
Appendix for the Report
Dosimetric Assessment of the
UHF Handheld Transceiver (portable device)
Thrane & Thrane SAILOR SP3550
(FCC ID: TCOSP3550)

According to the FCC Requirements

SAR Distribution Plots

January 09, 2008
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The test results only relate to the items tested.
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1 SAR Distribution Plots, PTT configuration

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [SP3550_y4hm_1_PTT_P45.da4](#)

DUT: SAILOR; Type: SP3550; Serial: 1234560014

Program Name: Body Worn

Communication System: CW; Frequency: 457.575 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 457.575$ MHz; $\sigma = 0.905$ mho/m; $\epsilon_r = 44.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.32, 7.32, 7.32); Calibrated: 15.02.2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 17.09.2007
- Phantom: ELI 4; Type: ELI 4;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Worn/Area Scan (9x17x1): Measurement grid: dx=

Maximum value of SAR (measured) = 1.35 mW/g

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

Reference Value = 29.3 V/m; Power Drift = -0.602 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.934 mW/g

Maximum value of SAR (measured) = 1.29 mW/g

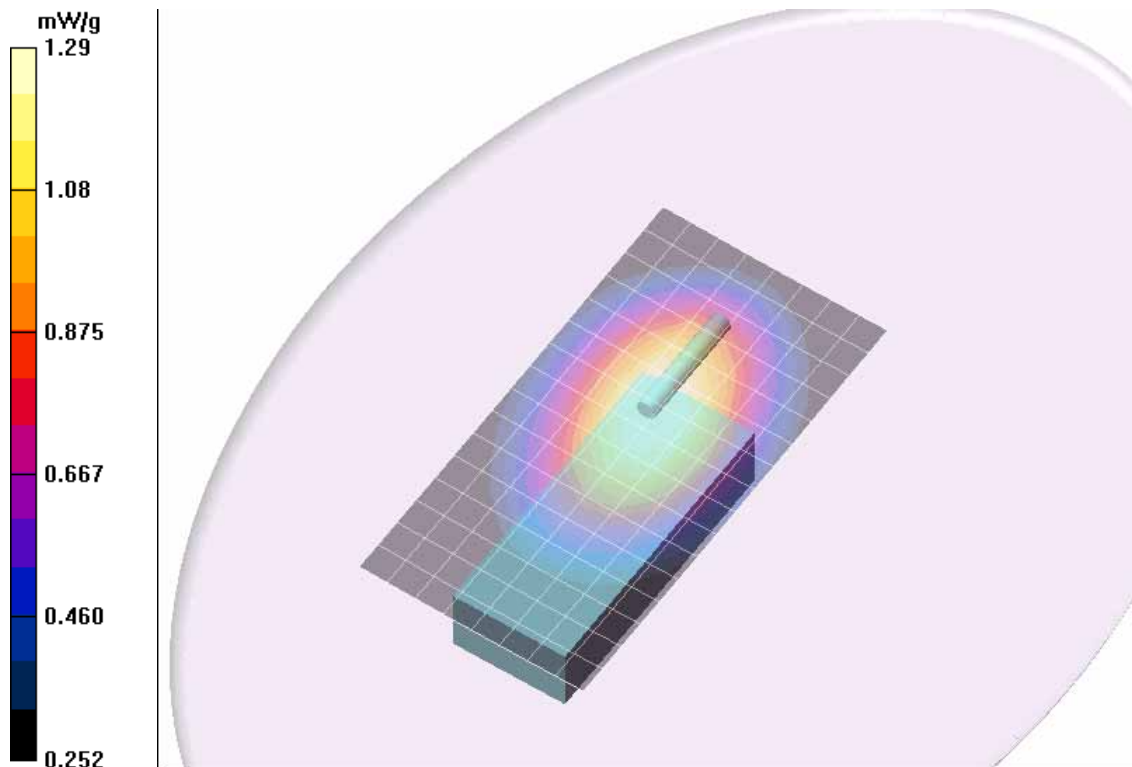


Fig. 1: SAR distribution for PTT configuration, 457.575 MHz, 25 mm distance (October 02, 2007; Ambient Temperature: 22.2°C; Liquid Temperature: 21.3°C).

