



**SAR EVALUATION REPORT**

*For*

**Lime Creations Ltd  
MODEL: NUTGUARD**

**Summary Report UL-SAR-RP10470178JD01 V1.0  
ISSUE DATE: 11 September 2014**

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## 0.1. Test Results

SAR Measurements in this section are tested to a 10g limit of 2.0W/kg

### 0.1.1. GPRS 900 Body Configuration 10g

Max Reported SAR = 0.535 (W/kg)

					For LTE Only		Power (dBm)		10g : SAR Results (W/kg)			
Mode or Modulation	Dist (mm)	Test Position	Channel No.	Freq (MHz)	RB Allocation	RB Offset	Tune-up limit	Meas.	Meas.	Scaled	Note(s)	Scan No.
GMSK (2Tx Timeslot)	5	Back	37	987.4	N/A	N/A	N/A	N/A	0.535	-	1	1
GMSK (2Tx Timeslot)	5	Back	37	987.4	N/A	N/A	N/A	N/A	0.080	-	1, 2	2
GMSK (2Tx Timeslot)	5	Back	37	987.4	N/A	N/A	N/A	N/A	0.066	-	1, 3	3
GMSK (2Tx Timeslot)	5	Back	37	987.4	N/A	N/A	N/A	N/A	0.094	-	1, 4	4

#### Note(s):

1. No case was attached
2. Testing was performed on the EUT with Case 1 attached
3. Testing was performed on the EUT with Case 2 attached
4. Testing was performed on the EUT with Case 3 attached

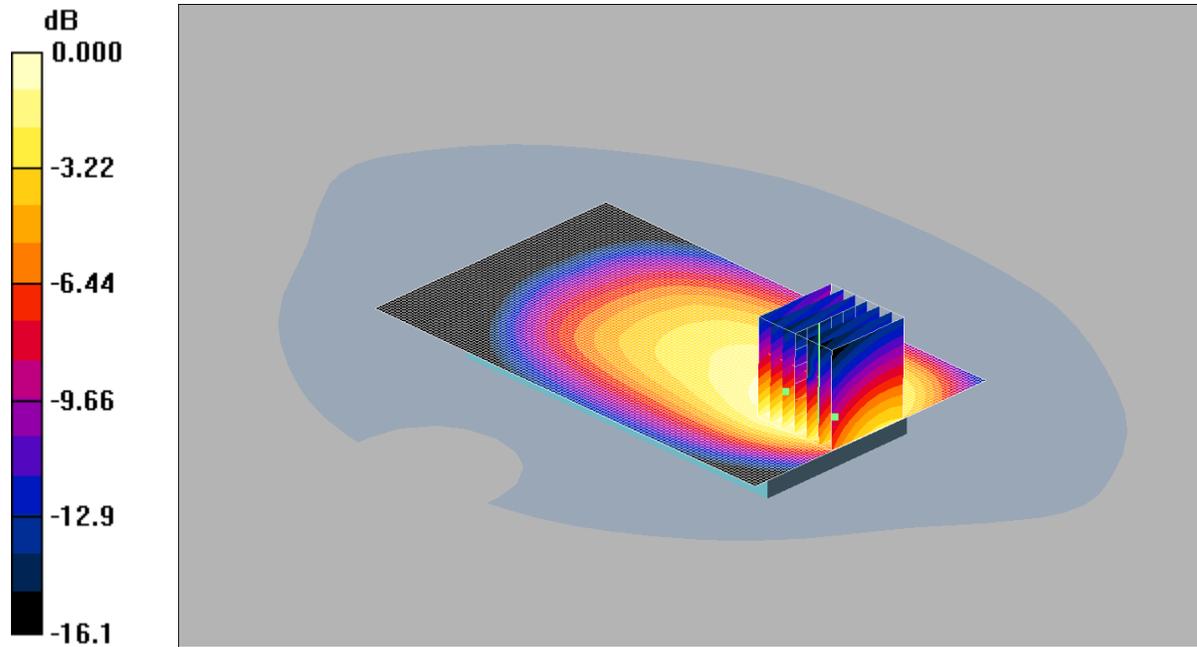
## 0.2. SAR Distribution Scans

Scan Reference Number	Title
001	Back of EUT Facing Phantom GPRS TX 2 CH37
002	Back of EUT Facing Phantom GPRS TX 2 (Case 1) CH37
003	Back of EUT Facing Phantom GPRS TX 2 (Case 2) CH37
004	Back of EUT Facing Phantom GPRS TX 2 (Case 3) CH37
005	System Performance Check 900MHz Head 02 09 14

