《环境与卫生科学杂志》

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Article 2. Epidemiology: Environmental & Health Standards of Electromagnetic Wave/电磁波污染的环境与卫生标准

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Electromagnetic pollution is the interference of natural or artificial electromagnetic waves of harmful electromagnetic radiation. Due to the development of radio, television and other microwave technology in modern society, and the electromagnetic radiation at the ground level has been increased significantly, which has become the direct threat to human health[1].

As discussed in another article of this journal [2], cells can hardly diagnose more than 3 dominant frequencies of electromagnetic waves, because soft organisms limits their perception capacity to three-dimension. Consequently, the interference caused by different dominant electromagnetic waves among multiple frequencies (more than 3 frequencies) leads to altered or distortive bio-signals which is detrimental to health. Consequently, this article presents a novel method to examine the environmental standards of electromagnetic wave for environmental monitoring and assessment:

Step 1. Parallel samples of rats with the same genetic strain are cultivated in Lab as the receptors of electromagnetic wave, and the rhythm of heart is measured as the indicator of health degree;

Step 2. Different frequencies of electromagnetic wave, which can be commonly found in daily life, are simulated in Lab, and more than three emittors of electromagnetic wave works concurrently; Different intensities of each frequency are simulated in Lab as well;

Step 3. The limitations of environmental standards for electromagnetic wave, in terms of limitations on the combination of both frequency and intensity, are tested and decided according to the heart rhythm of rat samples.

This is the revised materials in book “Proceedings for Degree of Postgraduate Diploma in Environmental Science (3rd Edition).” published in 2016. Revised on 28/12/2020; Thirdly revised on 13/09/2021; Fourthly Revised on 07/01/2022; Fifthly Revised on 28/11/2022;25/04/2023;30/05/2023.

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