

UNDERSTANDING RADIOFREQUENCY (RF) RADIATION SAFETY STANDARDS OF HAND-HELD MOBILE PHONES

1. What is the safety standard with respect to RF radiation from hand-held mobile phones?

For hand-held mobile phones which operate in close proximity to human body, the radiation exposure is quantified in terms of "Specific Absorption Rate" (S.A.R). S.A.R. measures the amount of RF energy actually absorbed in a human body. Currently, there are two commonly adopted S.A.R. limits, one recommended by the International Commission on Non-Ionising Radiation Protection (ICNIRP) and the other by the American National Standards Institute/Institute of Electrical and Electronics Engineers (ANSI/IEEE). In consultation with the Director of Health, the S.A.R. limits of ICNIRP and ANSI/IEEE are adopted by the Telecommunications Authority as the safety standard with respect to RF radiation from hand-held mobile phones.

2. Are mobile phones for use in Hong Kong in compliance with the RF radiation standard?

From 1 April 2003 onwards, hand-held mobile phones to be type-approved by OFTA must comply with either ICNIRP limit of maximum 2 watts per kilogram or ANSI/IEEE S.A.R. limit of maximum 1.6 watts per kilogram. However, it does not mean that the mobile phones approved before 1 April 2003 do not meet the requirement. A number of major mobile phone manufactures have taken the initiative to publish the data regarding the S.A.R. of their products. According to these manufacturers, the majority of the mobile phones being marketed in Hong Kong are actually designed and made to meet the RF radiation standard.

3. How do I know whether my mobile phone has been approved by OFTA against the RF radiation standard?

OFTA has launched a voluntary labelling scheme for hand-held mobile phones since January 2003. Under the scheme, suppliers or manufacturers are authorized to affix the following prescribed label to mobile phones which have been evaluated against and meet the RF radiation standard.

It is important to note that a mobile phone without the label does not mean it fails to comply with the RF radiation standard because affixing the label by the suppliers or manufacturers is on a voluntary basis. If a consumer wants to be sure that his or her equipment meets the safety standard, he or she may choose a mobile phone with the label. Alternatively, a consumer may

inspect a list of type-approved mobile phones which is posted on OFTA's homepage at <http://www.ofta.gov.hk>.

4. How can I know the S.A.R. value of my mobile phone?

From the list of the type-approved mobile phones, you may also find the maximum S.A.R. values of the mobile phones which have been evaluated by OFTA against the limits recommended by ICNIRP or ANSI/IEEE. Besides, some major manufacturers have published the maximum S.A.R. values emitted by their mobile phones on their web sites or product brochures for consumers' information. It should be noted that the maximum S.A.R. values determined in accordance with ICNIRP and ANSI/IEEE cannot be compared directly. This is because their assessment methods and procedures are different. Despite the difference, the safety protection offered by the S.A.R. limits of ICNIRP and ANSI/IEEE should largely be equivalent.

S.A.R. levels fluctuate while you are making a call. This is because mobile phones are designed to operate at multiple power levels so as to use only the power required to reach the network. When you are using your mobile phones, the actual S.A.R. will typically fall well below the maximum value.

5. What should I do if I still remain concerned about the exposure to RF radiation?

There is no proof that hand-held mobile phones in normal use can be harmful. But if you remain concerned, you may consider taking the following measures. These measures include limiting conversations on the hand-held mobile phones, avoiding contacts with antennas when the phones are operating and making greater use of mobile phones with a hands-free kit. In addition, because a mobile phone transmits a stronger signal in areas of bad reception, you may wish to avoid using your phone in areas of poor reception.

6. Where can I get further information?

There are a number of sources of information on the RF radiation safety of mobile phones including:

- World Health Organization (WHO) - www.who.int/emf
- Mobile Manufacturers Forum (MMF) - www.mmfai.org
- The International Commission on Non-Ionizing Radiation Protection (ICNIRP) - www.icnirp.de