



Isotropic fieldmeter reading of HF mobile phone radiation ≤ 2.5 GHz (15 V/m = 60 μ W/cm²) – Photo [Maya-Press EHS Gallery](#)

Mobile Telephones (France): Legislation concerning of the display of the SAR*

***Specific Absorption Rate of artificial electromagnetic microwave radiation**

NEXT-UP ORG. Nov 16, 2010 PARIS - The Ministry of Health has just issued in the Journal Officiel of 12 October 2010 the Decree n°2010-1207 and the Regulations for applying it, on the subject of displaying information on the measurement of radiation levels SAR (Specific Absorption Rate).

This protocol has been established to assess radiation levels from mobile phones and other appliances and equipment emitting artificial HF wireless microwaves.



[DECREE](#)



[REGULATIONS](#)

On 12 July, [the law Fr 2010-788](#) included this obligation in the measures to be applied. For the benefit of consumers, from 15 April 2011 it will be obligatory for the SAR to be displayed in point of sale advertising and other publicity.

This information is very relevant for protecting our health.

According to a press release from the Ministry of Health, "This legislation was promised during the Round Table conference on Health and Radiofrequencies organised at the request of the Prime Minister by Roselyne Bachelot, Health Minister, Nathalie Kosciusko-Morizet, Secretary of State for the development of the digital economy, and Chantal Jouanno, Secretary of State for ecology."

In the USA, San Francisco and other cities have passed regulations on "displaying the SAR in the same size print as the selling price of the mobile telephone". These state regulations will come into force on 1 February 2011.

In France the decree to be applied stipulates: "The SAR, expressed in watts per kilogram (W/kg) and identified as such, is to be indicated in bold print at least as large as that used to list the technical features of the equipment, on whatever background is employed."

Current SAR in France according to thermic factors: the bigger I am the less I get irradiated?

The SAR indicates in theory the maximum intensity of radiation emitted by a mobile telephone and absorbed by the body, and is expressed in watts per kilogram of human body tissue (W/kg).

The level for the body overall is 0.08 W/kg but this may be exceeded in the case of certain body parts such as the cheek and the temple (1.1 W/kg) in people using a mobile phone, while remaining below the limit of 2 W/kg for the head.

The [limits are based on the standard period of 6 minutes](#), the length of time during which the body is able to counteract the effect of the radiation.

There is no regulation governing the use of a mobile phone for periods of more than 6 minutes. Moreover this standard currently in force in France results from the recommendations of ICNIRP (an organisation registered in Germany as a private legal entity), and is based solely on the **thermic effect** of artificial HF microwave radiation, ie the heating of body tissues.

SAR levels according to the latest scientific evidence: the “athermic” effects

For more than 10 years scientists have been producing evidence for [other "athermic" effects](#) that result from the direct impact of microwaves on the cells, the nervous system, DNA, etc. These fall into 3 categories: those that affect the metabolism, sleep, electroencephalogram profile, etc; those revealed by epidemiological studies and clusters, particularly among people living close to phone masts; and those resulting from experiments on animals and cell cultures.

It has been scientifically proven that these athermic effects appear at levels of exposure to radiation much lower than those that produce heating in the tissues, especially among people who are particularly sensitive (EHS) or in poor health.

In any case scientific findings confirm that both thermic and athermic effects have an impact on human biology and health.

A biological effect is a change in the physiology, biochemistry or behaviour that is induced in an organism, a tissue or a cell, in response to an external stimulus. Not every biological effect is necessarily a serious threat to health, it may be simply the normal response of the cell, the tissue or the organism to this stimulus.

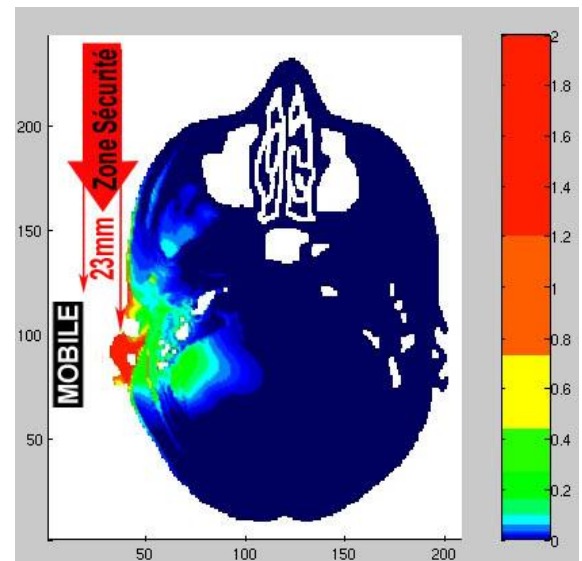
On the other hand a health effect may endanger the normal functions of an organism and trigger damaging pathologies such as cancer. [\[Dossier: the Microwave Syndrome\]](#)

SAR and using a mobile phone: a problem

The permitted SAR is calculated on the assumption that the caller uses the phone not held close to the ear, as most people do, but at a “safe distance”, which is about 2.3cm away from any part of the head and from the ear.

