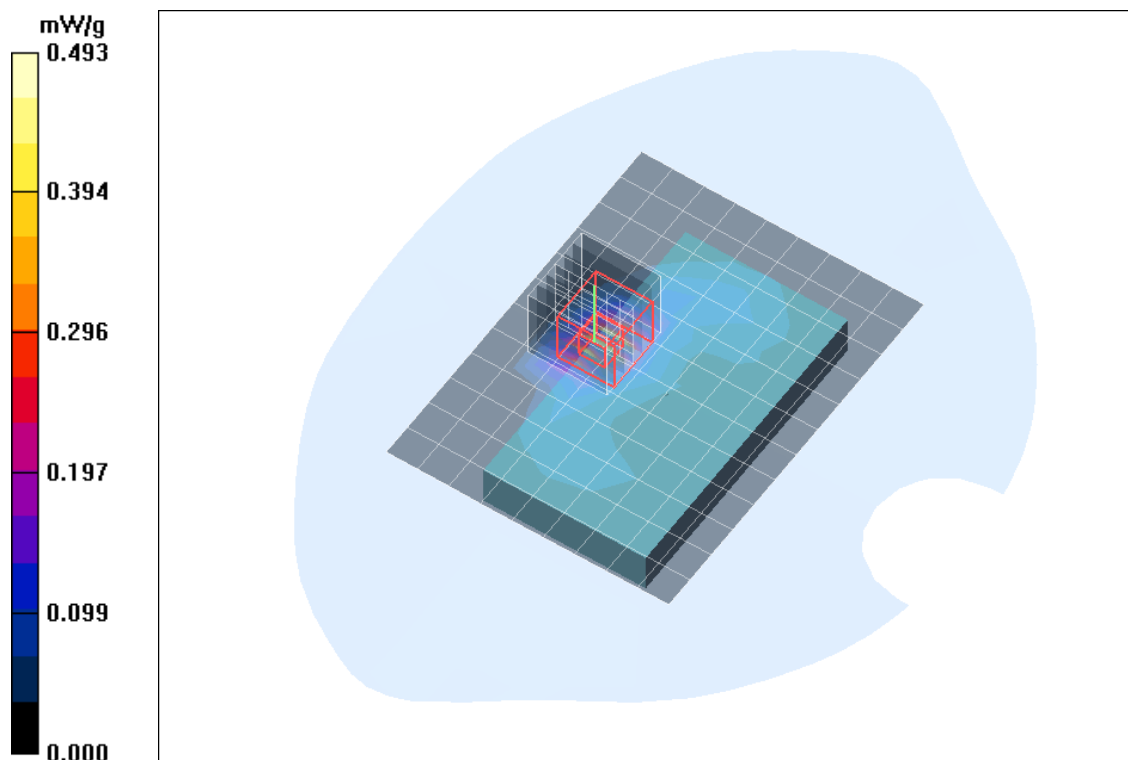


Fig. 1: SAR distribution for IEEE 802.11b, channel 6, position 1 (February 18, 2013; Ambient Temperature: 21.8 °C; Liquid Temperature: 21.4 °C).

**Test Laboratory:** Imst GmbH, DASY Yellow (II); **File Name:** [Stream 5 ywhm 2 CH6 b.da4](#)

**DUT:** Humanware; **Type:** Stream; **Serial:** 5

**Program Name:** IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.93$  mho/m;  $\epsilon_r = 53.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.55, 7.55, 7.55); Calibrated: 24.09.2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 20.09.2012
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Body Worn/Area Scan (10x13x1):** Measurement grid:  $dx=12$ mm,  $dy=12$ mm

