

SAR Testing at CETECOM Inc.

Specific Absorption Rate (SAR) is measuring the amount of RF energy absorbed by human tissue from a radio transmitter, including technologies that use GSM, UMTS, LTE, DECT, WLAN, and Bluetooth®. SAR measurements are the most important means of showing compliance to health requirements.

SAR measurements

The absorption of electromagnetic energy by the human muscle or brain tissue is simulated by measuring the electrical field inside a so-called SAM phantom filled with a liquid having the same electrical properties as human tissue at the different frequency bands, which are used by mobile communication systems. These liquids are prepared by CETECOM according to internationally standardized recipes. Measurements are defined for different head and body worn positions to simulate normal use of e.g. mobile phones.

Governmental bodies worldwide each have their own separate RF limits. CETECOM performs SAR measurements according to

- European (CE),
- U.S. (FCC),
- Canadian (IC),
- Australian (ACA)

standards for devices operating within the frequencies of 400MHz and 6GHz. Such standards are accepted in most countries in the world.

CETECOM provides regulatory SAR measurements according to following standards:

- EN 50360 / EN 62209-1
Mobile phones and other hand-held devices (head only)
- EN 50383 / EN 50385
base stations
- EN 62311
other radio devices
- IEC/EN 62209-2
international standard for all kinds of SAR measurements in body position
- IEEE 1528-2003
Mobile phones and other hand-held devices (head only)
- FCC OET Bulletin 65 Supplement C
all kinds of SAR measurements
- ACA 2003 / ARPANSA
Australian SAR standard

For further details: <http://www.cetecom.com/us/en/testing/health/sar-specific-absorption-rate/regulatory-sar-measurements.html>