2 SAR Distribution Plots, Body Worn

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [SP3550_b4hm_1_P45_Clip_Conf1.da4](#)

DUT: SAILOR; Type: SP3550; Serial: 1234560014

Program Name: Body Worn

Communication System: CW; Frequency: 457.575 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 457.575$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 57.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.83, 7.83, 7.83); Calibrated: 15.02.2007

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn631; Calibrated: 17.09.2007

- Phantom: ELI 4; Type: ELI 4;

- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Worn/Area Scan (10x17x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.04 mW/g

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

Reference Value = 35.3 V/m; Power Drift = -0.521 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.934 mW/g; SAR(10 g) = 0.696 mW/g

Maximum value of SAR (measured) = 0.976 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 35.3 V/m; Power Drift = -0.521 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.868 mW/g; SAR(10 g) = 0.645 mW/g

Maximum value of SAR (measured) = 0.907 mW/g

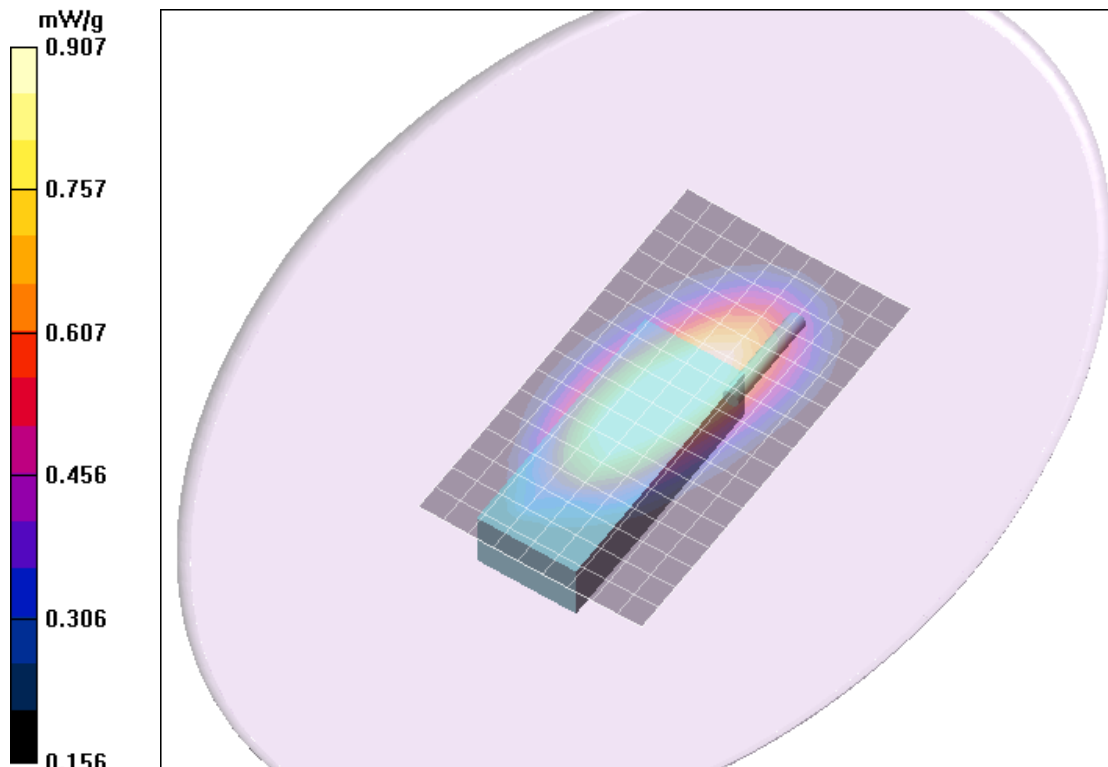


Fig. 2: SAR distribution for Body Worn with clip, 457.575 MHz, display towards the ground, Configuration 1 (January 03, 2008; Ambient Temperature: 21.2° C; Liquid Temperature: 20.5° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [SP3550_b4hm_1_P45_Case_Conf2_dspl_dwn.da4](#)

DUT: SAILOR; Type: SP3550; Serial: 1234560014
 Program Name: Body Worn

Communication System: CW; Frequency: 457.575 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 457.575$ MHz; $\sigma = 0.932$ mho/m; $\epsilon_r = 58$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.83, 7.83, 7.83); Calibrated: 15.02.2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 17.09.2007
- Phantom: ELI 4; Type: ELI 4;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Worn/Area Scan (10x17x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.26 mW/g

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

Reference Value = 37.0 V/m; Power Drift = -0.684 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.843 mW/g