001: Back of EUT Facing Phantom GPRS TX 2 CH37

Date: 02/09/2014

DUT: Lime Creations; Type: Mobile Phone; Serial: 352015063092961



0 dB = 1.04mW/g

Communication System: GPRS 900 2Tx; Frequency: 897.4 MHz; Duty Cycle: 1:4

Medium: 900 MHz HSL Medium parameters used (interpolated):  $f = 897.4$  MHz;  $\sigma = 0.985$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3304; ConvF(6.27, 6.27, 6.27);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 31/10/2013
- Phantom: SAM 12b (Site 57); Type: SAM 4.0; Serial: TP:1031
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Back - Middle/Area Scan 2 (81x131x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 1.10 mW/g

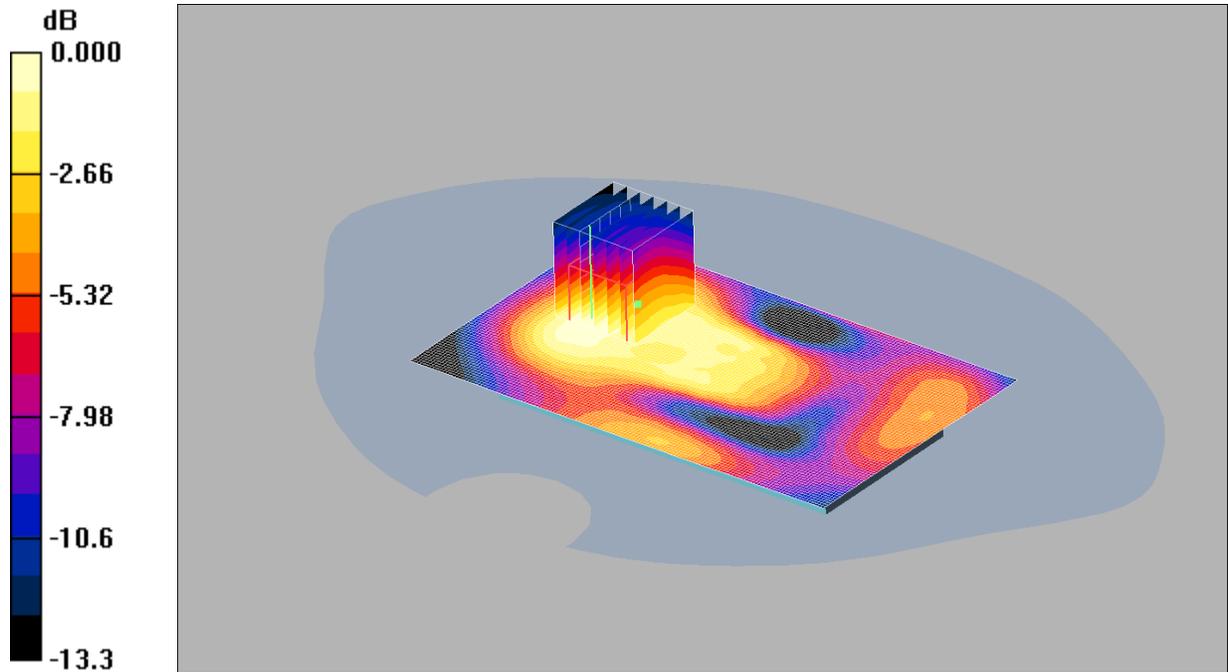
**Back - Middle/Zoom Scan (5x5x7) 2 (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.4 V/m; Power Drift = 0.029 dB

