

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3962

Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) ^F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 450 | 43.5 | 0.87 | 11.00 | 11.00 | 11.00 | 0.15 | 1.30 | ± 13.4 % |
| 750 | 41.9 | 0.89 | 10.67 | 10.67 | 10.67 | 0.50 | 0.80 | ± 12.0 % |
| 835 | 41.5 | 0.90 | 10.17 | 10.17 | 10.17 | 0.50 | 0.80 | ± 12.0 % |
| 1750 | 40.1 | 1.37 | 8.77 | 8.77 | 8.77 | 0.37 | 0.80 | ± 12.0 % |
| 1900 | 40.0 | 1.40 | 8.49 | 8.49 | 8.49 | 0.28 | 0.93 | ± 12.0 % |
| 2300 | 39.5 | 1.67 | 8.02 | 8.02 | 8.02 | 0.25 | 1.09 | ± 12.0 % |
| 2450 | 39.2 | 1.80 | 7.65 | 7.65 | 7.65 | 0.38 | 0.80 | ± 12.0 % |
| 2600 | 39.0 | 1.96 | 7.35 | 7.35 | 7.35 | 0.22 | 1.23 | ± 12.0 % |
| 5250 | 35.9 | 4.71 | 5.14 | 5.14 | 5.14 | 0.40 | 1.80 | ± 13.1 % |
| 5600 | 35.5 | 5.07 | 4.56 | 4.56 | 4.56 | 0.45 | 1.80 | ± 13.1 % |
| 5750 | 35.4 | 5.22 | 4.79 | 4.79 | 4.79 | 0.45 | 1.80 | ± 13.1 % |

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3962

Calibration Parameter Determined in Body Tissue Simulating Media

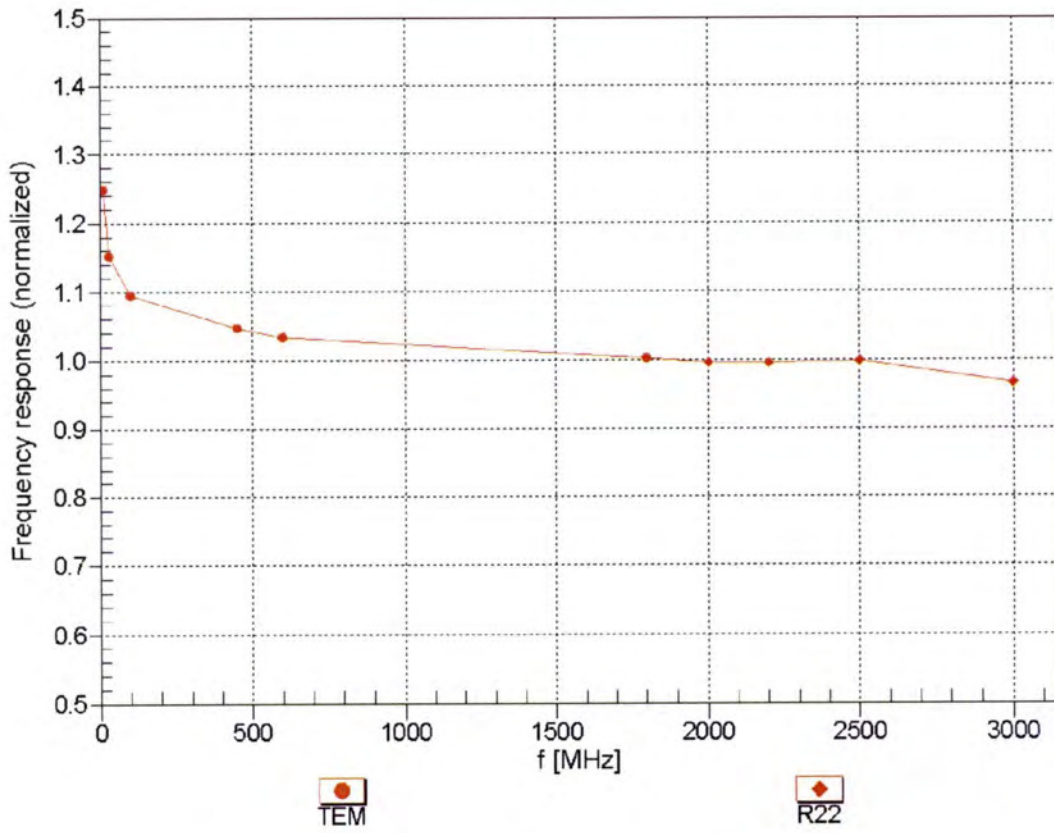
| f (MHz) ^C | Relative Permittivity ^F | Conductivity (S/m) ^F | ConvF X | ConvF Y | ConvF Z | Alpha ^G | Depth ^G (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 450 | 56.7 | 0.94 | 11.33 | 11.33 | 11.33 | 0.08 | 1.20 | ± 13.4 % |
| 750 | 55.5 | 0.96 | 10.41 | 10.41 | 10.41 | 0.50 | 0.80 | ± 12.0 % |
| 835 | 55.2 | 0.97 | 10.16 | 10.16 | 10.16 | 0.50 | 0.80 | ± 12.0 % |
| 1750 | 53.4 | 1.49 | 8.49 | 8.49 | 8.49 | 0.32 | 0.88 | ± 12.0 % |
| 1900 | 53.3 | 1.52 | 8.20 | 8.20 | 8.20 | 0.33 | 0.89 | ± 12.0 % |
| 2300 | 52.9 | 1.81 | 7.96 | 7.96 | 7.96 | 0.39 | 0.80 | ± 12.0 % |
| 2450 | 52.7 | 1.95 | 7.70 | 7.70 | 7.70 | 0.38 | 0.80 | ± 12.0 % |
| 2600 | 52.5 | 2.16 | 7.63 | 7.63 | 7.63 | 0.37 | 0.80 | ± 12.0 % |
| 5250 | 48.9 | 5.36 | 4.15 | 4.15 | 4.15 | 0.50 | 1.90 | ± 13.1 % |
| 5600 | 48.5 | 5.77 | 3.61 | 3.61 | 3.61 | 0.60 | 1.90 | ± 13.1 % |
| 5750 | 48.3 | 5.94 | 3.70 | 3.70 | 3.70 | 0.60 | 1.90 | ± 13.1 % |

