

## APPENDIX 5. SIMULATED TISSUES

The body mixture consists of water, Polysorbate (Tween 20) and salt. Visual inspection is made to ensure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the tissue.

Ingredient (% by weight)	Frequency 750/835/850/900 MHz	
	Head	Body
De-Ionized Water	52.87	71.30
Polysorbate 20	46.10	28.00
Salt	1.03	0.70

Ingredient (% by weight)	Frequency 1800/1900 MHz	
	Head	Body
De-Ionized Water	55.40	71.50
Polysorbate 20	44.22	28.00
Salt	0.38	0.50

Ingredient (% by weight)	Frequency 2450/2600 MHz	
	Head	Body
De-Ionized Water	55.75 <sup>(1)</sup>	71.70
Polysorbate 20	45.25 <sup>(1)</sup>	28.00
Salt	0.00	0.30

Stimulating Liquid for 3700 MHz to 5800 MHz are supplied and manufactured by SPEAG

Ingredient (% by weight)	Frequency
	3700 - 5800 MHz Head / Body
De-Ionized Water	~78.00
Mineral Oil	~11.00
Emulsifiers	~9.00
Additives and Salt	~2.00

**Note(s):**

- As per the recipe provided by National Physical Laboratory, the 2450 MHz Head Fluid recipe is mixed to the total percentage of weight is by 101.0 %.

## APPENDIX 6. SYSTEM CHECK AND DIELECTRIC PARAMETERS

**Dielectric Property Measurements:** The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized.

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.

**System Performance Check:** Prior to the assessment, the system was verified in the flat region of the phantom, 900 MHz, 1900 MHz, 2450 MHz and 5.0 GHz dipoles were used. A forward power of 250 mW was applied to the 900 MHz, 1900 MHz, 2450 MHz dipoles and 100 mW was applied to 5.0 GHz dipole and the system was verified to a tolerance of ±5% for the 900 MHz, 1900 MHz, 2450 MHz and 5.0 GHz dipoles.

The applicable verification normalised to 1 Watt.

System Check 900 Head								
Date: 16/06/2014								
Validation Dipole and Serial Number: D900V2 SN: 035 [Lab Site 57]								
Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	900	23.0°C	22.0°C	$\epsilon_r$	41.50	40.51	-2.39	5.00
				$\sigma$	0.97	1.00	2.58	5.00
				1g SAR	10.50	10.60	0.95	5.00
				10g SAR	6.69	6.88	2.84	5.00

System Check 900 Head								
Date: 16/06/2014								
Validation Dipole and Serial Number: D900V2 SN: 035 [Lab Site 61]								
Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	900	23.0°C	22.0°C	$\epsilon_r$	41.50	39.84	-4.00	5.00
				$\sigma$	0.97	0.97	0.05	5.00
				1g SAR	10.50	10.24	-2.48	5.00
				10g SAR	6.69	6.60	-1.35	5.00

System Check 900 Body								
Date: 16/06/2014								
Validation Dipole and Serial Number: D900V2 SN: 035 [Lab Site 61]								
Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	23.0°C	22.0°C	$\epsilon_r$	55.0	54.13	-1.58	5.00
				$\sigma$	1.05	1.09	3.48	5.00
				1g SAR	10.40	10.24	-1.54	5.00
				10g SAR	6.73	6.56	-2.53	5.00

**System Check 1900 Head**  
 Date: 16/06/2014  
 Validation Dipole and Serial Number: D1900V2: SN: 537 [Lab Site 56]

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	1900	22.3 °C	24.0 °C	$\epsilon_r$	40.00	38.65	-3.38	5.00
				$\sigma$	1.40	1.38	-1.31	5.00
				1g SAR	39.80	39.64	-0.40	5.00
				10g SAR	20.70	20.32	-1.84	5.00

**System Check 1900 Body**  
 Date: 16/06/2014  
 Validation Dipole and Serial Number: D1900V2: SN: 537 [Lab Site 56]

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	24.0 °C	23.5 °C	$\epsilon_r$	53.30	53.04	-0.49	5.00
				$\sigma$	1.52	1.53	0.63	5.00
				1g SAR	40.20	38.6	-3.98	5.00
				10g SAR	21.10	20.32	-3.70	5.00

**System Check 2450 Head**  
 Date: 17/06/2014  
 Validation Dipole and Serial Number: D2440V2: SN: 701 [Lab Site 59]

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	2450	24.0°C	23.5 °C	$\epsilon_r$	39.20	37.77	-3.65	5.00
				$\sigma$	1.80	1.77	-1.92	5.00
				1g SAR	53.40	52.80	-1.12	5.00
				10g SAR	24.7	24.72	0.08	5.00