Peak SAR (extrapolated) = 1.92 W/kg

**SAR(1 g) = 0.955 mW/g; SAR(10 g) = 0.535 mW/g**

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



0 dB = 0.140mW/g

Communication System: GPRS 900 2Tx; Frequency: 897.4 MHz; Duty Cycle: 1:4  
 Medium: 900 MHz HSL Medium parameters used (interpolated):  $f = 897.4 \text{ MHz}$ ;  $\sigma = 0.985 \text{ mho/m}$ ;  $\epsilon_r = 41.4$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section  
 DASY4 Configuration:  
 - Probe: ES3DV3 - SN3304; ConvF(6.27, 6.27, 6.27);  
 - Sensor-Surface: 4mm (Mechanical Surface Detection)  
 - Electronics: DAE3 Sn450; Calibrated: 31/10/2013  
 - Phantom: SAM 12b (Site 57); Type: SAM 4.0; Serial: TP:1031  
 - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

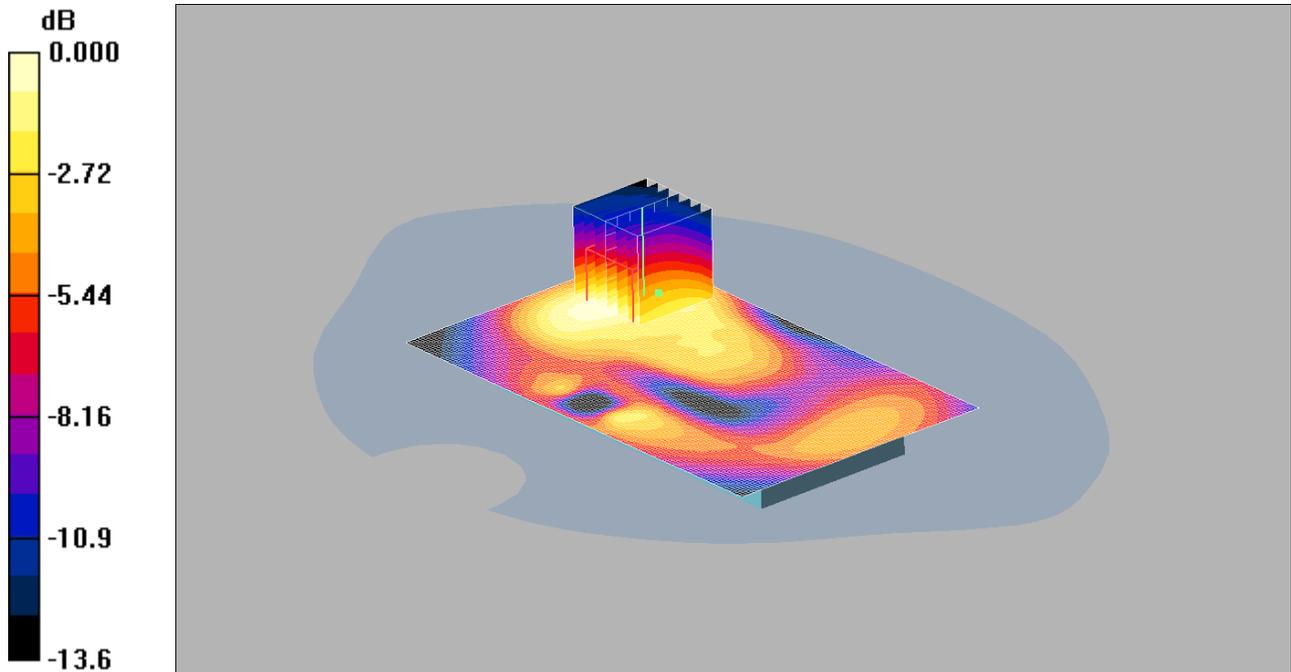
**Back - Middle/Area Scan (81x131x1):** Measurement grid:  $dx=12\text{mm}$ ,  $dy=12\text{mm}$   
 Maximum value of SAR (interpolated) = 0.136 mW/g

**Back - Middle/Zoom Scan (5x5x7) 2 2 (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 9.95 V/m; Power Drift = -0.031 dB  
 Peak SAR (extrapolated) = 0.228 W/kg  
**SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.081 mW/g**  
 Maximum value of SAR (measured) = 0.140 mW/g