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

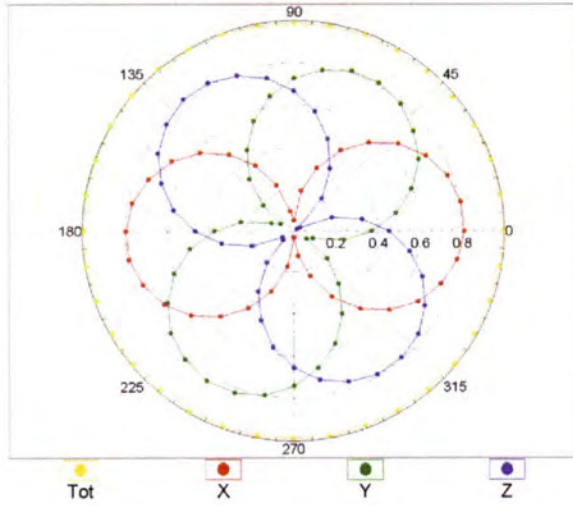
Frequency Response of E-Field (TEM-Cell:ifi1110 EXX, Waveguide: R22)



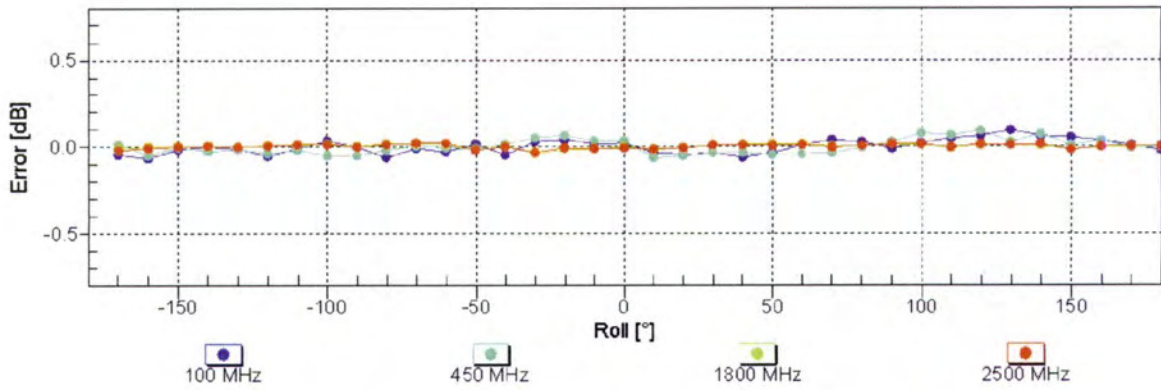
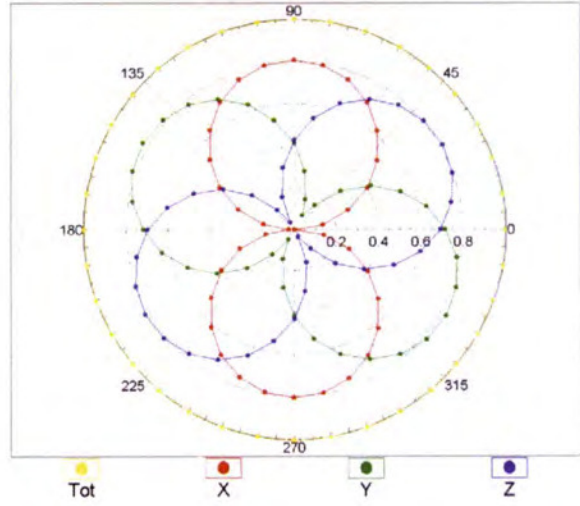
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ (k=2)