This safety zone should be evaluated in relation to the increase in frequencies (3G/UMTS) that occurs when the wavelength is shorter and the energy level rises steeply, in accordance with the following equation: the energy emitted is in inverse proportion to the length of the wave. In other words, the shorter the wavelength, the more intense the energy produced.

Using a mobile phone held right against the ear, that's to say without respecting the so-called safe distance, is an act that can strictly speaking be considered as an illegal and dangerous gesture that relieves the authorities and the manufacturers of all legal liability. This is clearly stipulated in [the 'security' section of the phone user's manual](#).

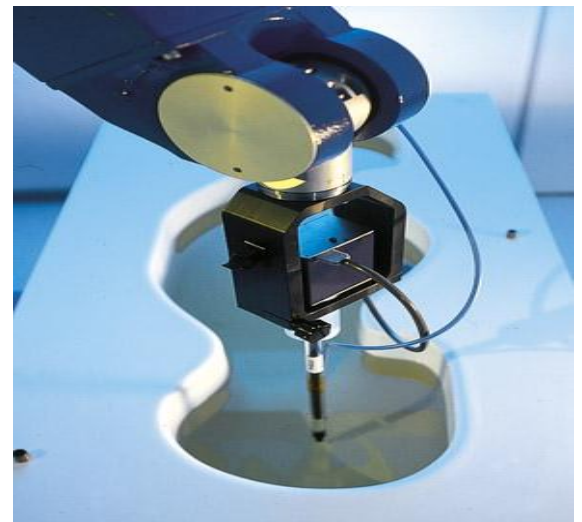


How is the SAR radiation level actually calculated?

The evaluation of this level is carried out using a ‘ghost’ caller, which is in fact a model of a head filled with a liquid (ethanediol) that is supposed to reproduce the conductivity and the permeability of human brain tissue. The mobile phone is switched on and a probe reveals the rise in temperature generated in the “head” during a period of 6 minutes, which is the length of time the body is able to counteract the impact of the radiation. Since a mobile phone call of **more than 6 minutes** is considered abnormal, so far no test procedure and no regulation have been drawn up to cover this eventuality!

It is important to know that the conductivity of human tissues varies with a person's age and many other factors. These complex factors are considered only in serious experimental studies. In fact HF microwaves interact in numerous ways with anything that contains water molecules (this is the working principle of a microwave oven), thus the network of interactions is limitless.

[\[Dossier Dr Devra Davis FDA-FCC BlackBerry and iPhone-Fr\]](#)



The SAR specified and the actual SAR may be totally different

In many situations the actual SAR may be very different from that specified in the model manual or publicity.

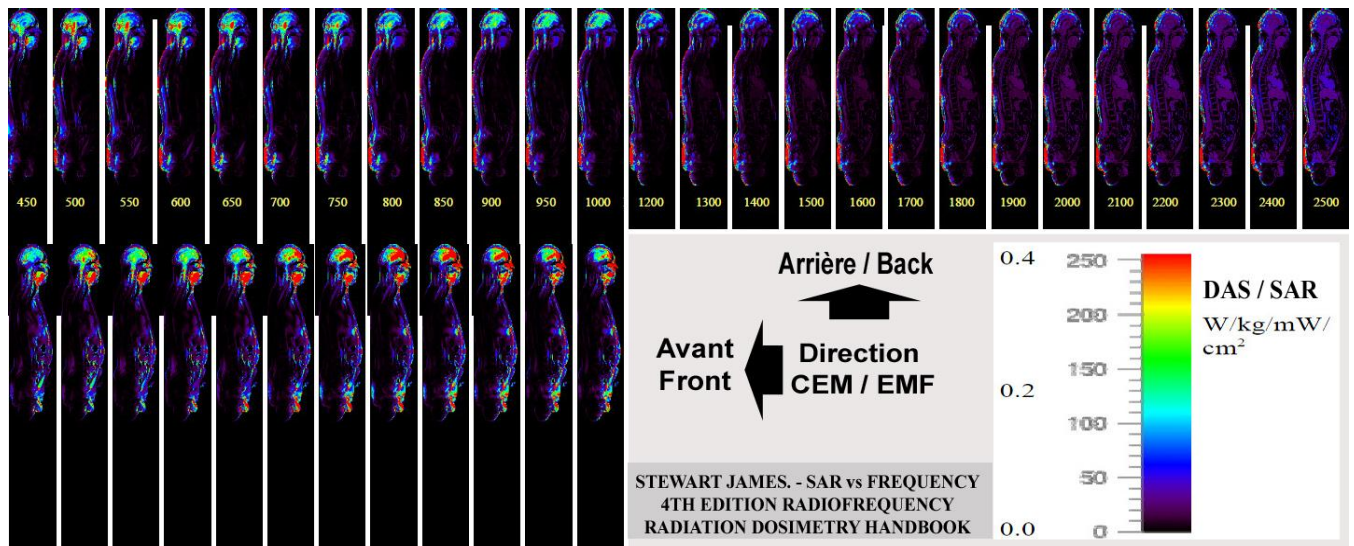
The theoretical SAR calculation supposes a maximum efficiency of the phone's antenna, tested by using a notional base station signal. Thus apart from many other variables, the quality of reception of the signal from the base station is fundamental.

