UNIVERSITI TEKNOLOGI MARA

THE ELECTROMAGNETICS RADIATION (EMR) PATTERN FROM INDOOR PLANTS USING FREQUENCY DETECTOR AND STATISTICAL ANALYSIS

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ABSTRACT

This research employs a frequency detector to investigate the electromagnetic radiation (EMR) emitted by indoor plants. Indoor plants, thriving in confined spaces like homes and offices, serve not only decorative purposes but also demonstrate positive psychological effects and contribute to indoor air purification. They are recognized for their ability to enhance positive energy flow, often correlated with EMR or aura. In this study, Epipremnum Aureum (money plant) and Dracaena Trifasciata (snake plant) are selected for examination. EMR measurements are conducted in a standard-sized room, both with and without the presence of an indoor plant. Data is collected over a period of two weeks without a plant and three weeks with each indoor plant, during specific time ranges each day. Measurements are taken near the indoor plant and in the room's central location. Subsequently, SPSS software is employed to analyse the acquired EMR data. The findings in this study are really important as they empirically demonstrate a significant increase in electromagnetic radiation (EMR) levels in the presence of indoor plants, specifically Epipremnum Aureum (money plant) and Dracaena Trifasciata (snake plant).

Keywords: electromagnetics radiation (EMR), money plant, snake plant, indoor plant, frequency detector

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CHAPTER 1
INTRODUCTION

1.1 Research Background

Humans and nature have a deep connection, thus bringing the natural world indoors may successfully boost people's connection to it, which may then improve their comfort and health [1]. Malaysian contemporary society spends more than 90% or over 16 hours a day, on average of their time indoors [2]. Moreover, children spend the majority of their time at home indoors. Which increases the possibility of being exposed to the air pollution in interior microenvironments [3]. These indoor spaces include those who stay home, work in an office setting, retail as well as classrooms. Towards the end of 2019, the situation got worse when the world was hit by a major pandemic SARS COVID-19 that causes a lot of movement restrictions all over the world. Hence, in March 2020 a national lockdown was declared and enforced. Everyone was forced to stay home and restrict their movements outside their home except for purchasing necessities, meeting particular requirements at work, or for any urgent health reasons. Therefore, the hazards effect due to a bad indoor environment are becoming more concerned to the society. In addition, personal exposure to various air contaminants is greatly influenced by the indoor environment [4]. Thus, having a cool and comfortable environment is very crucial. It is proven that enhancing the working environment could lower dissatisfaction and absenteeism while boosting productivity and enables people to operate comfortably at their best [5]. Investigations conducted in Germany in the 1960s indicated that adding plants to office spaces would have beneficial effects on staff morale, attendance, and worker productivity compared to traditional workplaces without plants [6].

Indoor plants can act as a great cost-effective, sustainable, self-regulating bioremediation system for indoor air pollution, enhancing human health and productivity while complementing engineering measures to reduce indoor air pollution [7]. Previous researchers have shown that looking at nature or even just being in natural environments will help to promote environmental comfort [8]. Moreover, air pollution indoors can be much worse than air pollution outdoors. There are two reasons why indoor air pollution concentrations may exceed the levels outdoors. Firstly, due to the