Receiving Pattern (ϕ), $\vartheta = 0^\circ$

f=450 MHz,TEM

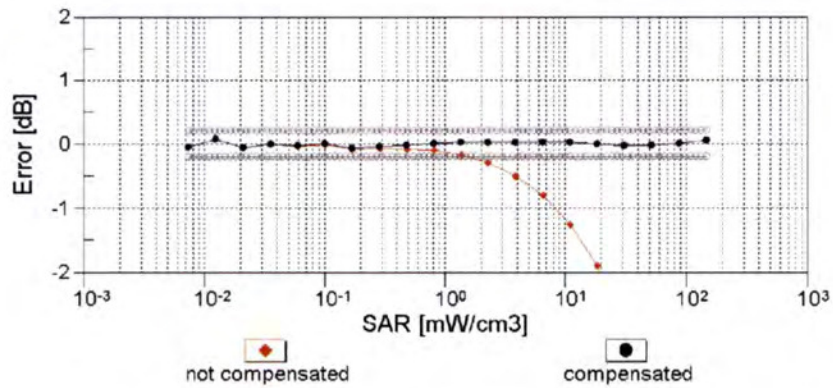
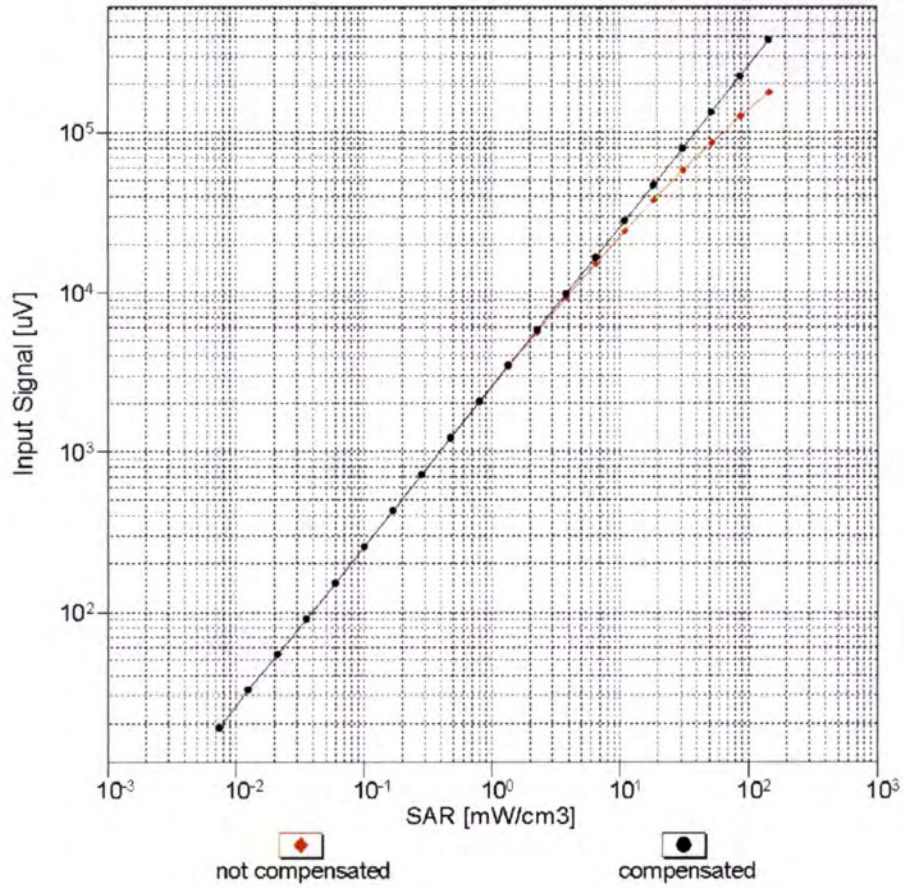