003: Back of EUT Facing Phantom GPRS TX 2 (Case 2) CH37

Date: 02/09/2014

DUT: Lime Creations; Type: Mobile Phone; Serial: 352015063092961



0 dB = 0.116mW/g

Communication System: GPRS 900 2Tx; Frequency: 897.4 MHz; Duty Cycle: 1:4

Medium: 900 MHz HSL Medium parameters used (interpolated):  $f = 897.4$  MHz;  $\sigma = 0.985$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3304; ConvF(6.27, 6.27, 6.27);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 31/10/2013
- Phantom: SAM 12b (Site 57); Type: SAM 4.0; Serial: TP:1031
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Back - Middle/Area Scan (81x131x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 0.122 mW/g

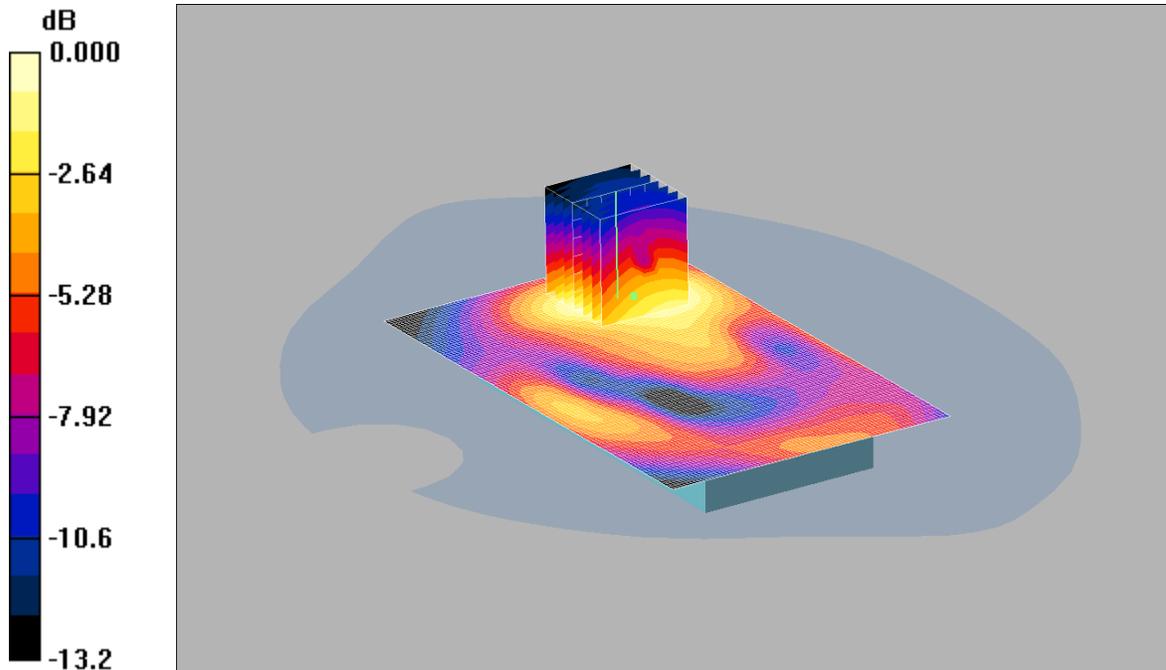
**Back - Middle/Zoom Scan (5x5x7) 2 2 2 (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.98 V/m; Power Drift = 0.053 dB

Peak SAR (extrapolated) = 0.200 W/kg

**SAR(1 g) = 0.108 mW/g; SAR(10 g) = 0.066 mW/g**

Maximum value of SAR (measured) = 0.116 mW/g



0 dB = 0.162mW/g

Communication System: GPRS 900 2Tx; Frequency: 897.4 MHz; Duty Cycle: 1:4

Medium: 900 MHz HSL Medium parameters used (interpolated):  $f = 897.4$  MHz;  $\sigma = 0.985$  mho/m;  $\epsilon_r = 41.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3304; ConvF(6.27, 6.27, 6.27);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 31/10/2013
- Phantom: SAM 12b (Site 57); Type: SAM 4.0; Serial: TP:1031
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Back - Middle/Area Scan (81x131x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 0.174 mW/g

