# Annex E.   Calibration Certificates

| ID | Device | Type/Model | S/N | Manufacturer | Calibration Certificate |
|---|---|---|---|---|---|
| 002-009 | Dosimetric E-field Probe | EX3DV4 | 3978 | SPEAG | "See attachments" |
| 405-000 | 3500 MHz System Validation Dipole | D3.5GHzV2 | 1123 | SPEAG | "See attachments" |
| 404-000 | 3700 MHz System Validation Dipole | D3.7GHzV2 | 1093 | SPEAG | "See attachments" |

**Dipole calibration**

According to the KDB 865664 D01, a dipole must be calibrated using a fully validated SAR system according to the tissue dielectric parameters and SAR probe calibration frequency required for device testing. However, instead of the typical annual calibration recommended by measurement standards, longer calibration intervals of up to three years may be considered when it is demonstrated that the SAR target, impedance and return loss of a dipole have remain stable according to the following requirements.

The test laboratory must ensure that the required supporting information and documentation are
included in the SAR report to qualify for the three-year extended calibration interval; otherwise, recommend annual calibration applies.

Immediate re-calibration is required for the following conditions:

1.   When the most recent return-loss result, measured at least annually, deviates by more than 20% from the previous measurement (i.e. value in dB x 0.2) or not meeting the required 20 dB minimum return-loss requirement.

2.   When the most recent measurement of the real or imaginary parts of the impedance, measured at least annually, deviates by more than 5 Ohm from the previous measurement

The below results show the latest return loss and impedance measurements for each dipole performed by the lab:

| ID #405-000 Dipole 3500 MHz Body TSL | | | |
|---|---|---|---|
| | Return Loss [dB] | Impedance [Ω] | Date |
| Original Calibration | -31.40 | 51.30 + 2.40j | 2021-05-21 |
| Dipole verification | -32.34 | 51.90 - 1.57j | 2023-06-06 |
| ID #404-000 Dipole 3700 MHz Body TSL | | | |
| | Return Loss [dB] | Impedance [Ω] | Date |
| Original Calibration | -21.00 | 41.30 + 2.30j | 2021-05-21 |
| Dipole verification | -24.16 | 46.30 + 4.67j | 2023-06-06 |