f=1800 MHz,R22



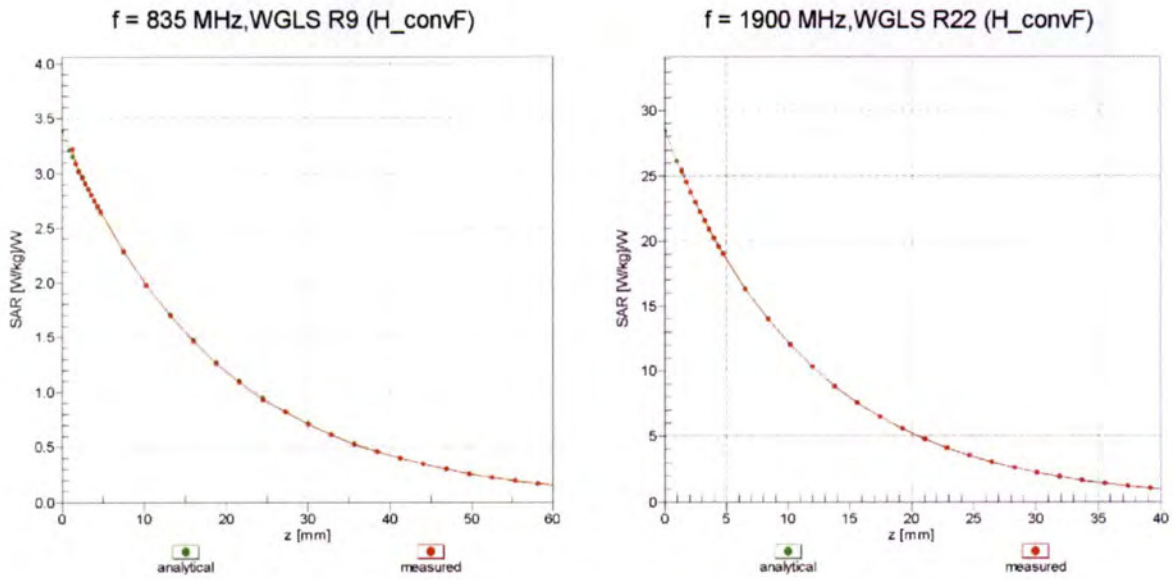
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell , $f_{\text{eval}} = 1900 \text{ MHz}$)

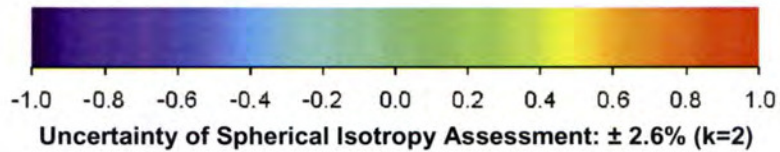
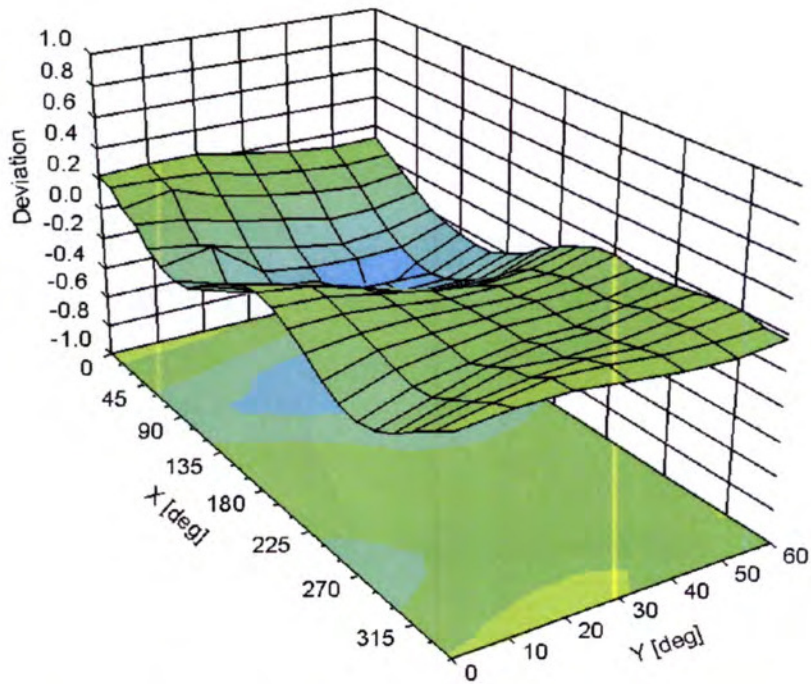


Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (ϕ, θ), f = 900 MHz



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Other Probe Parameters

| | |
|---|------------|
| Sensor Arrangement | Triangular |
| Connector Angle (°) | -30.1 |
| Mechanical Surface Detection Mode | enabled |
| Optical Surface Detection Mode | disabled |
| Probe Overall Length | 337 mm |
| Probe Body Diameter | 10 mm |
| Tip Length | 9 mm |
| Tip Diameter | 2.5 mm |
| Probe Tip to Sensor X Calibration Point | 1 mm |
| Probe Tip to Sensor Y Calibration Point | 1 mm |
| Probe Tip to Sensor Z Calibration Point | 1 mm |
| Recommended Measurement Distance from Surface | 1.4 mm |



Appendix D

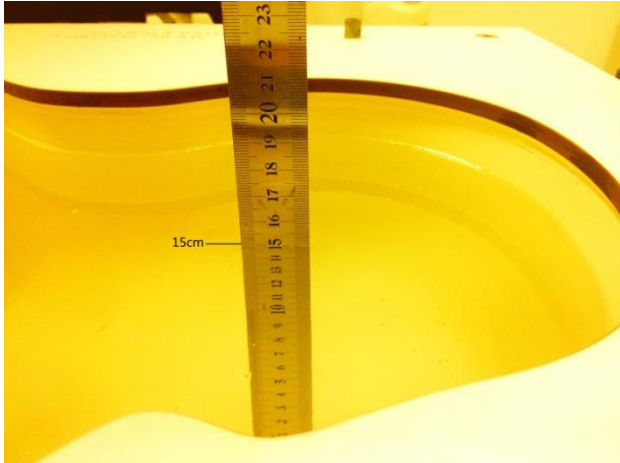
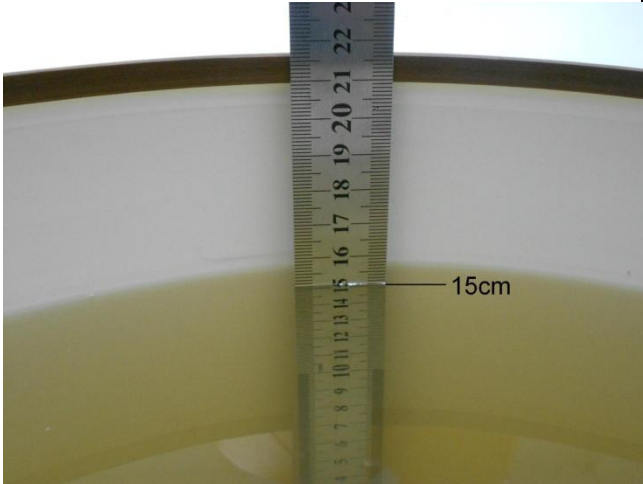
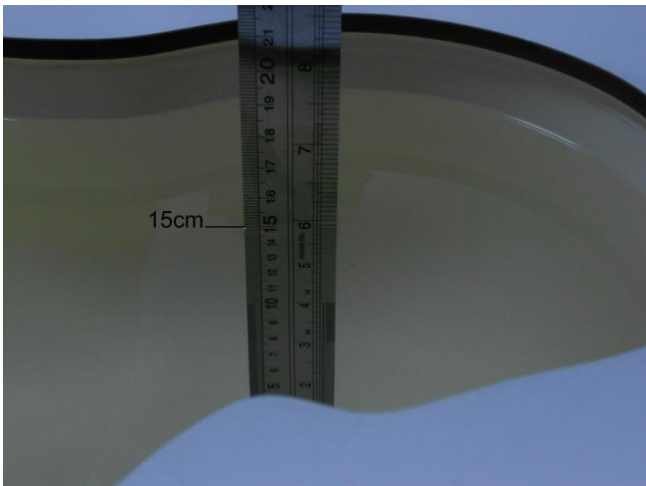
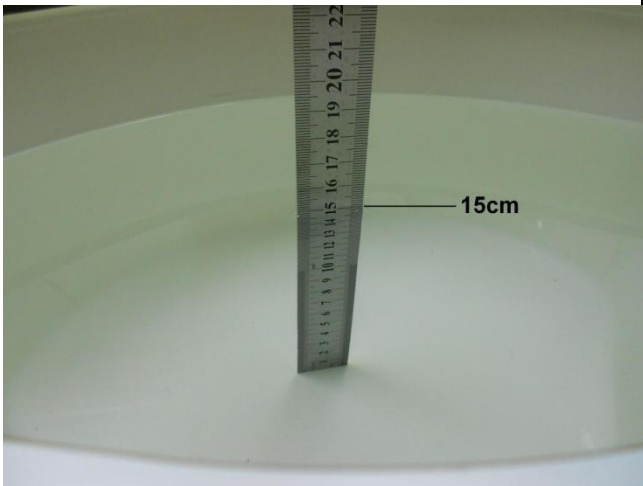
Photographs