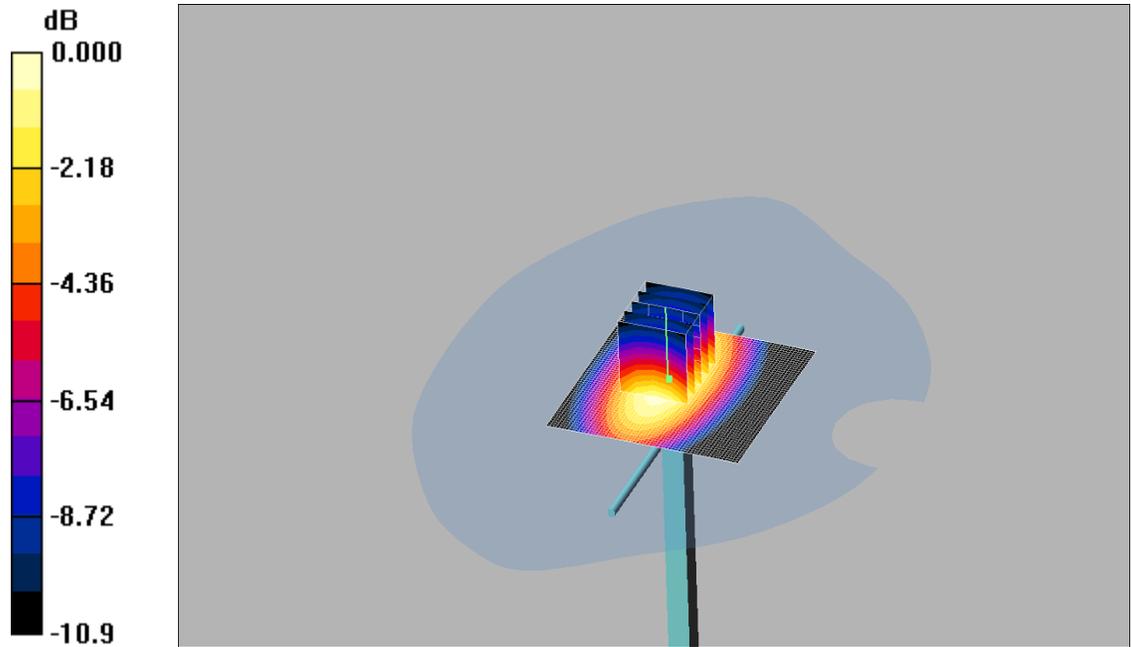
**Back - Middle/Zoom Scan (5x5x7) 2 2 (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.33 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 0.252 W/kg

**SAR(1 g) = 0.151 mW/g; SAR(10 g) = 0.094 mW/g**

Maximum value of SAR (measured) = 0.162 mW/g



0 dB = 2.87mW/g

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz HSL Medium parameters used:  $f = 900 \text{ MHz}$ ;  $\sigma = 0.987 \text{ mho/m}$ ;  $\epsilon_r = 41.4$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3304; ConvF(6.27, 6.27, 6.27);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 31/10/2013
- Phantom: SAM 12b (Site 57); Type: SAM 4.0; Serial: TP:1031
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**d=15mm, Pin=250mW/Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.86 mW/g

**d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.5 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 3.96 W/kg

