

Annex D – Liquid and System Validation

Liquid Validation

; Name : DAK 3.5 Head 18.5 deg.C 2025-Jan-07 16:57:29						
; Date : 2025-Jan-07 16:57:29						
; Temperature(C) : 18.5						
; Probe : DAK 3.5						
; Network Analyzer : Keysight ENA						
MHz	ReflR	ReflI	EpsR	EpsI	Sigma	TanD
350	0.8474	-0.1626	45.5278	36.4016	0.7088	0.7995
450	0.8254	-0.1946	43.2403	31.7789	0.7947	0.7349
450	0.8254	-0.1946	43.2407	31.7733	0.7948	0.7348
450	0.8254	-0.1947	43.2412	31.7673	0.7948	0.7347
450	0.8253	-0.1947	43.242	31.7612	0.7949	0.7345
450	0.8253	-0.1948	43.2424	31.7559	0.795	0.7344
450	0.8253	-0.1948	43.2426	31.7507	0.7951	0.7342
450	0.8253	-0.1949	43.2428	31.7453	0.7952	0.7341
470	0.8202	-0.2023	43.2348	31.1526	0.8137	0.7205
470	0.8202	-0.2023	43.2338	31.1503	0.8138	0.7205
470	0.8202	-0.2023	43.233	31.1479	0.814	0.7205
470	0.8201	-0.2024	43.232	31.1451	0.8141	0.7204
470	0.8201	-0.2024	43.2309	31.1421	0.8143	0.7204
470	0.8201	-0.2025	43.2303	31.1394	0.8144	0.7203
470	0.82	-0.2025	43.2296	31.1361	0.8145	0.7202
470	0.82	-0.2026	43.2284	31.1325	0.8147	0.7202
470	0.82	-0.2026	43.2276	31.1289	0.8148	0.7201
539	0.8018	-0.2173	41.1943	29.9098	0.8962	0.7261
539	0.8018	-0.2173	41.1923	29.9066	0.8963	0.726
539	0.8017	-0.2174	41.1905	29.9033	0.8965	0.726
539	0.8017	-0.2174	41.1889	29.8999	0.8966	0.7259
539	0.8017	-0.2175	41.1874	29.8965	0.8967	0.7259
539	0.8017	-0.2175	41.186	29.8932	0.8968	0.7258
539	0.8017	-0.2176	41.185	29.8897	0.8969	0.7257
550	0.7992	-0.2211	41.1305	29.5974	0.9056	0.7196

Measurement Report for (450.000MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	450.000	9.97	0.795	43.2

Hardware Setup

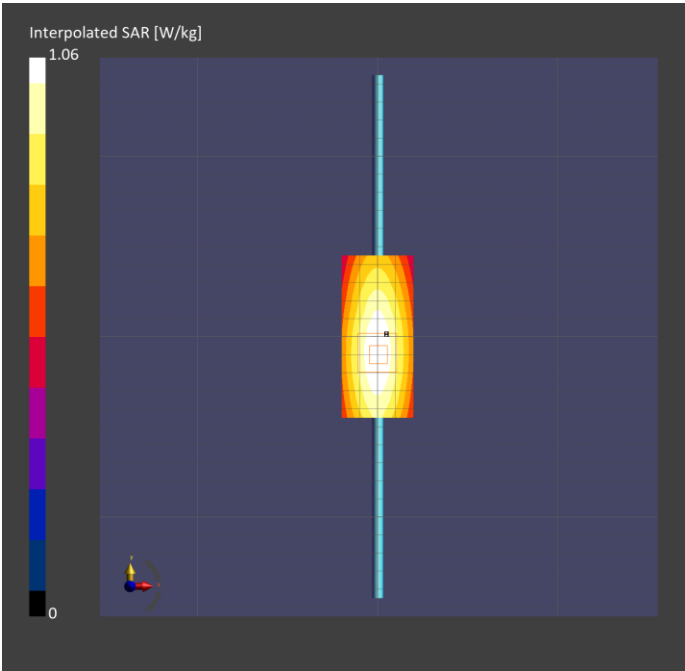
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2191	HSL450 Charge: H450-20240917, 2025-Jan-07	EX3DV4 - SN7783, 2024-04-12	DAE4 Sn1724, 2024-03-28