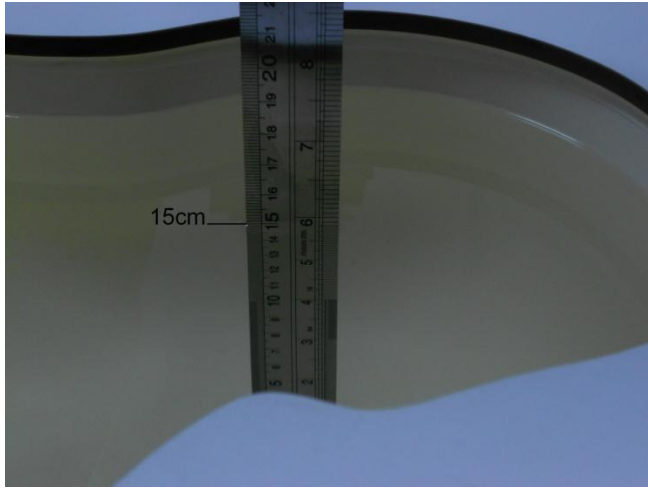
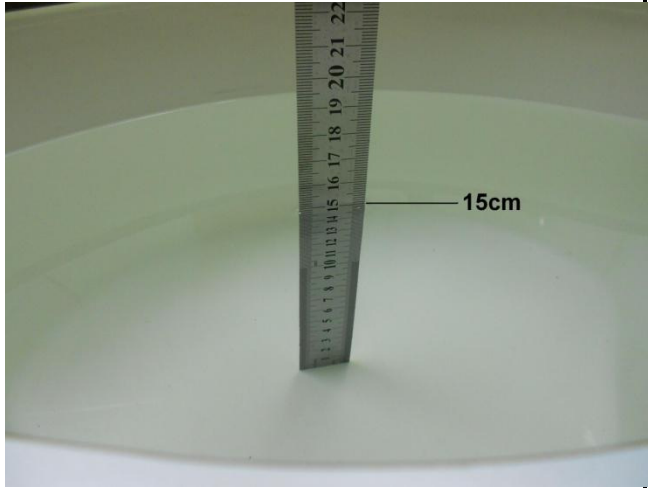
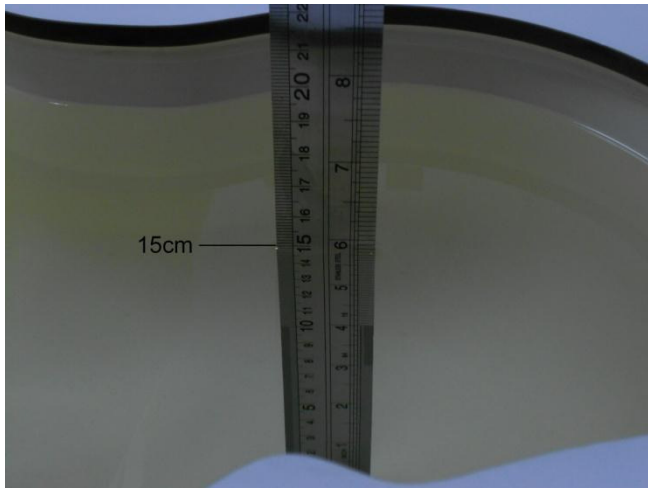
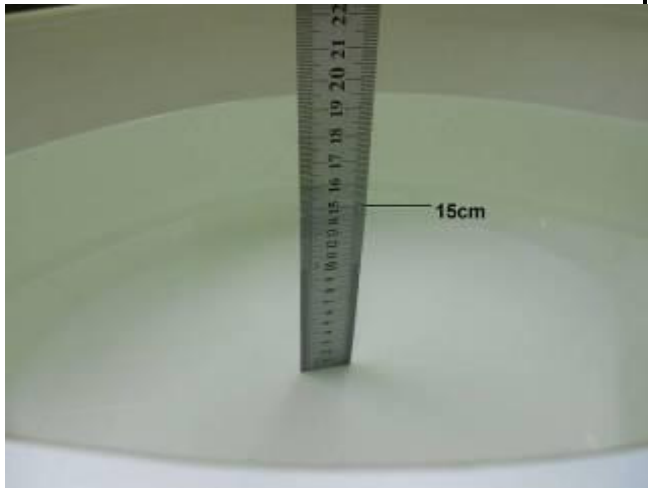
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| 1. SAR measurement System |
| 2. Photographs of Tissue Simulate Liquid |
| 3. Photographs of EUT test position |
| 4. EUT Constructional Details |