**System Check 2450 Body**  
 Date: 17/06/2014  
 Validation Dipole and Serial Number: D2440V2: SN: 701 [Lab Site 59]

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2450	24.0°C	24.0°C	$\epsilon_r$	52.70	52.20	-0.95	5.00
				$\sigma$	1.95	2.03	4.35	5.00
				1g SAR	51.40	53.60	4.28	5.00
				10g SAR	23.90	23.88	-0.08	5.00

System Check 5200 Head								
Date 18/06/2014								
Validation dipole and Serial Number: D5GHzV2 SN: 1016 [Lab Site 60]								
Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	5200	24.0°C	22.0°C	$\epsilon_r$	35.99	35.14	-2.36	5.00
				$\sigma$	4.66	4.52	-3.04	5.00
				1g SAR	77.40	75.20	-2.84	5.00
				10g SAR	22.3	21.50	-3.84	5.00

System Check 5500 Head								
Date 18/06/2014								
Validation dipole and Serial Number: D5GHzV2 SN: 1016 [Lab Site 60]								
Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	5500	24.0°C	22.0°C	$\epsilon_r$	35.60	34.90	-1.97	5.00
				$\sigma$	4.96	4.85	-2.17	5.00
				1g SAR	84.80	86.30	1.77	5.00
				10g SAR	24.10	24.40	1.24	5.00

System Check 5800 Head								
Date 18/06/2014								
Validation dipole and Serial Number: D5GHzV2 SN: 1016 [Lab Site 60]								
Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	5800	24.0°C	22.8°C	$\epsilon_r$	35.30	34.42	-2.49	5.00
				$\sigma$	5.27	5.11	-3.03	5.00
				1g SAR	76.90	76.80	-0.13	5.00
				10g SAR	22.00	21.70	-1.36	5.00

System Check 5200 Body								
Date: 16/06/2014								
Validation Dipole and Serial Number: D5GHzV2 SN: 1016 [Lab Site 60]								
Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5200	24.0°C	23.5°C	$\epsilon_r$	49.01	48.04	-1.98	5.00
				$\sigma$	5.30	5.21	-1.61	5.00
				1g SAR	73.10	75.10	2.74	5.00
				10g SAR	20.40	21.20	3.92	5.00

System Check 5500 Body								
Date: 16/06/2014								
Validation Dipole and Serial Number: D5GHzV2 SN: 1016 [Lab Site 60]								
Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5500	24.0°C	23.5.0°C	$\epsilon_r$	48.60	47.75	-1.75	5.00
				$\sigma$	5.65	5.71	1.02	5.00
				1g SAR	79.0	75.40	-4.56	5.00
				10g SAR	21.9	21.00	-4.11	5.00

System Check 5800 Body								
Date: 16/06/2014								
Validation Dipole and Serial Number: D5GHzV2 SN: 1016 [Lab Site 60]								
Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5800	24.0°C	23.5°C	$\epsilon_r$	48.20	46.59	-3.34	5.00
				$\sigma$	6.00	6.10	1.66	5.00
				1g SAR	73.20	73.50	0.41	5.00
				10g SAR	20.20	20.20	0.00	5.00

## APPENDIX 7. MEASUREMENT UNCERTAINTY TABLE

Measurement uncertainty tables for technologies tested.

### A.7.1. Uncertainty -GSM 850 / UMTS FDD 5 Head Configuration 1g

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C <sub>i</sub> (1g)	Standard Uncertainty		U <sub>i</sub> or U <sub>eff</sub>
							+ u (%)	- u (%)	
B	Probe calibration	6.000	6.000	normal (k=1)	1.0000	1.0000	6.000	6.000	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	1.730	1.730	Rectangular	1.7321	1.0000	0.999	0.999	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	2.510	2.510	normal (k=1)	1.0000	1.0000	2.510	2.510	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	2.950	2.950	normal (k=1)	1.0000	0.6400	1.888	1.888	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	2.840	2.840	normal (k=1)	1.0000	0.6000	1.704	1.704	5
	Combined standard uncertainty			t-distribution			9.58	9.58	>500
	Expanded uncertainty			k = 1.96			18.77	18.77	>500

**A.7.2. Uncertainty -GSM / GPRS / EDGE 850 / UMTS FDD 5 Body Configuration 1g**

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C <sub>i</sub> (1g)	Standard Uncertainty		U <sub>i</sub> or U <sub>eff</sub>
							+ u (%)	- u (%)	
B	Probe calibration	6.000	6.000	normal (k=1)	1.0000	1.0000	6.000	6.000	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	1.730	1.730	Rectangular	1.7321	1.0000	0.999	0.999	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration /Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	2.510	2.510	normal (k=1)	1.0000	1.0000	2.510	2.510	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	2.000	2.000	normal (k=1)	1.0000	0.6400	1.280	1.280	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	1.560	1.560	normal (k=1)	1.0000	0.6000	0.936	0.936	5
	Combined standard uncertainty			t-distribution			9.37	9.37	>500
	Expanded uncertainty			k = 1.96			18.36	18.36	>500