**SAR(1 g) = 2.67 mW/g; SAR(10 g) = 1.74 mW/g**

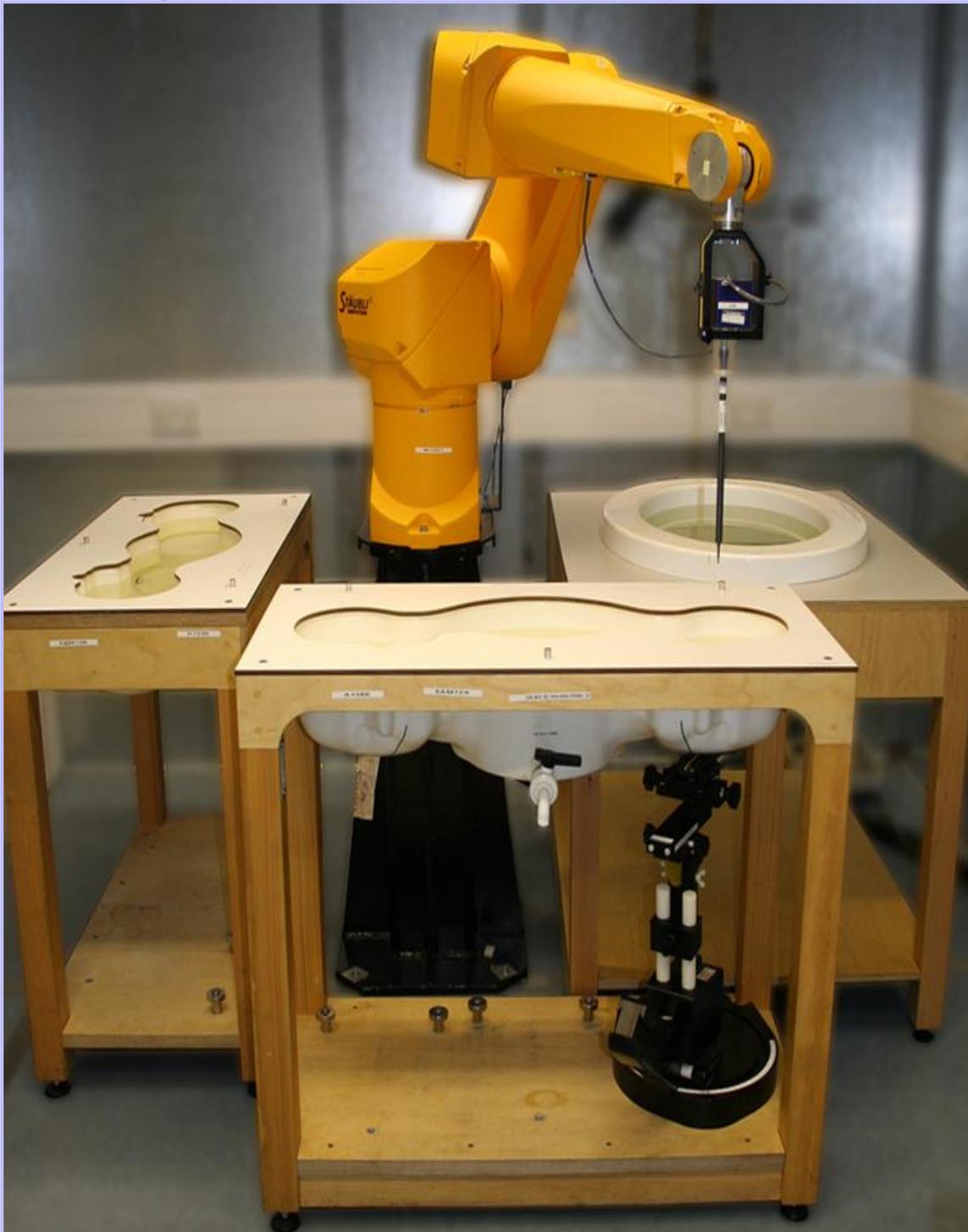
Maximum value of SAR (measured) = 2.87 mW/g