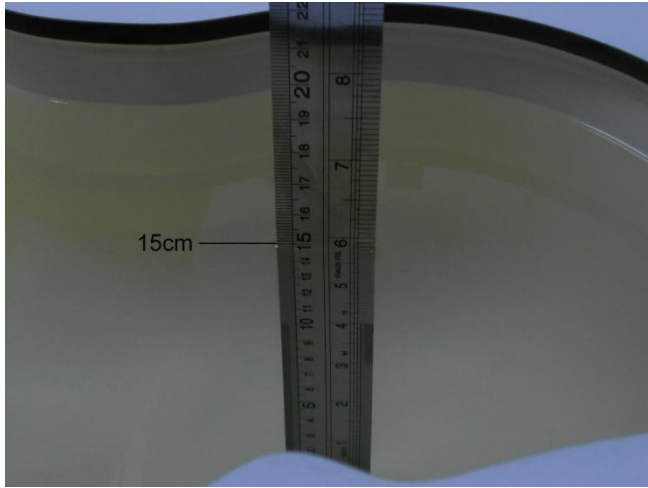
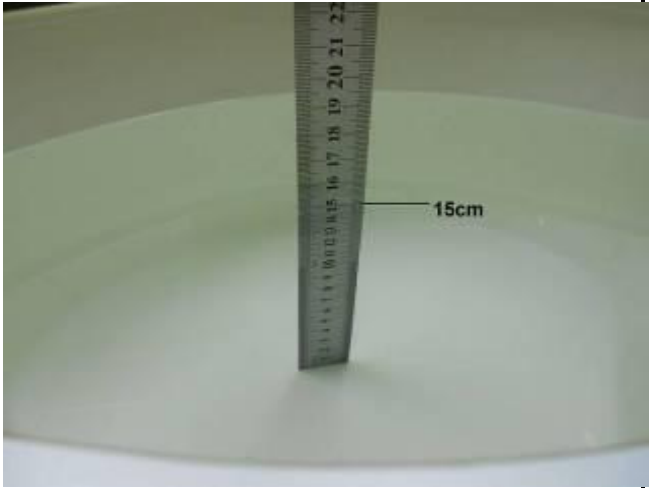
1. SAR measurement System



2. Photographs of Tissue Simulate Liquid

| | |
|--|--|
| <p>Photo 1: Tissue Simulant Liquid for Head 835</p> | <p>Photo 2: Tissue Simulant Liquid for Body 835</p> |
|  <p>A photograph showing a yellow liquid in a white container. A ruler is placed vertically in the center of the liquid, and a horizontal line indicates a depth of 15 cm. The ruler markings range from 15 to 23 cm.</p> |  <p>A photograph showing a yellow liquid in a white container. A ruler is placed vertically in the center of the liquid, and a horizontal line indicates a depth of 15 cm. The ruler markings range from 15 to 22 cm.</p> |
| <p>Photo 3: Tissue Simulant Liquid for Head 1800</p> | <p>Photo 4: Tissue Simulant Liquid for Body 1800</p> |
|  <p>A photograph showing a grey liquid in a white container. A ruler is placed vertically in the center of the liquid, and a horizontal line indicates a depth of 15 cm. The ruler markings range from 15 to 24 cm.</p> |  <p>A photograph showing a light green liquid in a white container. A ruler is placed vertically in the center of the liquid, and a horizontal line indicates a depth of 15 cm. The ruler markings range from 15 to 22 cm.</p> |