Maximum value of SAR (measured) = 1.23 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 37.0 V/m; Power Drift = -0.684 dB

Peak SAR (extrapolated) = 1.73 W/kg

SAR(1 g) = 0.915 mW/g; SAR(10 g) = 0.645 mW/g

Maximum value of SAR (measured) = 0.984 mW/g

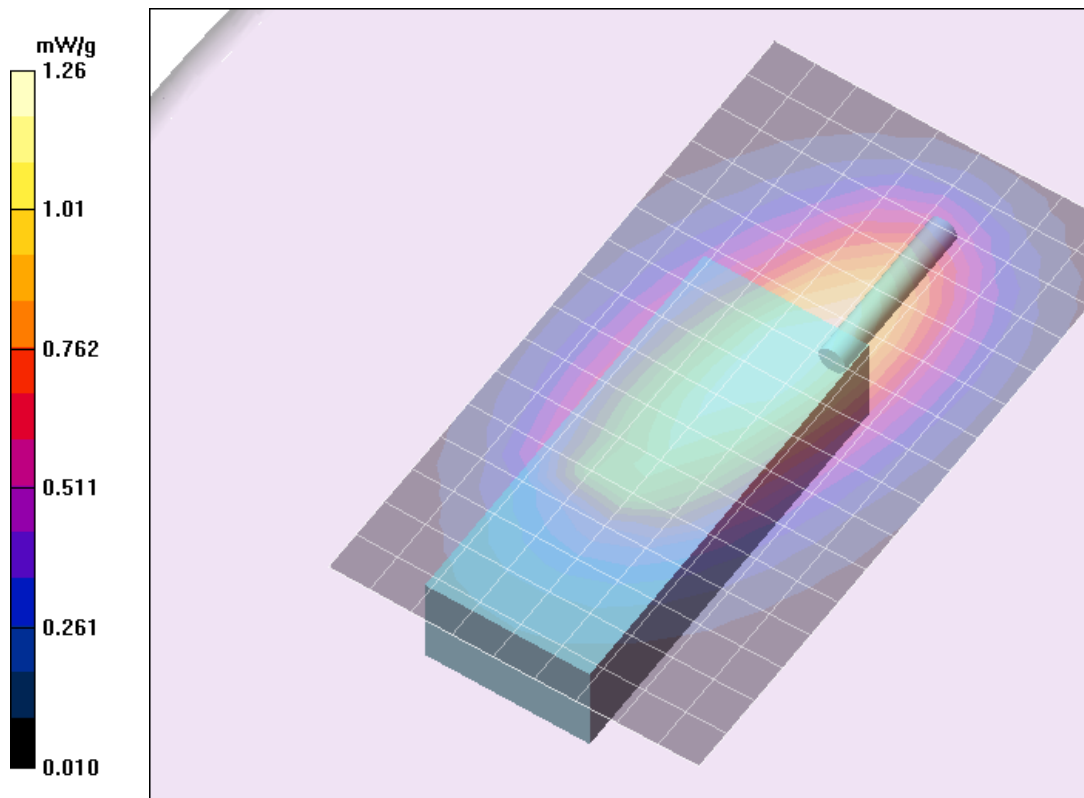


Fig. 3: SAR distribution for Body Worn with leather case, 457.575 MHz, display towards the ground, Configuration 2 (January 07, 2008; Ambient Temperature: 21.5° C; Liquid Temperature: 20.9° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [SP3550_b4hm_1_P45_Case_Conf1_dspl_up.da4](#)

DUT: SAILOR; Type: SP3550; Serial: 1234560014
 Program Name: Body Worn

Communication System: CW; Frequency: 457.575 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 457.575 \text{ MHz}$; $\sigma = 0.932 \text{ mho/m}$; $\epsilon_r = 58$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(7.83, 7.83, 7.83); Calibrated: 15.02.2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 17.09.2007
- Phantom: ELI 4; Type: ELI 4;
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Body Worn/Area Scan (10x17x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.08 mW/g

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

Reference Value = 32.8 V/m; Power Drift = -0.604 dB

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.742 mW/g

Maximum value of SAR (measured) = 1.07 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 32.8 V/m; Power Drift = -0.604 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.733 mW/g; SAR(10 g) = 0.529 mW/g

