

Annex A: Testing laboratory technical assessment checklist (November 6, 2020)

Laboratory name	
Laboratory location (i.e. address)	
Website (if applicable)	
Laboratory Contact (name)	
Laboratory Contact (email address)	
Accreditation body	
Date of assessment	
Completed by (Assessor name(s))	
Signature of assessor	
Scope of accreditation (Standards covered by assessment <i>e.g.</i> RSS-102 (SAR), RSS-GEN, RSS-247, etc.)	
Type of assessment	

I. SCOPE OF ASSESSMENT				
<i>The laboratory shall possess or demonstrate access to appropriate ISED standards, and measurement methods, consistent with their scope of accreditation.</i>				
Y	N	N/A	1. Have all the applicable RSS and BETS standards for the scope of interest been assessed?	
2. Has the test laboratory been assessed and found to be capable and competent to perform measurements and test site validation in accordance with the standards listed below?				
Y	N	N/A	2a. ANSI C63.4-2014, <i>American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.</i> Specify, in the notes column (next column), if only test site validation, or both test site validation and measurement methods.	
Y	N	N/A	2b. ANSI C63.10-2013, <i>American National Standard for Testing Unlicensed Wireless Devices.</i>	

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Y	N	N/A	2c. ANSI C63.26-2015, <i>American National Standard of Procedures for Compliance Testing of Licensed Transmitters.</i>	
Y	N	N/A	2d. ANSI C63.17-2013, <i>American National Standard Methods of Measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices.</i>	
Y	N	N/A	<p>2e. Latest version of IEC/IEEE 62209-1528 ED1 entitled <i>Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-worn wireless communication devices - Part 1528: Human models, instrumentation and procedures (Frequency range of 4 MHz to 10 GHz)</i></p> <p>Note: IEC/IEEE 62209-1528 ED1 is the unification of the three (3) standards below that are still accepted in Canada until May 3, 2021.</p> <ul style="list-style-type: none"> • IEEE 1528: <i>Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques</i> or • IEC 62209-1: <i>Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Part 1: Devices used next to the ear (Frequency range of 300 MHz to 6 GHz) or</i> • IEC 62209-2 (Body): <i>Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures – Part 2. Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz).</i> <p>Please see Notice 2020-DRS0020 for further details.</p>	
Y	N	N/A	3. Has the latest issue of RSS-102: <i>Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)</i> been assessed for the scopes of interest?	
Y	N	N/A	4. Is the testing laboratory familiar with ISED DRS Notices, Supplementary Procedures (SPRs), and accepted FCC Knowledge Data Base (KDB) procedures and capable of testing devices subject to said notices/procedures?	

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Y	N	N/A	5. Can the testing laboratory demonstrate access to all of the accepted supplementary procedures and notices published by ISED?	
Y	N	N/A	6. Does the testing laboratory possess or can demonstrate access to all ISED standards and any normative reference standards in their desired scope of the assessment?	
Y	N	N/A	7. Are all measurement software packages used by the testing laboratory (such as software for controlling the turntable and antenna height and/or software for controlling the measurement receiver) documented in the test report?	
Y	N	N/A	8. Has each measurement software (see Q7 above) been properly validated?	
Y	N	N/A	9. Is the validated test volume large enough to encompass the EUT?	
Y	N	N/A	10. Are Line impedance stabilization network(s) (LISN), filters, and isolation transformers, if used, properly installed?	
Y	N	N/A	11. Are LISN(s), filters, and isolation transformers bonded to the ground reference plane?	
Y	N	N/A	12. Does the radiated emission test site(s) meet the site validation requirements of 5.4 of ANSI C63.4-2014 for the frequency range of 30 MHz to 1 GHz?	
Y	N	N/A	13. Does the radiated emission test site(s) meet the site voltage standing wave ratio (Svswr) site validation requirements of International Special Committee on Radio Interference (CISPR) CISPR 16-1-4:2010 for the frequency range of 1 GHz to 18 GHz?	
Y	N	N/A	14. Was the test site validation for performing radiated emissions measurements completed in the last three years?	
Y	N	N/A	15. Does the test laboratory have all of the appropriate test equipment to cover the required frequency range per the scope of accreditation for the measurements to be performed by the testing laboratory?	
II. EMISSION TESTS				
Y	N	N/A	16. Are the AC power-line conducted emission tests performed in accordance with the applicable parts of the applicable RSS standards?	
Y	N	N/A	17. Are the guidelines in ANSI C63.4 followed for large EUTs, including <i>in-situ</i> measurements, if appropriate?	
Y	N	N/A	18. Is the conducted emission test setup in accordance with ANSI C63.4 with respect to the required separation between the EUT and any conducting surfaces? (this question also applies for ANSI C63.10, see 6.2.2 of ANSI C63.10-2013, which refers to ANSI C63.4)	