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|---|--|
| <p>Photo 5: Tissue Simulant Liquid for Head 1900</p> | <p>Photo 6: Tissue Simulant Liquid for Body 1900</p> |
|  |  |
| <p>Photo 7: Tissue Simulant Liquid for Head 2450</p> | <p>Photo 8: Tissue Simulant Liquid for Body 2450</p> |
|  |  |

| Photo 9: Tissue Simulant Liquid for Head 2600 | Photo 10: Tissue Simulant Liquid for Body 2600 |
|---|--|
|  <p>15cm</p> |  <p>15cm</p> |

3. Photographs of EUT test position

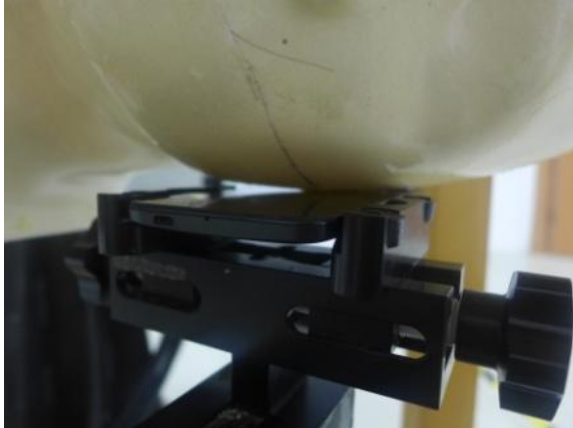
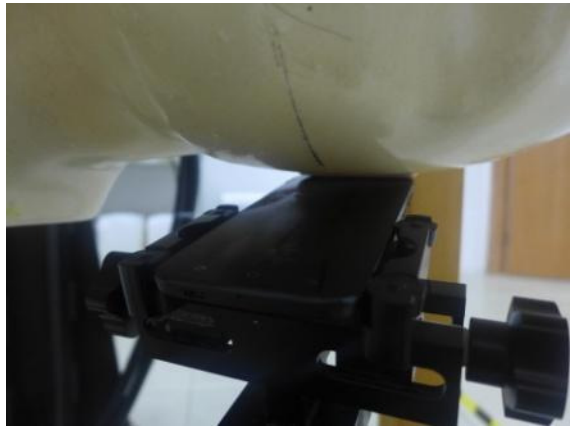

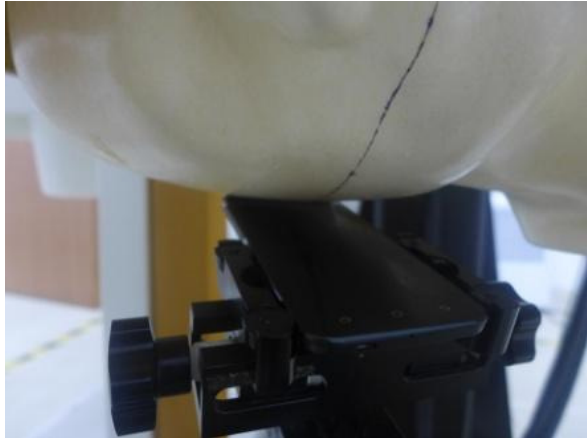
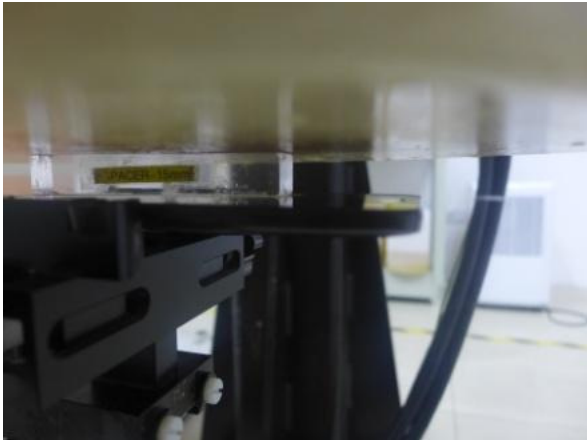

| | |
|---|--|
| <p>Photo 11: Left touch cheek</p> | <p>Photo 12: Left tilted 15 degree</p> |
|  |  |
| <p>Photo 13: Right touch cheek</p> | <p>Photo 14: Right tilted 15 degree</p> |
|  |  |
| <p>Photo 15: Front side 15mm</p> | <p>Photo 16: Back side 15mm</p> |
|  |  |




Photo 17: Right side 10mm



Photo 18: Bottom side 10mm



4. EUT Constructional Details

| Photo 19: Front View | Photo 20: Back View |
|--|--|
|  |  |
| Photo 21: Accessory | N/A |
|  | <p>N/A</p> |