Maximum value of SAR (measured) = 0.803 mW/g

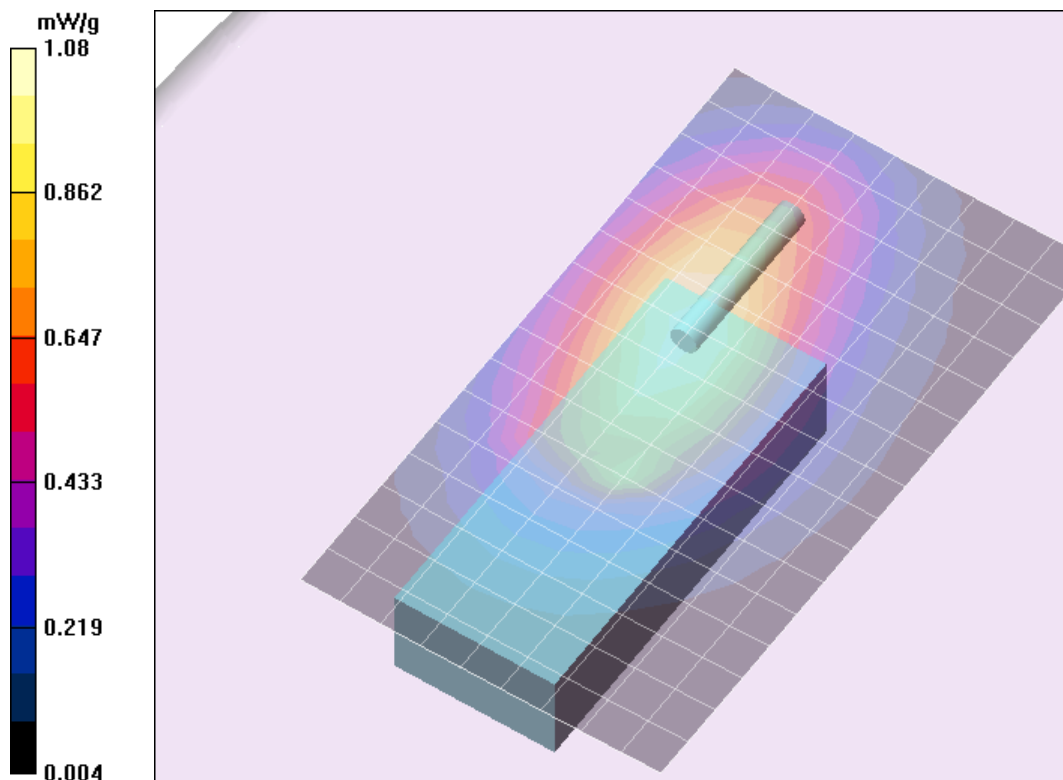


Fig. 4: SAR distribution for Body Worn with leather case, 457.575 MHz, display towards the phantom, Configuration 1 (January 07, 2008; Ambient Temperature: 21.5° C; Liquid Temperature: 20.9° C).