Maximum value of SAR (measured) = 0.072 mW/g

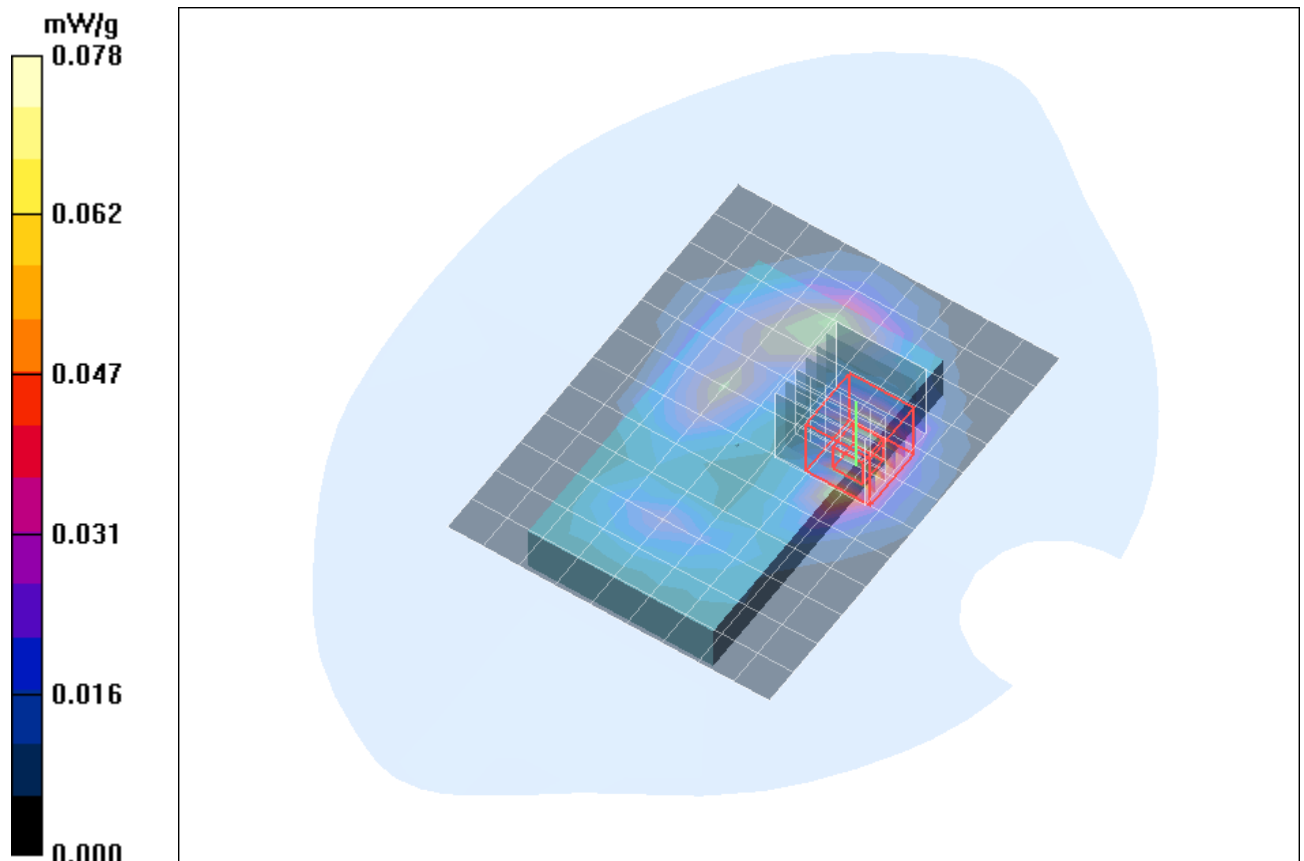
**Body Worn/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 1.89 V/m; Power Drift = 0.143 dB

Peak SAR (extrapolated) = 0.156 W/kg

**SAR(1 g) = 0.070 mW/g; SAR(10 g) = 0.032 mW/g**

Maximum value of SAR (measured) = 0.078 mW/g



**Fig. 2:** SAR distribution for IEEE 802.11b, channel 6, position 2 (February 18, 2013; Ambient Temperature: 21.8 °C; Liquid Temperature: 21.4 °C).

**Test Laboratory:** Imst GmbH, DASY Yellow (II); **File Name:** [Stream 5 ywhm 1 CH1 b.da4](#)

**DUT:** Humanware; **Type:** Stream; **Serial:** 5

**Program Name:** IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.9$  mho/m;  $\epsilon_r = 53.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.55, 7.55, 7.55); Calibrated: 24.09.2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 20.09.2012
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Body Worn/Area Scan (10x13x1):** Measurement grid:  $dx=12$ mm,  $dy=12$ mm