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	All points	All points
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-01-07, 18:34	2025-01-07, 18:44
psSAR1g [W/kg]	1.01	1.02
psSAR10g [W/kg]	0.710	0.702
Power Drift [dB]	0.01	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		81.3
Dist 3dB Peak [mm]		> 15.0



; Name : DAK 3.5 Head 18.3 deg.C 2025-Jan-08 15:57:48						
; Date : 2025-Jan-08 15:57:48						
; Temperature(C) : 18.3						
; Probe : DAK 3.5						
; Network Analyzer : Keysight ENA						
MHz	RefIR	RefII	EpsR	EpsI	Sigma	TanD
350	0.8467	-0.1521	42.6148	37.1302	0.723	0.8713
450	0.8256	-0.1804	40.0941	32.4041	0.8103	0.8082
450	0.8255	-0.1804	40.0913	32.3999	0.8104	0.8082
450	0.8255	-0.1805	40.0883	32.3953	0.8105	0.8081
450	0.8254	-0.1805	40.0854	32.3912	0.8107	0.8081
450	0.8254	-0.1805	40.0824	32.3874	0.8108	0.808
450	0.8254	-0.1806	40.0794	32.3837	0.8109	0.808
450	0.8254	-0.1806	40.0762	32.3798	0.811	0.808
450	0.8254	-0.1806	40.073	32.3755	0.8112	0.8079
450	0.8253	-0.1807	40.0697	32.3715	0.8113	0.8079
450	0.8255	-0.1805	40.0883	32.3953	0.8105	0.8081
470	0.8212	-0.1858	39.6852	31.701	0.828	0.7988
470	0.8212	-0.1858	39.6827	31.6972	0.8281	0.7988
470	0.8212	-0.1859	39.6808	31.6938	0.8282	0.7987
470	0.8212	-0.1859	39.6787	31.6899	0.8284	0.7987
470	0.8211	-0.1859	39.6764	31.686	0.8285	0.7986
470	0.8211	-0.186	39.6737	31.6818	0.8286	0.7986
470	0.8211	-0.186	39.6713	31.6777	0.8287	0.7985
470	0.821	-0.186	39.6688	31.6736	0.8288	0.7985
470	0.821	-0.1861	39.6662	31.6694	0.8289	0.7984
539	0.8066	-0.2031	38.2968	29.6391	0.8883	0.7739
539	0.8066	-0.2031	38.2941	29.6361	0.8884	0.7739
539	0.8065	-0.2031	38.2909	29.633	0.8886	0.7739
539	0.8065	-0.2032	38.2882	29.6299	0.8887	0.7739
539	0.8065	-0.2032	38.2856	29.627	0.8888	0.7738
539	0.8065	-0.2032	38.2831	29.6238	0.8889	0.7738
550	0.8043	-0.2057	38.0718	29.3463	0.8979	0.7708

Measurement Report for (450.000MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	450.000	9.97	0.811	40.1

Hardware Setup

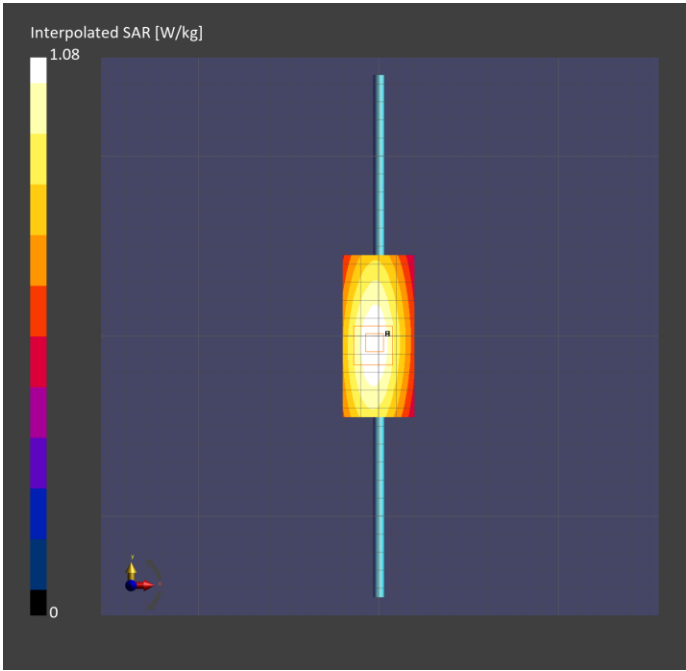
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2191	HSL450 Charge: H450-20240917, 2025-Jan-08	EX3DV4 - SN7783, 2024-04-12	DAE4 Sn1724, 2024-03-28