3 SAR z-axis scans (Validation)

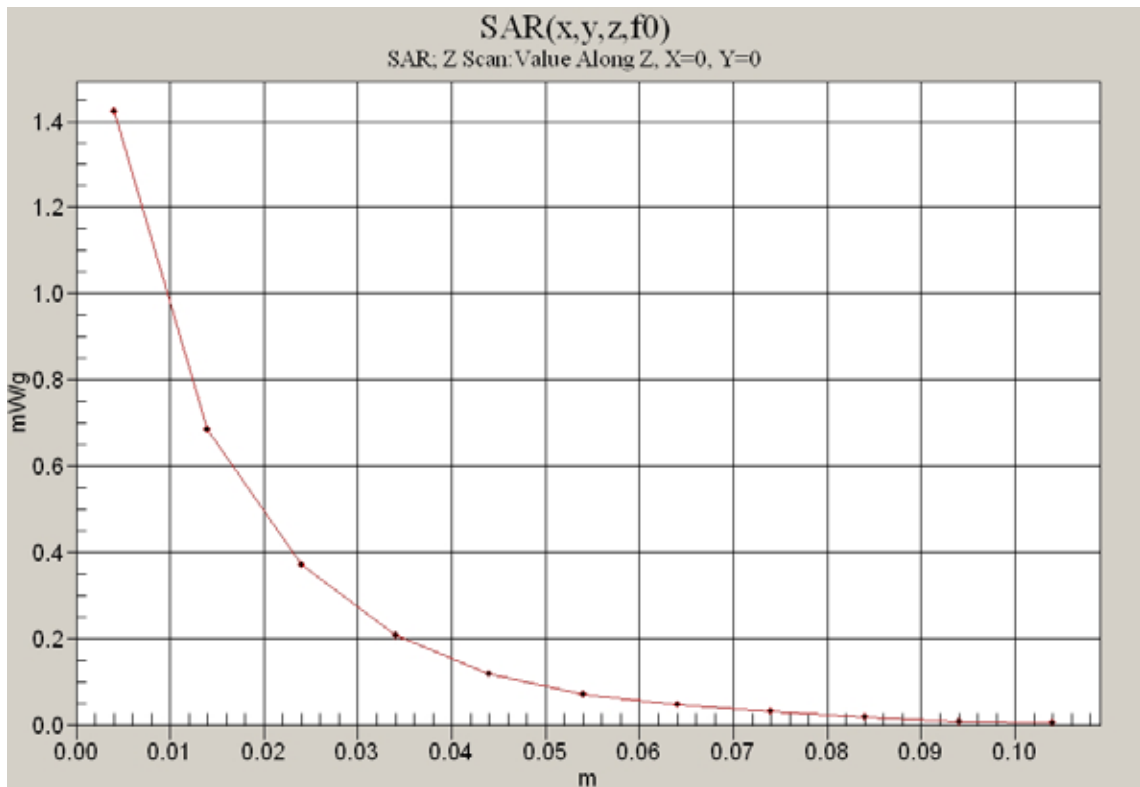


Fig. 5: SAR versus liquid depth, 450 MHz, head (October 02, 2007; Ambient Temperature: 22.2° C; Liquid Temperature : 21.3° C).

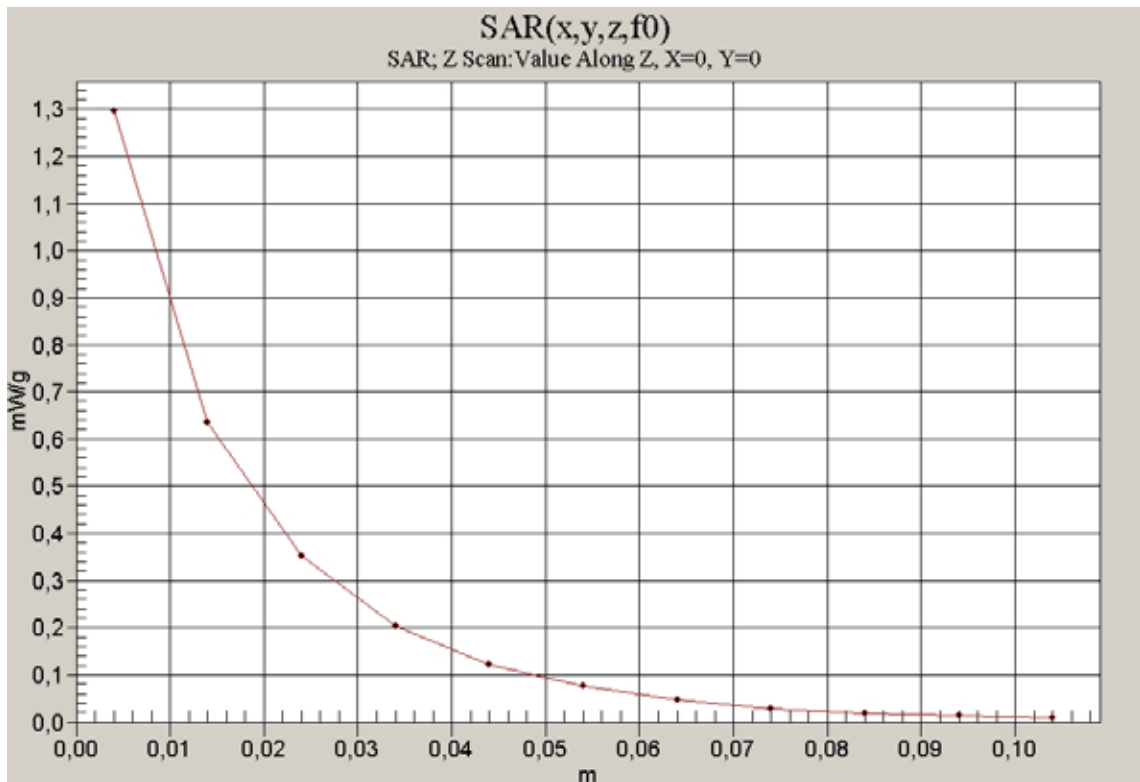


Fig. 6: SAR versus liquid depth, 450 MHz, body (January 03, 2008; Ambient Temperature: 21.1° C; Liquid Temperature : 20.5° C).