Maximum value of SAR (measured) = 0.371 mW/g

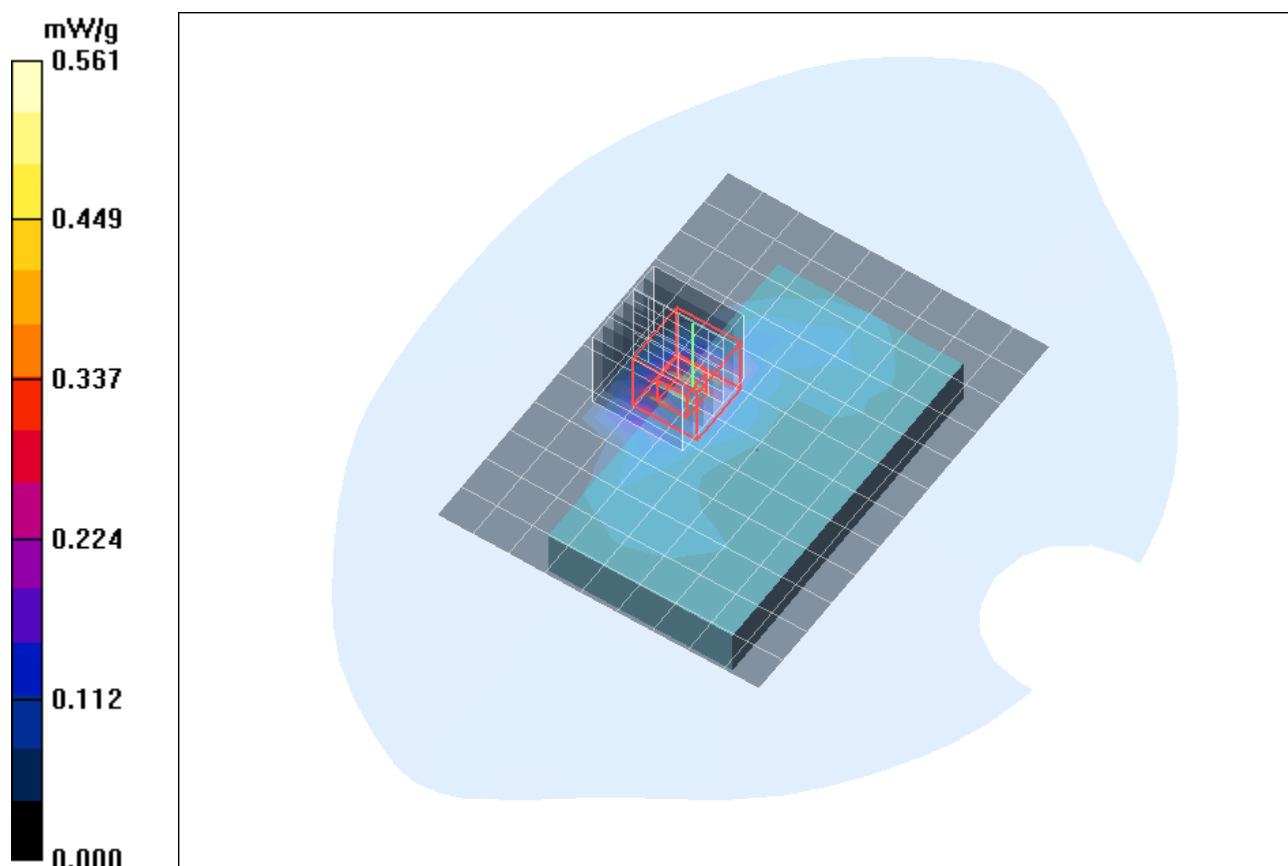
**Body Worn/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 3.78 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 1.50 W/kg

**SAR(1 g) = 0.495 mW/g; SAR(10 g) = 0.185 mW/g**

Maximum value of SAR (measured) = 0.561 mW/g



**Fig. 3:** SAR distribution for IEEE 802.11b, channel 1, position 1 (February 18, 2013; Ambient Temperature: 21.8 °C; Liquid Temperature: 21.4 °C).

**Test Laboratory:** Imst GmbH, DASY Yellow (II); **File Name:** [Stream 5 ywhm 1 CH11 b.da4](#)

**DUT:** Humanware; **Type:** Stream; **Serial:** 5

**Program Name:** IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.97$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.55, 7.55, 7.55); Calibrated: 24.09.2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 20.09.2012
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Body Worn/Area Scan (10x13x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.277 mW/g