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	All points	All points
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-01-08, 17:09	2025-01-08, 17:16
psSAR1g [W/kg]	0.995	1.02
psSAR10g [W/kg]	0.705	0.708
Power Drift [dB]	0.20	0.00
Power Scaling	Disabled	Disabled
Scaling Factor		
[dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		81.5
Dist 3dB Peak [mm]		> 15.0



; Name : DAK 3.5 Head 20.6 deg.C 2025-Jan-08 21:18:17						
; Date : 2025-Jan-08 21:18:17						
; Temperature(C) : 20.6						
; Probe : DAK 3.5						
; Network Analyzer : Keysight ENA						
MHz	RefIR	RefII	EpsR	EpsI	Sigma	TanD
500	0.8278	-0.2067	41.0846	27.5418	0.7661	0.6704
539	0.8221	-0.2214	41.0298	25.966	0.7781	0.6329
539	0.822	-0.2215	41.0288	25.961	0.7781	0.6328
539	0.822	-0.2215	41.0277	25.956	0.7781	0.6326
539	0.822	-0.2216	41.0267	25.9512	0.7782	0.6325
539	0.822	-0.2216	41.0259	25.9469	0.7782	0.6324
539	0.822	-0.2217	41.0247	25.9422	0.7782	0.6324
539	0.8219	-0.2217	41.0235	25.9374	0.7783	0.6323
600	0.8132	-0.2435	40.7787	23.8288	0.7947	0.5843
600	0.8131	-0.2435	40.778	23.8255	0.7948	0.5843
600	0.8131	-0.2435	40.7775	23.8223	0.7948	0.5842
600	0.8131	-0.2436	40.7771	23.8191	0.7949	0.5841
600	0.8131	-0.2436	40.7768	23.8156	0.7949	0.584
600	0.8131	-0.2437	40.7767	23.8119	0.795	0.584
600	0.813	-0.2437	40.7767	23.8081	0.795	0.5839
600	0.813	-0.2438	40.7766	23.8044	0.7951	0.5838
600	0.813	-0.2438	40.7765	23.8008	0.7951	0.5837
607	0.8119	-0.2459	40.7465	23.6373	0.7977	0.5801
607	0.8119	-0.246	40.7456	23.6342	0.7978	0.58
607	0.8119	-0.246	40.7447	23.6312	0.7978	0.58
607	0.8119	-0.246	40.7437	23.628	0.7979	0.5799
607	0.8118	-0.2461	40.7427	23.6248	0.7979	0.5799
607	0.8118	-0.2461	40.7417	23.6215	0.798	0.5798
607	0.8118	-0.2462	40.7409	23.6183	0.798	0.5797
608	0.8118	-0.2462	40.7402	23.6149	0.7981	0.5796
608	0.8118	-0.2462	40.7395	23.6118	0.7981	0.5796
608	0.8117	-0.2463	40.7389	23.6087	0.7982	0.5795
608	0.8117	-0.2463	40.7382	23.6054	0.7983	0.5794
608	0.8117	-0.2464	40.7376	23.6021	0.7983	0.5794
608	0.8117	-0.2464	40.7372	23.5987	0.7984	0.5793
608	0.8116	-0.2465	40.7368	23.5953	0.7984	0.5792
608	0.8116	-0.2465	40.7365	23.5921	0.7985	0.5791
608	0.8116	-0.2466	40.7361	23.5888	0.7985	0.5791
700	0.7964	-0.2784	40.4246	21.2808	0.8287	0.5264

Measurement Report for (600.000MHz)
Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	600.000	9.74	0.795	40.8

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2191	HBBL-600-10000 SLAAHU16BC221222-1, 2025-Jan-08	EX3DV4 - SN7783, 2024-04-12	DAE4 Sn1724, 2024-03-28

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	All points	All points
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-01-08, 21:26	2025-01-08, 21:34
psSAR1g [W/kg]	1.34	1.51
psSAR10g [W/kg]	0.905	0.974
Power Drift [dB]	0.17	0.17
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		82.1
Dist 3dB Peak [mm]		21.4