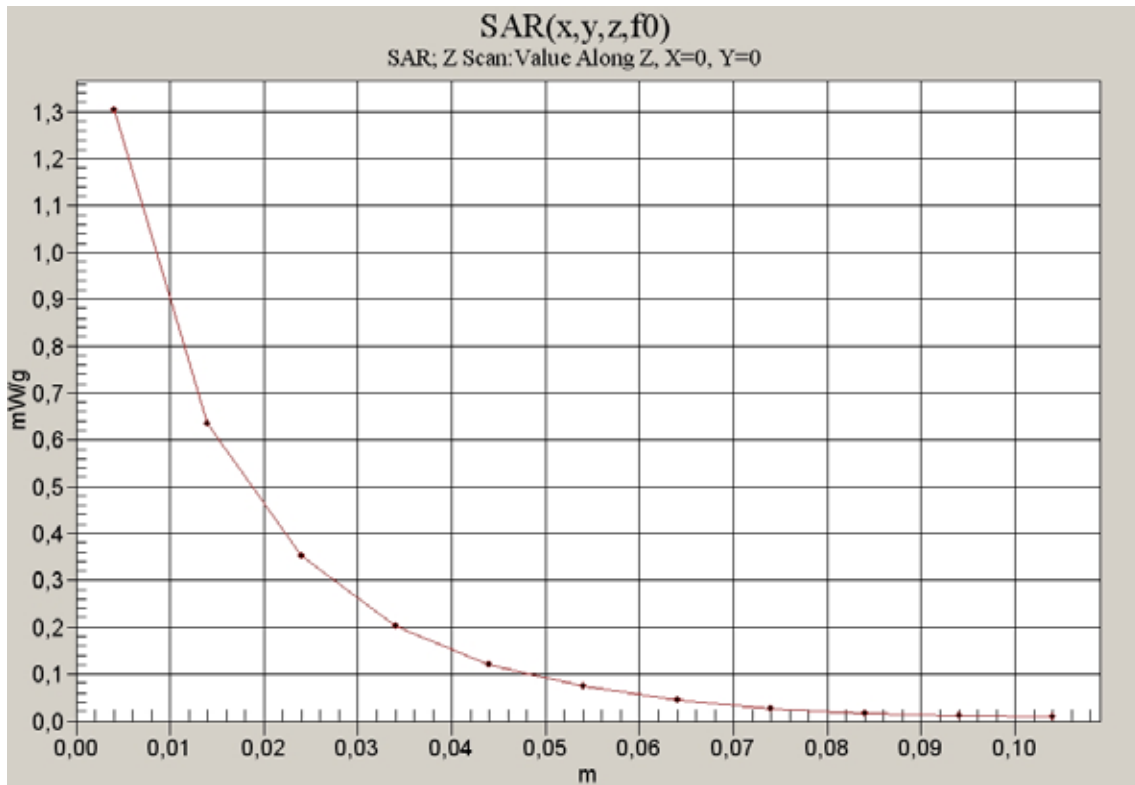


Fig. 7: SAR versus liquid depth, 450 MHz, body (January 07, 2008; Ambient Temperature: 21.5° C; Liquid Temperature : 20.9° C).

4 SAR z-axis scans (Measurements)

The following pictures show the plots of SAR versus liquid depth for the worst case values.