### 0.3. Photographs

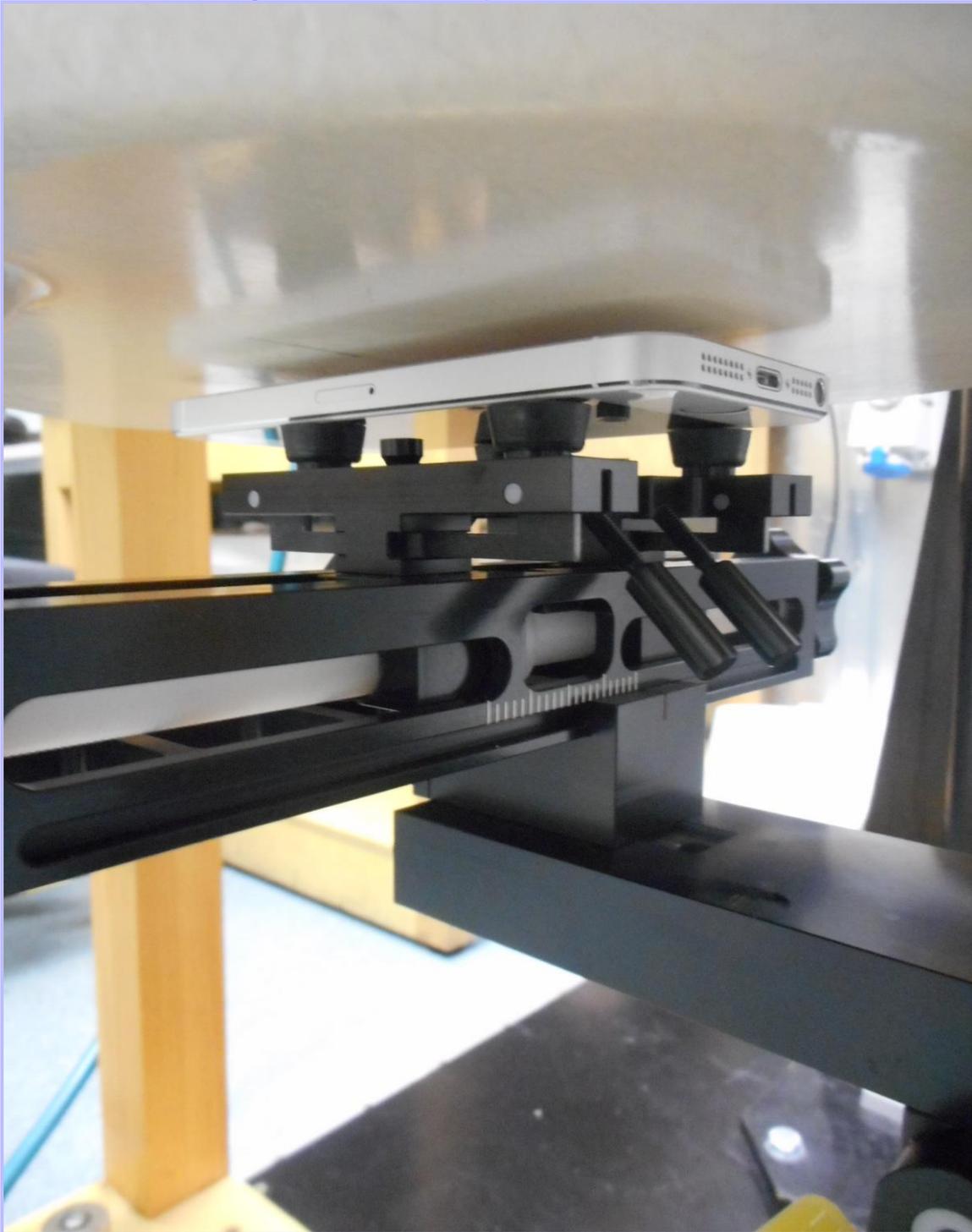
This appendix contains the following photographs:

Photo Reference Number	Title
001	Test configuration for the measurement of Specific Absorption Rate (SAR)
002	Back of EUT Facing Phantom at 5mm Separation
003	Back of EUT Facing Phantom (Case 1) at 5mm Separation
004	Back of EUT Facing Phantom (Case 2) at 5mm Separation
005	Back of EUT Facing Phantom (Case 3) at 5mm Separation
006	Front View of EUT (Case 1)
007	Back View of EUT (Case 1)
008	Front View of EUT (Case 2)
009	Back View of EUT (Case 2)
010	Front View of EUT (Case 3)
011	Back View of EUT (Case 3)
012	Left Hand Side View of EUT (Case 1)
013	Right Hand Side View of EUT (Case 1)
014	Top View of EUT (Case 1)
015	Bottom View of EUT (Case 1)
016	900 Body Fluid Level

001: Test configuration for the measurement of Specific Absorption Rate (SAR)



002: Back of EUT Facing Phantom at 5mm Separation



**003: Back of EUT Facing Phantom (Case 1) at 5mm Separation**



004: Back of EUT Facing Phantom (Case 2) at 5mm Separation



**005: Back of EUT Facing Phantom (Case 3) at 5mm Separation**



006: Front View of EUT (Case 1)



007: Back View of EUT (Case 1)



008: Front View of EUT (Case 2)



009: Back View of EUT (Case 2)



010: Front View of EUT (Case 3)



011: Back View of EUT (Case 3)



012: Left Hand Side View of EUT (Case 1)



013: Right Hand Side View of EUT (Case 1)



014: Top View of EUT (Case 1)



015: Bottom View of EUT (Case 1)



016: 900 Body Fluid Level

