

February 12, 2025

Technical Protocol for Regional Key Comparison on LS2P Microphone Calibration in Pressure Field - SIM.AUV.A-K6

Amendment 4

Amendment 3, Section “**Timetable**”

Replace by

Timetable

The timetable of the comparison is presented in Table 2 and Table 3. It is essential that the microphones be transported to the next participant on time. Any change of the timetable must be justified and agreed.

Table 2 – Timetable for the microphone Brüel and Kjaer 4180 serial number 3257821 of the SIM.AUV.A-K6 comparison.

1) Check of microphones stability	
National Metrology Institute	Period
INMETRO	May 29 to September 8, 2023
2) Circulation of the microphones	
National Metrology Institutes	Period
INMETRO	September 11 to September 29, 2023
Transportation of the microphones by previous participant to the next one	
NRC	February 12 to March 1, 2024
Transportation of the microphones by previous participant to the next one	
NIST	March 25 to April 12, 2024
Transportation of the microphones by previous participant to the next one	
CENAM	May 6 to May 24, 2024
Transportation of the microphones by previous participant to the next one	
INMETRO	August 12 to August 30, 2024
Transportation of the microphones by previous participant to the next one	
LACOMET	October 7 to October 25, 2024
Transportation of the microphones by previous participant to the next one	
INTI	February 17 to February 24, 2025
Transportation of the microphones by previous participant to the next one	
NIST	March 31 to April 18, 2025
Transportation of the microphone by previous participant to the next one	

(continue)

INMETRO	May 12 to May 30, 2025
3) Analysis of the reported results	
National Metrology Institute	Period
INMETRO	June 2 to August 22, 2025

Notes:

1. A period of three weeks is allocated for the microphones calibration by each participant **except for INTI. For INTI it was agreed a shorter period due to the expiry date of microphone's Ata Carnet.**
2. A period of three weeks is also allocated for the transportation of the microphones between participants **except for the transportation between INTI and NIST. For this transportation, it was agreed a longer period due to the expiry date of microphone's Ata Carnet.** Because of the difference between customs formalities of each country, it is difficult to know how long it actually takes to clear the goods. Therefore, each participant shall consider the transportation as early as possible within the period in order to avoid any delays due to customs. It is highly recommended that each participant get in contact with the next one in advance in order to check all specific customs requirements/procedures to be fulfilled, assure a expedite export/import process and avoid unnecessary delays with the transference of the microphones.
3. INMETRO will carry out measurements in three periods during the circulation of the microphones to monitor their stability, but only the results obtained during the first period will be used for comparison with the reference values.
4. **The microphone will be send two times do NIST, but only the results obtained during the first shipment will be used for comparison with the reference values. The second shipment is only to issue a new Ata Carnet.**

Table 3 – Timetable for the microphone Brüel and Kjaer 4180 serial number 2787481 of the SIM.AUV.A-K6 comparison.

1) Check of microphones stability	
National Metrology Institute	Period
INMETRO	May 29 to September 8, 2023
2) Circulation of the microphones	
National Metrology Institutes	Period
INMETRO	September 11 to September 29, 2023
Transportation of the microphones by previous participant to the next one	
NRC	February 12 to March 1, 2024
Transportation of the microphones by previous participant to the next one	
NIST	March 25 to April 12, 2024
Transportation of the microphones by previous participant to the next one	
CENAM	May 6 to May 24, 2024
Transportation of the microphones by previous participant to the next one	
INMETRO	August 12 to August 30, 2024

(continue)

Transportation of the microphones by previous participant to the next one	
LACOMET	October 7 to October 25, 2024
Transportation of the microphones by previous participant to the next one	
INTI	February 17 to February 24, 2025
Transportation of the microphones by previous participant to the next one	
INMETRO	May 12 to May 30, 2025
3) Analysis of the reported results	
National Metrology Institute	Period
INMETRO	June 2 to August 22, 2025

Notes:

1. A period of three weeks is allocated for the microphones calibration by each participant **except for INTI. For INTI it was agreed a shorter period due to the expiry date of microphone's Ata Carnet.**
2. A period of three weeks is also allocated for the transportation of the microphones between participants **except for the transportation between INTI and INMETRO. For this transportation, it was scheduled a longer period just to INMETRO's measurements start at the same date for both microphones.** Because of the difference between customs formalities of each country, it is difficult to know how long it actually takes to clear the goods. Therefore, each participant shall consider the transportation as early as possible within the period in order to avoid any delays due to customs. It is highly recommended that each participant get in contact with the next one in advance in order to check all specific customs requirements/procedures to be fulfilled, assure a expedite export/import process and avoid unnecessary delays with the transference of the microphones.
3. INMETRO will carry out measurements in three periods during the circulation of the microphones to monitor their stability, but only the results obtained during the first period will be used for comparison with the reference values.