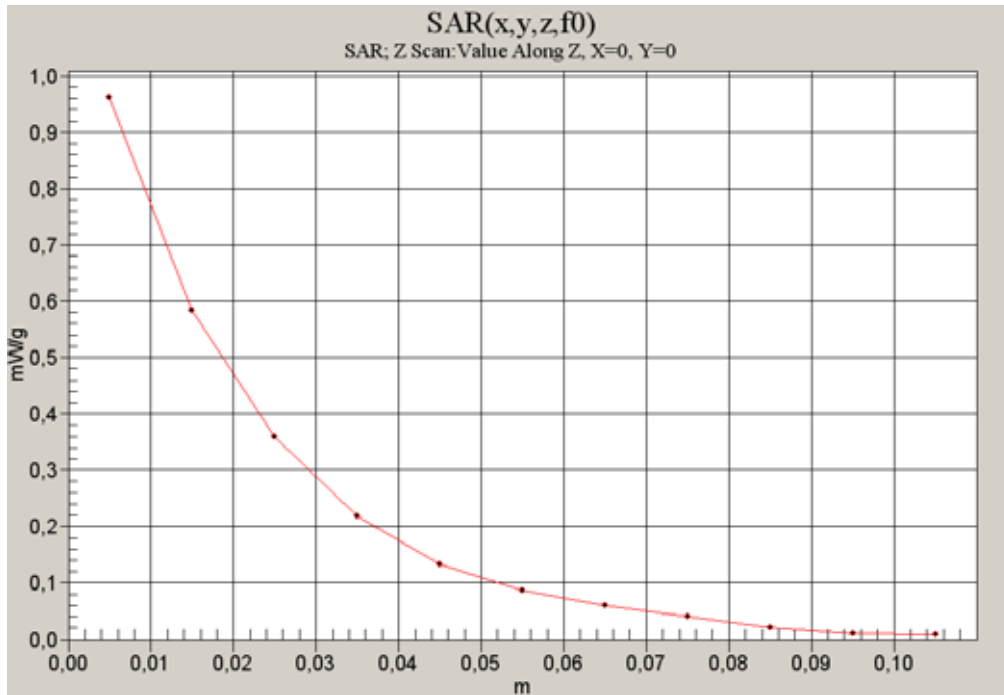


Fig. 8: SAR versus liquid depth, PTT configuration, 457.575 MHz, display towards the phantom, 25 mm distance, (October 02, 2007; Ambient Temperature: 22.2° C; Liquid Temperature: 21.1° C).

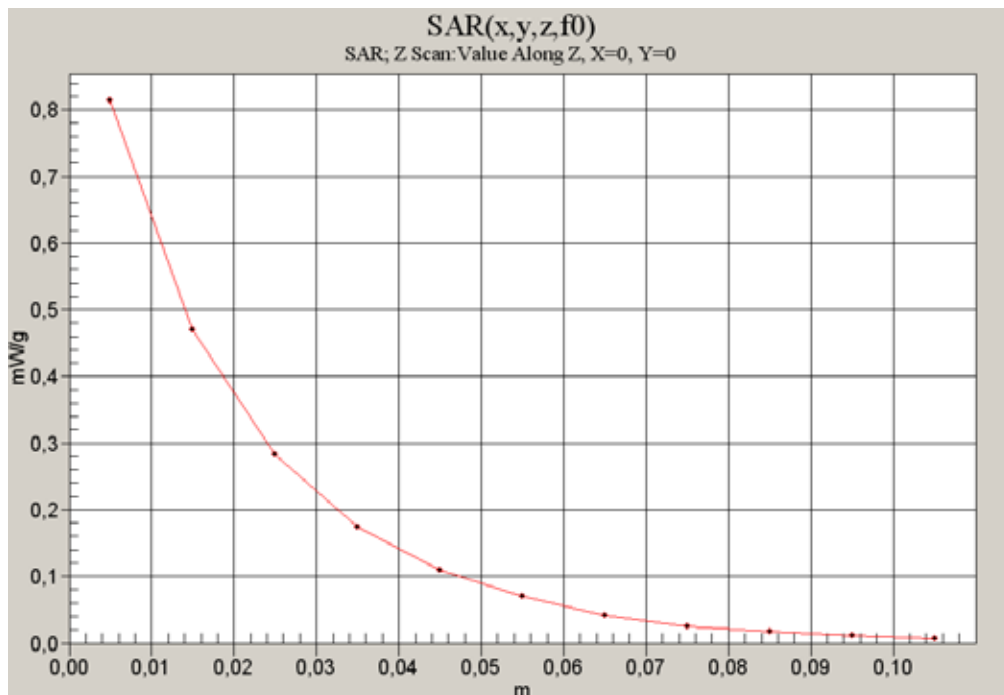


Fig. 9: SAR versus liquid depth, body worn with leather case, 457.575 MHz, display towards the ground, configuration 2 (January 07, 2008; Ambient Temperature: 21.5° C; Liquid Temperature: 20.9° C).