

## **1. What is the International Electrotechnical Commission and its role for 5G exposure standards?**

The International Electrotechnical Commission or IEC is a world leading organization based in Geneva that develops international standards for electrical, electronic and related technologies including 5G. Close to 20 000 experts from industry, commerce, government, test and research laboratories, academia and consumer groups participate in IEC.

The IEC is responsible for developing international standards to assess the exposure of electromagnetic fields (EMF) from mobile networks and devices and this includes 5G.

The IEC also develops standards with the IEEE an international standards organization based in the US to ensure the global harmonization of test methods.

## **2. How do the standards ensure public and worker safety for 5G?**

This is an important question for workers and the public. The safety standards for wireless technologies including 5G are set by International and National health authorities.

The IEC develops the testing methods using the exposure standards set by the health authorities. This two-step process ensures that 5G base stations and devices can be checked for compliance with the safety standards for workers and the public.

### 3. What new standards has the IEC developed for 5G

The IEC has been preparing for 5G since 2016.

For 5G base stations, the IEC has a standard that specifies the testing methods for the initial 5G networks, and a Technical Report that provides case studies demonstrating the assessment methods. The IEC is currently working on a revision of the base station standard due for publication in 2021 that covers future advanced 5G networks and assessment methods.

For 5G devices, the existing standards are suitable as the initial 5G networks use the same frequencies as 3G and 4G.

Future 5G networks will use a higher frequency in the milli meter wave band and the IEC is currently developing a new standard for testing devices as the test procedures are different.

Some countries have already commenced using 5G mmWave frequencies so in order to ensure that new test methods were available, the IEC published a Technical Report in 2018 that detailed the latest device test methods for the higher frequencies. These methods are now being adopted into the new international standard for devices due for publication in 2021.

Information on EMF testing standards from the [IEC website](#)