Y	N	N/A	19. Is the conducted emission test setup in accordance with ANSI C63.4 with respect to the Vertical coupling plane dimensions? (this question also applies for ANSI C63.10, see 6.2.2 of ANSI C63.10-2013, which refers to ANSI C63.4)	
Y	N	N/A	20. Is the EUT connected to one LISN and all the peripherals connected to other LISNs or to a separate LISN through a power strip, i.e. per ANSI C63.4-2014? (this question also applies for ANSI C63.10, see 6.2.2 of ANSI C63.10-2013, which refers to ANSI C63.4)	
Y	N	N/A	21a. Is the testing laboratory using any adaptors (i.e. power bars) connected to the “EUT” port of the LISN?	
Y	N	N/A	21b. If the answer at 21a is Y, has this adapter been properly characterized and accounted for in all corresponding test results?	
Y	N	N/A	22. For each applicable standard described in the scope of accreditation, has the testing laboratory demonstrated its capability of performing measurements in the appropriate frequency range, with the correct detector, and using the correct bandwidth (Resolution Bandwidth (RBW) and Video Bandwidth (VBW), as applicable)?	
Y	N	N/A	23. Are the radiated emission tests performed in accordance with the proper standard?	
Y	N	N/A	24. Were radiated emission tests observed, and is the radiated emission test setup in accordance with proper standard?	
Y	N	N/A	25. Does the radiated emission measurement represent the maximized cable configuration and worst case mode of EUT operation?	
III. SAR/LOCALIZED POWER DENSITY (LDP) TESTS				
Y	N	N/A	26a. Does the measurement system meet the standardized requirements in the referenced standards listed in the above Scope of Assessment?	
Y	N	N/A	26b. When computational assessment are performed, does the software meet the requirements normative requirements of 62704-1/62704-4 for FDTD and FEM applications respectively?	
Y	N	N/A	27. Does the laboratory have the proper equipment (TSL, dipoles, VNA for dielectric measurements, etc.) to cover the entire frequency range listed in the scope of the latest version of IEC/IEEE SAR related standards As defined in 2e?	
Y	N	N/A	28. Was the measurement system or computational software validated in accordance with the proper standards and at the proper intervals (i.e. annually/after probe calibration/etc.) and is it being tracked?	

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Y	N	N/A	29. Are the measurements or computations performed in accordance with the proper standards (including dielectric measurements/system checks/SAR evaluation/LPD, etc.)?	
Y	N	N/A	30. Is the LDP assessment conducted in accordance with SPR-003?	
IV. RF EXPOSURE EVALUATION AND NERVE STIMULATION TEST				
Y	N	N/A	31. Does the laboratory have the proper equipment to test devices under the scope of IEEE C95.3?	
Y	N	N/A	32. Are the RF Exposure Evaluations conducted in accordance with IEEE C95.3?	
Y	N	N/A	33. Does the laboratory have the proper equipment to cover the entire frequency range listed in the scope of ISED SPR-002, <u>Supplementary Procedure for Assessing Compliance with RSS-102 Nerve Stimulation Exposure Limits?</u>	
Y	N	N/A	34. Is the NS assessment conducted in accordance with SPR-002?	
V. TEST REPORTS <i>Assessor should request to review several sample test reports for various types of products.</i>				
Y	N	N/A	35. Have several sample test reports for various types of products been reviewed for accuracy?	
Y	N	N/A	36. Does each of the test reports contain all the required information based on the RSS being assessed (e.g. reporting requirements of RSS-Gen or RSS-102)?	
Y	N	N/A	37. Does the test report reference the standard used and specify any deviations?	
Y	N	N/A	38. Is the rationale for selecting and arranging the EUT clearly stated, and are the components of the EUT system clearly identified?	
Y	N	N/A	39. Does the test report include photographs or detailed sketches of the EUT configuration?	
Y	N	N/A	40. Does the measurement report include a sample calculation with all conversion and correction factors used?	
Y	N	N/A	41. Does the testing laboratory use external resources/subcontractors to perform testing, and if so do they have procedures in place to ensure that the external resources are properly accredited and ISED recognized?	

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Y	N	N/A	42. If external resources/subcontractors are used to perform testing, do the test reports clearly identify the work performed by the external resources/subcontractors and the results of the testing? Note: External resources/subcontractors must be from an ISED recognized testing laboratory.	
<p>VI. PERSONNEL COMPETENCY <i>The following is a list of general or lead-in questions, which are intended to be used as a guide to assess competency of laboratory personnel. Additional specific questions should be used to determine the technical competency of the personnel performing the measurement.</i></p>				
Radio Laboratory Personnel				
Y	N	N/A	43. Are laboratory personnel able to obtain recent ISED standards and appropriate test procedures?	
Y	N	N/A	44. Has each laboratory personnel responsible for testing been able to demonstrate performing a measurement of an applicable device?	
Y	N	N/A	45a. Do the test personnel know how to determine if an emission is from the EUT or is an ambient signal? (to note that ambient signals can also exist inside a SAC, for example from a faulty bulkhead or a noisy LED lighting fixture)	
Y	N	N/A	45b. Do the test personnel know how to handle an emission that is close to, or coincident with, an ambient signal?	
45. Arrange for one of the laboratory personnel, at each type of site, to replicate at least three frequency points for normalized site attenuation (NSA), and at least three test points for the Svswr. Select frequencies from previous data that have both low and high deviations from the NSA and Svswr.				
Y	N	N/A	46a. Is the test performed correctly?	
Y	N	N/A	46b. Is the NSA and/or Svswr data at these frequencies consistent with the previously recorded data?	
SAR/LPD Laboratory Personnel				
Y	N	N/A	47. Has each laboratory personnel responsible for testing been able to demonstrate performing a SAR/LPD measurement on an applicable device?	
Y	N	N/A	48. Are the test personnel knowledgeable of the measurement procedures and requirements in RSS-102 and referenced standards/DRS Notices/SPRs/FCC KDBs?	
Y	N	N/A	49. Are the test personnel knowledgeable of the SAR exemption limits and test reduction requirements in RSS-102 and referenced standards/DRS Notices/SPRs/FCC KDBs?	

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