

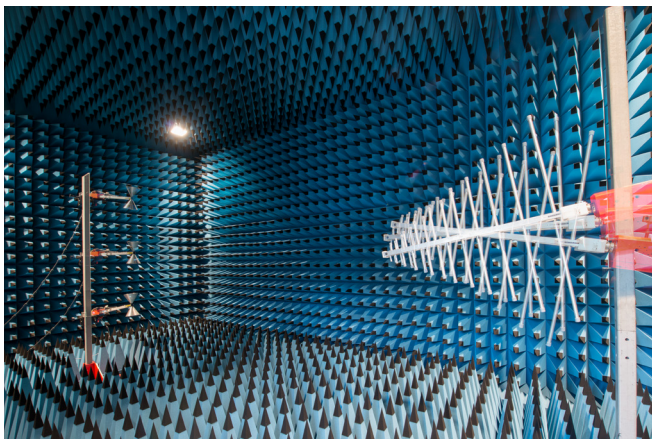
# VALIDATION RF - TEST SITES

## VALIDATION SERVICE FOR:

- EMC TEST SITES
- ANTENNA TEST FACILITIES
- MICROWAVE TEST RANGES

SEIBERSDORF LABORATORIES, former Austrian Research Centers, as market leader for the manufacturer independent, accredited validation of EMC test sites expands its services to the validation of antenna and microwave test ranges. Traceable validations are performed according to international standards and to customers requirements.

The validation service is offered for all kinds of EMC test sites, for antenna test sites and for calibration sites according to civil, military, automotive, telecom and customer specific requirements.



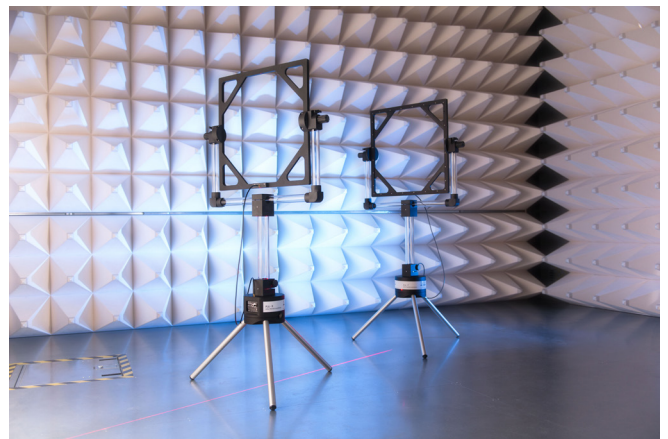
## RESEARCH

We are dedicated to scientific research work. Results are published at international conferences and implemented in CISPR and CENELEC standards.

NEW!  
MAGNETIC NSA VALIDATION

## READY FOR THE NEW STANDARD

CISPR 16-1-4 defines a new procedure for validation of EMC test sites in the frequency range 9 kHz to 30 MHz. A draft has been released defining the Reference Site Method (RSM) and Normalized Site Attenuation (NSA) procedures. Seibersdorf Laboratories as active member of the standardization working group offers these Magnetic NSA validation measurements using the PLA (Precision Loop Antenna) system developed for this purpose: active transmit and receive loop antennas with integrated x-, y- and z-positioner and laser pointer for easy alignment.



## REFERENCES

Since 1992 we have validated more than 820 sites all over the world. Besides Europe the main activities are in China, Korea, India, Taiwan, Japan and US. Our customers are test labs and all major manufacturers of test sites. Validation reports are accepted world-wide in all ILAC countries through our accreditation.

# VALIDATION

## RF - TEST SITES

### STANDARD MEASUREMENTS

The following table lists the routine site validation measurements. If you need measurements that you do not find listed here, please do not hesitate to contact us.



ACCREDITED TESTING LABORATORY (Nr. 312)  
for Electromagnetic Compatibility.

TYPE OF MEASUREMENT	STANDARD	FREQUENCY RANGE
Shielding Effectiveness	EN 50147-1 Mil-Std. 285 NSA 65-6	10 kHz - 40 GHz
Normalized Site Attenuation	CISPR 16-1-4 ANSI C63.4 ETSI TS 102 321	30 MHz - 40 GHz
Magnetic NSA	CISPR 16-1-4 (draft)	9 kHz - 30 MHz
Site VSWR	CISPR 16-1-4	1 GHz - 18 GHz
Transmission Loss		1 GHz - 40 GHz
Field Uniformity	IEC 61000-4-3	26 MHz - 40 GHz
Chamber Factor	CENELEC R210-003	30 MHz - 1 GHz
Automotive Component Test Site Validation	CISPR 25	150 kHz - 3 GHz
Ambient Noise		10 kHz - 40 GHz
Table Influence	CISPR 16-1-4	200 MHz - 18 GHz
Antenna Calibration Test Site Validation	CISPR 16-1-5	30 MHz - 1 GHz
Absorber Return Loss		200 MHz - 18 GHz
Free Space VSWR	ANSI / IEEE Std. 149	170 MHz - 40 GHz
CTIA Ripple Test	CTIA Test Plan for Mobile Station over the Air Performance	722 MHz - 2132.5 MHz
Reverberation Chamber Validation	IEC 61000-4-21, Mil-Std. 461E, DO-160	80 MHz - 18 GHz

Presented by: