SAR Measurement Uncertainty (Revised)

No	Uncertainty Component	Type	Uncertainty Value (%)	Probability Distribution	k	c_i	Standard Uncertainty (%) u_i(%)	Degree of freedom V_{eff} or v_i
	Measurement System							
1	−Probe Calibration	B	3.6	N	1	1	3.60	∞
2	−Axial isotropy	B	4.23	R	$\sqrt{3}$	$\sqrt{1-cp}$	0.00	∞
3	−Hemispherical Isotropy	B	10.7	R	$\sqrt{3}$	$\sqrt{\mathrm{cp}}$	6.18	∞
4	−Boundary Effect	B	1.7	R	$\sqrt{3}$	1	0.98	∞
5	−Linearity	B	2.98	R	$\sqrt{3}$	1	1.69	∞
6	−System Detection Limits	B	1.00	R	$\sqrt{3}$	1	0.60	∞
7	−Readout Electronics	B	1.00	N	1	1	1.00	∞
8	−Response Time	B	0.80	R	$\sqrt{3}$	1	0.50	∞
9	−Integration Time	B	2.60	R	$\sqrt{3}$	1	1.50	∞
10	−RF Ambient Conditions	B	3.00	R	$\sqrt{3}$	1	1.70	∞
11	−Probe Position Mechanical tolerance	B	1.14	R	$\sqrt{3}$	1	0.33	∞
12	-Probe Position with respect to Phantom Shell	B	2.86	R	$\sqrt{3}$	1	0.83	∞
13	-Extrapolation, Interpolation and Integration Algorithms for Max. SAR evaluation	B	3.6	R	$\sqrt{3}$	1	2.08	∞
	Uncertainties of the DUT							
14	−Position of the DUT	A	2.90	N	1	1	2.90	0
15	−Holder of the DUT	A	3.60	N	1	1	3.60	0
16	−Output Power Variation –SAR drift measurement	B	5.0	R	$\sqrt{3}$	1	2.89	∞
	Phantom and Tissue Parameters							
17	−Phantom Uncertainty(shape and thickness tolerances)	B	1.43	R	$\sqrt{3}$	1	0.83	∞

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18	−Liquid Conductivity Target – tolerance	B	5.0	R	$\sqrt{3}$	0.7	2.02	∞
19	−Liquid Conductivity – measurement Uncertainty)	B	2.0	R	$\sqrt{3}$	0.7	0.81	∞
20	−Liquid Permittivity Target tolerance	B	5.0	R	$\sqrt{3}$	0.6	1.73	∞
21	−Liquid Permittivity – measurement uncertainty	B	1.0	R	$\sqrt{3}$	0.6	0.35	∞
Combined Standard Uncertainty				RSS			±8.95%	
Expanded uncertainty (Confidence interval of 95 %)				K= 2.003935			±17.9%	