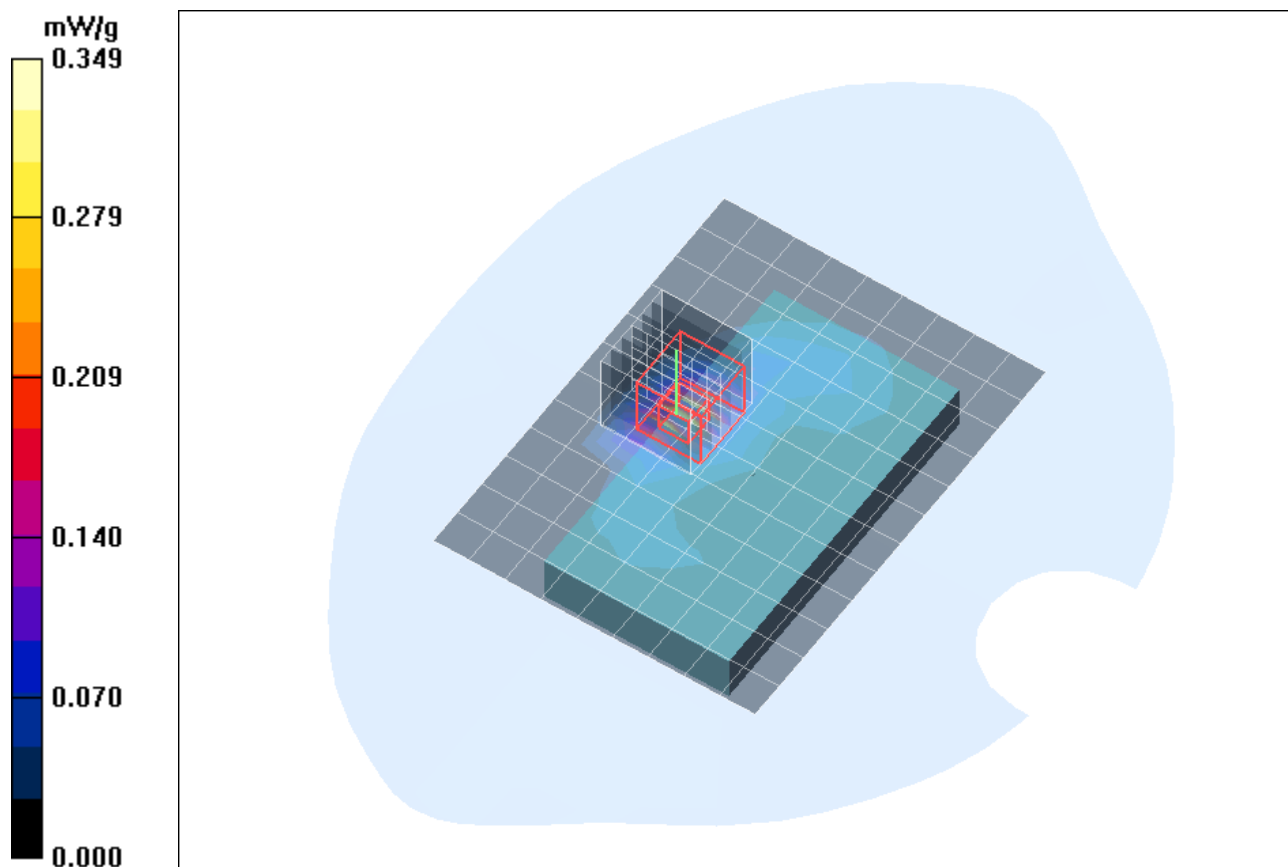
**Body Worn/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.83 V/m; Power Drift = 0.149 dB

Peak SAR (extrapolated) = 0.908 W/kg

**SAR(1 g) = 0.302 mW/g; SAR(10 g) = 0.111 mW/g**

Maximum value of SAR (measured) = 0.349 mW/g



**Fig. 4:** SAR distribution for IEEE 802.11b, channel 11, position 1 (February 18, 2013; Ambient Temperature: 21.8 °C; Liquid Temperature: 21.4 °C).

