

On-site Testing Service for High Frequency Electromagnetic Radiation

With recent news headlines linking the tragedy of multiple cases of cancer within a family in Hong Kong to suspected exposure to radiation from living in an apartment in close proximity to rooftop mobile phone base stations, the health hazards posed by high frequency electromagnetic radiation has again become a pressing public concern, what with the widespread increase in the use of modern telecom technologies such as mobile phones and Wi-Fi.



Research has shown that exposure to high frequency electromagnetic fields (EMF) above certain levels can trigger an increase in the risk of adverse health effects. Currently there is not a universal standard for the exposure limits for EMF. The guidelines set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) are commonly used, but they are often criticized for being overly lenient, which could potentially put an entire population at risk by lowering their alertness towards high frequency radiation threats.

Meanwhile, the Standard of Building Biology Testing Methods SBM-2015, developed by Germany-based IBN (Institute of Building Biology + Sustainability), offers guidelines on how to perform specific measurements and assess possible health risks encountered in sleeping areas, living spaces, workplaces, and on properties. It is a much more stringent standard compared to the ICNIRP guidelines. For radio-frequency electromagnetic fields, we typically measure their levels as power densities in microwatts per square meter ($\mu\text{W}/\text{m}^2$). ICNIRP puts the threshold levels for general public exposure to mobile phone base station frequencies (900 MHz–2.6 GHz) at up to 10,000,000 $\mu\text{W}/\text{m}^2$. In contrast, the Standard of Building Biology Testing Methods SBM-2015 rates any power density equaling or above 1,000 $\mu\text{W}/\text{m}^2$ an "extreme anomaly," which should "call for immediate and rigorous action."

In order to avoid health hazards associated with high frequency radiation fields, it is better to be conservative about guideline limits to ensure maximum protection. As an independent testing laboratory, STC offers on-site EMF measurement service according to the Standard of Building Biology Testing Methods SBM-2015.

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