During a phone call utilising a two-way connection with a phone mast, the energy emitted by the phone may vary by 30 dB, that's to say by a factor of 1000. Hence the warnings to phone users in the advice manual issued by the Ministry of Health [\[Brochure Fr: Santé & sécurité\]](#), such as avoiding making phone calls when in the car, in the train or even when walking!



Video clip Fr ["Mobile and children"](#) on the Ministry of Health brochure

Variation of SAR according to the frequency (MHz) of ambient radiation: [the need to discharge](#)

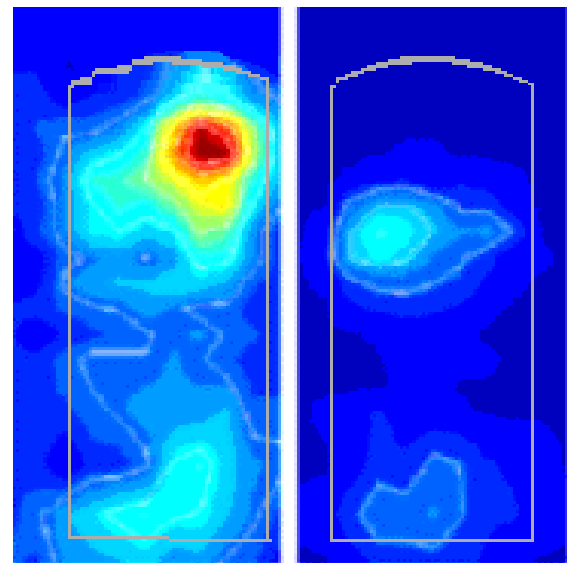


The SAR and finding the relay antenna in a mobile phone - once again the caller is getting irradiated without realising it!

There is yet another important parameter that has a direct influence on the SAR that most phone users are unaware of. A few years ago mobile phones had an external antenna that was clearly visible. Then in order to make phones less serious-looking and more attractive, especially to young people, the manufacturers incorporated the antenna inside the phone.

This means that nowadays, without any indication on the case, there is no way of knowing the exact location of the relay antenna, which is the main source of radiation.

While the thermal SAR level was standardised throughout the industry in October 2003, with the obligation to publish it in the phone manuals, it would be a benefit to their health if phone users could know from a precise indication the exact point of maximum irradiation from their phone. With some models the user is being even more intensely irradiated without realising it! [\[iPhone: Le Monde -Fr\]](#)

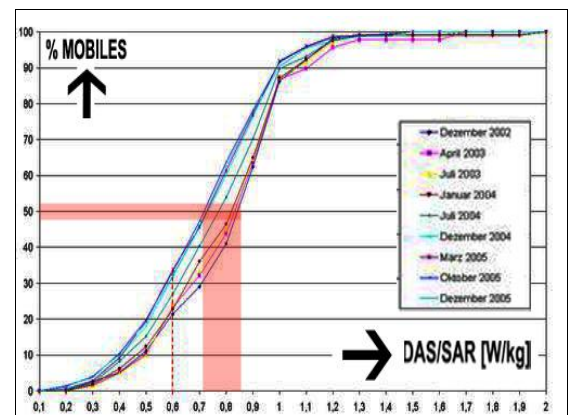


Maximum point of radiation when phone is in use and when off.

SAR and the future

From the worldwide statistics of mobile phone sales from December 2002 to December 2006 it appears that the SAR level did not vary significantly. The average was between 0.7 and 0.9 W/kg, and only 10% of mobiles exceeded a level of 1.1 W/kg during this period.

At the time most mobile phones were used for voice communication only, but since the arrival of the videophone, in spite of technological refinements SAR levels are on the increase. Thus the ambient fog of radiation created by the ever growing number of phone masts and antennas is creating the most serious environmental pollution of all time, with an impact on the whole biosphere, including flora, fauna and climate.



Conclusions :

The publication of this decree by the French Ministry of Health is unquestionably a first positive step in protecting public health, but it arrives too late. Now that habits have been formed it will be difficult to make people realise, especially the young who are totally addicted to them, that a mobile phone is not a harmless toy but that it has a serious impact on human health and on the environment.

In most cases the SAR specified is completely theoretical (even guesswork) because in real life so many factors can totally alter the data and increase, even double, the SAR..

[\[explicit video report SAR Nokia, Sony, ... Interview Pr Bruce Armstrong\]](#)



For the last 20 years thousands of researchers have been studying the influence of these parameters in calculating the SAR, because it is the immediate future of human beings, who are totally bio-electromagnetic, that is at risk.