**A.7.3. Uncertainty -PCS 1900 Head Configuration 1g**

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C <sub>i</sub> (1g)	Standard Uncertainty		U <sub>i</sub> or U <sub>eff</sub>
							+ u (%)	- u (%)	
B	Probe calibration	6.000	6.000	normal (k=1)	1.0000	1.0000	6.000	6.000	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	1.730	1.730	Rectangular	1.7321	1.0000	0.999	0.999	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with Regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	2.490	2.490	normal (k=1)	1.0000	1.0000	2.490	2.490	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	3.560	3.560	normal (k=1)	1.0000	0.6400	2.278	2.278	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	2.620	2.620	normal (k=1)	1.0000	0.6000	1.572	1.572	5
	Combined standard uncertainty			t-distribution			9.63	9.63	>500
	Expanded uncertainty			k = 1.96			18.88	18.88	>500



**A.7.4. Uncertainty -PCS / GPRS / EDGE 1900 Body Configuration 1g**

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C <sub>i</sub> (1g)	Standard Uncertainty		U <sub>i</sub> or U <sub>eff</sub>
							+ u (%)	- u (%)	
B	Probe calibration	6.000	6.000	normal (k=1)	1.0000	1.0000	6.000	6.000	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	1.730	1.730	Rectangular	1.7321	1.0000	0.999	0.999	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	1.860	1.860	normal (k=1)	1.0000	1.0000	1.860	1.860	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	2.610	2.610	normal (k=1)	1.0000	0.6400	1.670	1.670	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	2.140	2.140	normal (k=1)	1.0000	0.6000	1.284	1.284	5
	Combined standard uncertainty			t-distribution			9.32	9.32	>500
	Expanded uncertainty			k = 1.96			18.26	18.26	>500

**A.7.5. Uncertainty -Wi-Fi 2450 MHz Head Configuration 1g**

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C <sub>i</sub> (1g)	Standard Uncertainty		U <sub>i</sub> or U <sub>eff</sub>
							+ u (%)	- u (%)	
B	Probe calibration	6.000	6.000	normal (k=1)	1.0000	1.0000	6.000	6.000	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	2.180	2.180	normal (k=1)	1.0000	1.0000	2.180	2.180	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	1.840	1.840	normal (k=1)	1.0000	0.6400	1.178	1.178	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	2.030	2.030	normal (k=1)	1.0000	0.6000	1.218	1.218	5
	Combined standard uncertainty			t-distribution			9.25	9.25	>500
	Expanded uncertainty			k = 1.96			18.13	18.13	>500

**A.7.6. Uncertainty -Wi-Fi 2450 MHz Body Configuration 1g**

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C <sub>i</sub> (1g)	Standard Uncertainty		U <sub>i</sub> or U <sub>eff</sub>
							+ u (%)	- u (%)	
B	Probe calibration	6.000	6.000	normal (k=1)	1.0000	1.0000	6.000	6.000	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	2.440	2.440	normal (k=1)	1.0000	1.0000	2.440	2.440	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	2.260	2.260	normal (k=1)	1.0000	0.6400	1.446	1.446	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	2.150	2.150	normal (k=1)	1.0000	0.6000	1.290	1.290	5
	Combined standard uncertainty			t-distribution			9.36	9.36	>500
	Expanded uncertainty			k = 1.96			18.35	18.35	>500

**A.7.7. Uncertainty -Wi-Fi 5GHz Head Configuration 1g**

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C <sub>i</sub> (1g)	Standard Uncertainty		U <sub>i</sub> or U <sub>eff</sub>
							+ u (%)	- u (%)	
B	Probe calibration	6.550	6.550	normal (k=1)	1.0000	1.0000	6.550	6.550	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	2.380	2.380	normal (k=1)	1.0000	1.0000	2.380	2.380	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	5.000	5.000	normal (k=1)	1.0000	0.6400	3.200	3.200	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	5.000	5.000	normal (k=1)	1.0000	0.6000	3.000	3.000	5
	Combined standard uncertainty			t-distribution			10.48	10.48	>250
	Expanded uncertainty			k = 1.96			20.53	20.53	>250

**A.7.8. Uncertainty -Wi-Fi 5GHz Body Configuration 1g**

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C <sub>i</sub> (1g)	Standard Uncertainty		U <sub>i</sub> or U <sub>eff</sub>
							+ u (%)	- u (%)	
B	Probe calibration	6.550	6.550	normal (k=1)	1.0000	1.0000	6.550	6.550	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	1.960	1.960	normal (k=1)	1.0000	1.0000	1.960	1.960	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	4.370	4.370	normal (k=1)	1.0000	0.6400	2.797	2.797	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	4.270	4.270	normal (k=1)	1.0000	0.6000	2.562	2.562	5
	Combined standard uncertainty			t-distribution			10.15	10.15	>450
	Expanded uncertainty			k = 1.96			19.90	19.90	>450