## 2 SAR Z-axis Scans (Validation)

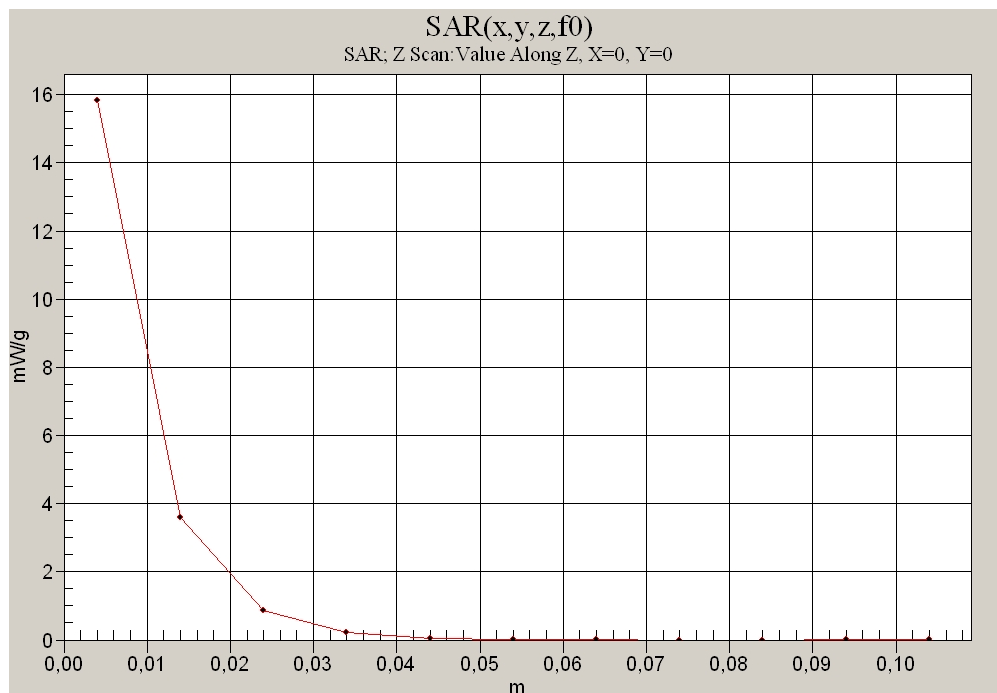


Fig. 5: SAR versus liquid depth, 2450 MHz, body (February 18, 2013; Ambient Temperature: 22.0 °C; Liquid Temperature: 21.4 °C).

## 3 SAR Z-axis Scans (Measurements)

The following picture shows the plot of SAR versus liquid depth for the worst case values.

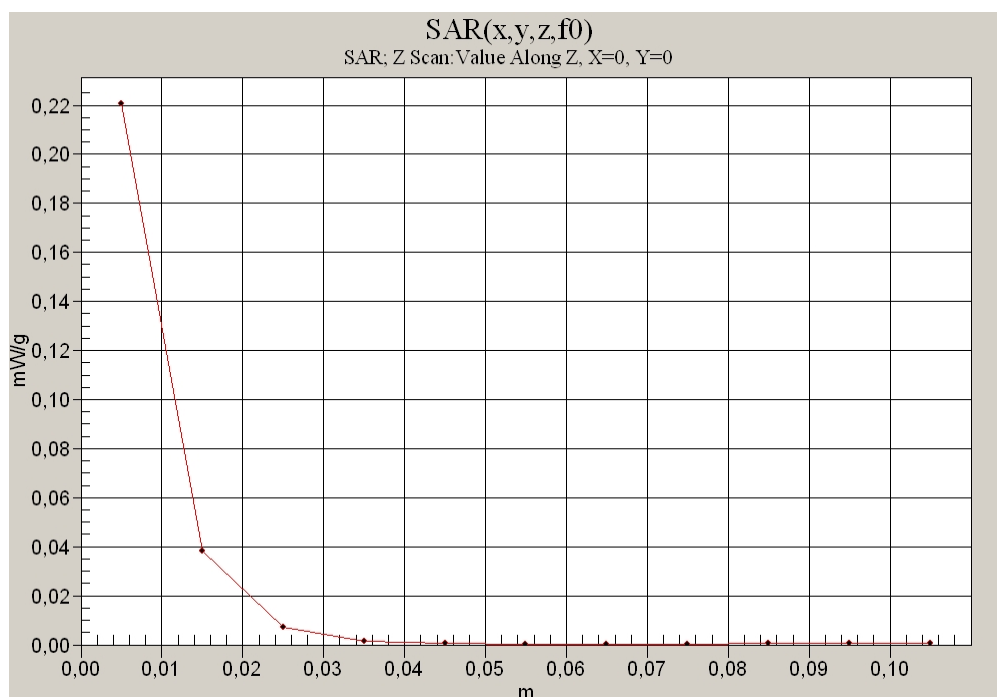


Fig. 6: SAR versus liquid depth, body worn: IEEE 802.11b, channel 1, position 1 (February 18, 2013; Ambient Temperature: 21.8 °C; Liquid Temperature: 21.4 °C).